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THE LIMITS OF ONLINE PRICE DISCRIMINATION IN
EUROPE

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As big data capabilities have increased, so too has the potential for price discrimination. Price discrimination occurs when sellers offer goods and services at different prices to different consumers. Profiles of consumers can be created based on a variety of factors, such as their location, past purchases or behaviors online, or, more frequently, a large number of factors that, when combined, enables sellers to serve tailored prices based on differences between consumer profiles. In addition to these algorithmic forms of price discrimination, simpler methods are also in use, such as basing prices solely on the basis of a consumer's IP address.

This article aims to provide a comprehensive mapping of the boundaries of online price discrimination in Europe. While few legal provisions speak directly to online price discrimination or personalized pricing, a number of areas of law likely have a bearing on the extent to which price discrimination is legally permitted. As such, this article will examine competition law, consumer protection law, data protection law, and non-discrimination law in order to determine where online price discrimination may constitute noncompliance with one of the relevant provisions, as well as to denote where it appears that the framework is ill-equipped to adequately address the practice. Practical and sociological aspects relating to both online price discrimination and the application of the legal frameworks in these areas are also incorporated.

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I. INTRODUCTION

A. Background

As big data capabilities have increased, so too has the potential for price discrimination. Price discrimination occurs when sellers offer goods and services at different prices to different consumers. Profiles of consumers can be created based on a variety of factors, such as their location, device used, past purchases or behaviors online, or, more frequently, a number of factors combined, which then enables suppliers or sellers to serve tailored prices based on differences between consumer profiles.²

This has been documented in a number of instances. As early as 2000, Amazon offered lower prices for DVDs to new customers than to repeat customers.³ The price difference could be demonstrated by deleting the cookies from the browser used, after which Amazon would show the lower price.⁴ Amazon quickly claimed the discount

² Oren Bar-Gill, Algorithmic Price Discrimination: When Demand Is a Function of Both Preferences and (Mis)perceptions, 86 U. CHI. L. REV. 217, 217 (2019).

³ Mark Ward, *Amazon's Old Customers 'Pay More'*, BBC NEWS (Sept. 8, 2000), <http://news.bbc.co.uk/2/hi/business/914691.stm>.

⁴ *Id.*

given was on a “totally random basis” and said steps would be taken to protect consumers.⁵ However, not everyone bought the explanation; for example, economist Paul Krugman stated that this pricing mechanism was merely a “new version of an old practice: price discrimination” and labeled it “undeniably unfair.”⁶

Some forms of online price discrimination are relatively simple. In 2012, the Wall Street Journal reported that Staples had been varying the price of items based on customers’ IP addresses.⁷ Other websites have also been found to have significant price differences based on geographic location. Steam, a video gaming platform, and Amazon were found to vary prices for video games and Kindle e-books, respectively, based on customers’ IP addresses.⁸

While these price discrepancies are, to an extent, easy to detect, other, more personalized forms of price discrimination can be harder to uncover. Given the ability to collect large amounts of data from consumers, sellers can create increasingly personalized profiles that enable pricing mechanisms to tailor prices to individual consumers. This introduces additional issues that regulators and consumers will have to confront.

This article analyzes online price discrimination within the European legal framework. While some related literature exists, most remains within the confines of a single area of law.⁹ As such, this article aims to provide a more comprehensive perspective of the boundaries of online price discrimination in Europe. The central question is thus: to what extent is online price discrimination permissible under European legal standards?

⁵. Press Release, Amazon.com Issues Statement Regarding Random Price Testing, (Sept. 27, 2000), <https://press.aboutamazon.com/news-releases/news-release-details/amazoncom-issues-statement-regarding-random-price-testing>.

⁶. Paul Krugman, *Reckonings; What Price Fairness?*, N.Y. TIMES (Oct. 4, 2000), <https://www.nytimes.com/2000/10/04/opinion/reckonings-what-price-fairness.html>.

⁷. Jennifer Valentino-Devries, Jeremy Singer-Vine & Ashkan Soltani, *Websites Vary Prices, Deals Based on Users’ Information*, WALL ST. J. (Dec. 24, 2012), <https://www.wsj.com/articles/SB1000142412788732377204578189391813881534>.

⁸. MIKIANS, LÁSZLÓ GYARMATI, VIJAY ERRAMILI & NIKOLAOS LAOUTARIS, DETECTING PRICE AND SEARCH DISCRIMINATION ON THE INTERNET 4 (2012).

⁹. See, e.g., Christopher Townley, Eric Morrison & Karen Yeung, *Big Data and Personalised Price Discrimination in EU Competition Law*, 36 YEARBOOK OF EUR. L. 683 (2017); Frederik Zuiderveen Borgesius & Joost Poort, *Online Price Discrimination and EU Data Privacy Law*, 40 J. CONSUMER POL’Y 347 (2017).

This article will therefore examine competition law, consumer protection law, data protection law, and human rights and non-discrimination law in order to determine where online price discrimination constitutes noncompliance with or an infringement of one of the relevant provisions, as well as to identify areas where the framework appears ill-equipped to adequately address the practice.¹⁰ In addition to the provisions themselves, this article will reference relevant case law, publications of regulatory authorities, and academic literature to illustrate how the provisions are currently understood and practiced. Additionally, practical and sociological aspects relating to both online price discrimination and the application of the legal frameworks in these areas will be incorporated in various sections below. While there may be some references to the economic aspects of and consumer reactions to online price discrimination, they largely fall outside the scope of this article.

After establishing a common understanding of online price discrimination, Sections 2 through 5 will discuss algorithmic price discrimination, the scope of recognized European legal standards that may apply, and how online price discrimination may be analyzed within these frameworks. While human rights law is discussed primarily in Section 5, it should be noted that its principles cut across all the areas of law examined.¹¹ Section 6 summarizes the previous sections, presents a table comparing the various areas of law in relation to online price discrimination, and outlines the extent to which these areas overlap.

B. What is online price discrimination?

It is important to have an understanding of what constitutes price discrimination, online or otherwise, in order to examine its legal limitations. Additionally, there are several related terms and concepts that lack generally agreed upon definitions.¹² To lay a foundation for the discussion that follows, this section will define and illustrate online price discrimination.

¹⁰ The laws examined in this article may not be entirely exhaustive; other provisions may exist that have a bearing on the extent to which price discrimination is legally permitted.

¹¹ For instance, all EU regulations and directives must be interpreted in light of the rights guaranteed by the Charter of Fundamental Rights. Charter of Fundamental Rights of the European Union, 2000 O.J. (C 364) 1 [hereinafter CFREU].

¹² Organisation for Economic Co-operation and Development (OECD), *Personalised Pricing in the Digital Era*, at 8, OECD Doc. DAF/COMP(2018)13 (Nov. 28, 2018) [hereinafter *Personalised Pricing*].

1. Price discrimination disambiguation

There are many forms of price discrimination and various associated terms. As a starting point, a simple definition for online price discrimination is “differentiating the online price for identical products or services partly based on information a company has about a potential customer.”¹³

A customer’s willingness to pay is often included as a component of the definition,¹⁴ as it should have some bearing on the price that is eventually displayed to the consumer. It is also notably a part of the economic pricing strategy of the “perfect” or “first-degree” price discrimination, where all customers are charged exactly what they are willing to pay.¹⁵ In practice, perfect price discrimination is highly improbable, if not impossible, to achieve. Instead, it generally serves as a theoretical benchmark.¹⁶ However, under a broader understanding of the term, “there is no reason to exclude from the definition more realistic pricing schemes where consumers are only charged a proportional share (not necessarily the total value) of their willingness to pay.”¹⁷

First-degree price discrimination must also be distinguished from second- and third-degree price discrimination. “Second-degree” price discrimination refers to the use of “versioning” (e.g., different versions of the same product have different prices)¹⁸ or quantity discounts.¹⁹ It has been considered an indirect form of price discrimination because it does not depend upon consumer

^{13.} Borgesius & Poort, *supra* note 9, at 348 (providing a concise definition that is supported by other academics); *see also* ANIKO HANNAK ET AL., MEASURING PRICE DISCRIMINATION AND STEERING ON E-COMMERCE WEB SITES 307 (2014) (stating that price discrimination “occurs when two users are shown inconsistent prices for the same product”).

^{14.} Bar-Gill, *supra* note 2, at 219; MIKIANS ET AL., *supra* note 8, at 2; MIKIANS, LÁSZLÓ GYARMATI, VIJAY ERRAMILI & NIKOLAOS LAOUTARIS, CROW-ASSISTED SEARCH FOR PRICE DISCRIMINATION IN E-COMMERCE: FIRST RESULTS, 1 (2013).

^{15.} CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 21 (Harvard Bus. Sch. Press ed., 1999).

^{16.} European Comm’n, *Consumer Market Study on Online Market Segmentation Through Personalised Pricing/Offers in the European Union*, at 34 (June 2018) [hereinafter European Commission Consumer Market Study].

^{17.} *Personalised Pricing*, *supra* note 12, at 8.

^{18.} *Id.* at 9; ROBERT L. PHILLIPS, PRICING AND REVENUE OPTIMIZATION 74 (Stan. Univ. Press ed., 2005). A common example of this is the price difference between the hardcover and paperback versions of the same book.

^{19.} Penelope Papandropoulos, *How Should Price Discrimination Be Dealt with by Competition Authorities?*, N° 3-2007 CONCURRENCES 34, 35 (2007) (citing A. C. Pigou, THE ECONOMICS OF WELFARE (Macmillan, 1920)).

information.²⁰ “Third-degree” price discrimination involves the discrimination of prices as applied to groups of consumers.²¹ Observed characteristics are used in the determination of the set price.²²

Some commentators prefer the terms “personalized pricing” or “tailored pricing.” These are often used interchangeably with price discrimination,²³ as an imperfect version of the first-degree form.²⁴ At other times, they are used in reference to a highly granular third-degree version.²⁵ It may be more accurate to view personalized pricing as lying somewhere between the somewhat narrow definitions of first- and third-degree price discrimination.²⁶

Others prefer the term “price differentiation” in order to avoid the negative connotation of “discrimination.”²⁷ This may be commendable, as there are economic arguments that price discrimination may increase the total welfare of consumers and sellers.²⁸ But “price discrimination” is more frequently used, and is also well-established in the economic arena and competition law.

Consequently, “price discrimination” will be used throughout this article. In addition to its common usage, it can take on a broad meaning. Some forms of online price discrimination would arguably not fall within the typical understanding of personalized pricing.²⁹

^{20.} European Commission Consumer Market Study, *supra* note 16, at 34 n.24.

^{21.} Borgesius & Poort, *supra* note 9, at 352.

^{22.} *Id.* This practice is commonly seen in discounts given to students or to seniors. In the online context, IP addresses may be used to distinguish groups of users based on their region.

^{23.} *Id.* at 348.

^{24.} Benjamin Reed Shiller, *First Degree Price Discrimination Using Big Data 3* (Brandeis Univ. Dept. Econ. & Int'l Bus. Sch. Working Paper No. 58, 2014).

^{25.} It has also been argued that personalized pricing is a sophisticated form of third-degree price discrimination. OFFICE OF FAIR TRADING (OFT), *THE ECONOMICS OF ONLINE PERSONALISED PRICING* 14-15 (May 2013).

^{26.} European Commission Consumer Market study, *supra* note 16, at 34; Borgesius & Poort, *supra* note 9, at 352.

^{27.} PHILLIPS, *supra* note 18, at 74.

^{28.} Borgesius & Poort, *supra* note 9, at 353-55; Mark Armstrong, *Recent Developments in the Economics of Price Discrimination*, in *ADVANCES IN ECONOMICS AND ECONOMETRICS, THEORY AND APPLICATIONS* 97-141 (R. Blundell, W. Newey & T. Persson eds., 2006). However, both have considered the effects of price discrimination in increasing total welfare as “ambiguous.”

^{29.} One such form of price discrimination occurs when a website requires buyers to designate their place of residence and subsequently displays different prices based on that single input. *See, e.g.*, Thu-Huong Ha, *Disneyland Paris is Charging Hundreds of Euros More to Non-French Speakers*, QUARTZ (July 29, 2015),

However, the article will sometimes refer to “personalized pricing” due to its use by other authors and the fact that certain provisions discussed below specifically apply to the practice.³⁰

2. Related terms and concepts

There are a number of terms and concepts related to online price discrimination that warrant mentioning. Price discrimination, as defined above, must also be differentiated from “dynamic pricing,” which is when the price of products or services are quickly adjusted in response to changes in supply and demand.³¹ This practice can coexist with online price discrimination and may make it difficult to determine when one or the other is occurring. However, as there is no differentiation in price between consumers with dynamic pricing alone, its use lies outside the scope of this article.

“Behavioral targeting,” or “online profiling,” is another concept closely tied to online price discrimination. It refers to the “monitoring of people’s online behavior over time and using the collected information” to target people.³² Such behavioral targeting is more commonly performed in the context of online advertisements; however, behavioral targeting for online price discrimination uses the same tools, such as “cookies, super cookies, device fingerprinting and deep packet inspection.”³³

Behavioral targeting, and in turn price discrimination (or more specifically personalized pricing), often rely on algorithms, not only to categorize consumers, but also to determine the price to display to consumers. Algorithms are able to perform a wide variety of functions in a broad range of industries, which has resulted in various definitions. In this article, an “algorithm” will refer to “any well-defined computational procedure that takes some value, or set

<https://qz.com/467200/disneyland-paris-is-charging-hundreds-more-to-visitors-who-speak-different-languages/>.

³⁰ For example, see the discussion on algorithmic decision-making under the GDPR in Section 4. See Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing of Directive 95/46/EC (General Data Protection Regulation), 2016 O.J. (L 119) 1 [hereinafter GDPR].

³¹ Tim Walker, *How Much ...? The Rise of Dynamic and Personalised Pricing*, THE GUARDIAN (Nov. 20, 2017), <https://www.theguardian.com/global/2017/nov/20/dynamic-personalised-pricing>.

³² Frederik Zuiderveen Borgesius, *Behavioral Targeting: A European Legal Perspective*, 11 IEEE SECURITY & PRIVACY 82, 82 (2013).

³³ *Id.* (internal quotation omitted).

of values, as input and produces some value, or set of values, as output.”³⁴ A “pricing algorithm” is an algorithm that “uses price as an input, and/or uses a computational procedure to determine price as an output,” which is broad enough to include “price monitoring algorithms, price recommendation algorithms, and price-setting algorithms.”³⁵

Behavioral targeting may also be used in ranking algorithms that result in “price steering.” Price steering is “personalizing search results to place more or less expensive products at the top of the list.”³⁶ The website could be trying to provide the user with more relevant goods or services, or it could be attempting to extract more money from the customer.³⁷ While this practice may incorporate the customer’s willingness to pay much like some forms of online price discrimination,³⁸ by itself there is no differentiation in prices and thus it is also outside the scope of this article.

As such, online price discrimination will often entail behavioral targeting techniques that use algorithms at various stages in the process. Having an understanding of how these concepts are defined and interact should aid in providing clarity when online price discrimination and its limits in Europe’s legal framework are discussed in more detail below.³⁹

II. ONLINE PRICE DISCRIMINATION AND COMPETITION LAW

Competition law may limit online price discrimination. This section will discuss general concerns and limitations, the legal

³⁴. THOMAS H. CORMEN ET AL., INTRODUCTION TO ALGORITHMS 5 (MIT Press ed., 3d ed. 2009), <http://web.ist.utl.pt/~fabio.ferreira/material/asa/clrs.pdf> (emphasis omitted). A more simple and concise definition for an algorithm is “a set of instructions designed to produce an output.” Stuart M. Benjamin, *Algorithms and Speech*, 161 U. PA. L. REV. 1445, 1447 n.4 (2013).

³⁵. COMPETITION & MKT. AUTH., PRICING ALGORITHMS 9 (2018). Dynamic pricing would also often fall within such a definition.

³⁶. HANNAK ET AL., *supra* note 13, at 309.

³⁷. *Id.* at 307.

³⁸. In 2012, the travel booking website Orbitz was found to be showing its Mac users more expensive options after it found that those users spend as much as 30% more per night on hotels. Dana Mattioli, *On Orbitz, Mac Users Steered to Pricier Hotels*, WALL ST. J. (Aug. 23, 2012), <https://www.wsj.com/articles/SB10001424052702304458604577488822667325882>.

However, it should also be noted that practices such as dynamic pricing can confound the detection of online price discrimination.

framework for competition law, and the application of the framework to online price discrimination.

There are several challenges in applying competition law to online price discrimination: (1) defining the relevant market, (2) assessing the degree of market concentration, and (3) assessing potential consumer detriments.⁴⁰

Certain assumptions must be made here. Given that consumer welfare has been stated as a goal for European Union (EU) competition law,⁴¹ one might question whether online price discrimination aids or impairs this objective.⁴² As stated above in section 1.2.1, the results of online price discrimination may not always be negative, and the intersection of perceived fairness by consumers and the economic efficiency of the practice has been studied in some detail.⁴³ It must also be taken into account that *online*

^{40.} See Organisation for Economic Co-Operation and Development [OECD], *Data-Driven Innovation for Growth and Well-Being: Interim Synthesis Report*, at 58-60 (Oct. 2014).

^{41.} The European Commission has stated that market competition is protected “as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources.” European Comm’n, *Guidelines on the Application of Article 81(3) of the Treaty*, 2004 O.J. (C 101) 97, 98; Case C-209/10, *Post Danmark A/S v. Konkurrencerådet*, 2012 E.C.R. I-172, ¶¶ 22-24, 41-42; Johannes Laitenberger, Dir.-Gen. for Competition, European Comm’n, Address at MLex, Brussels, EU Competition Law in Innovation and Digital Markets: Fairness and the Consumer Welfare Perspective, at 11 (Oct. 10, 2017) (transcript available at https://ec.europa.eu/competition/speeches/text/sp2017_15_en.pdf) (“The consumer welfare standard to which we are bound also includes a dynamic perspective, looking also at longer-term effects, potential effects, and counterfactual effects.”).

^{42.} It should be noted that the consumer welfare standard is not settled and remains a matter of debate. See Victoria Daskalova, *Consumer Welfare in EU Competition Law: What Is It (Not) About?*, 11 COMPETITION L. REV. 131 (2015); Svend Albæk, *Consumer Welfare in EU Competition Policy*, 2013 EUR. COMMISSION DIRECTORATE-GEN. FOR COMPETITION, https://ec.europa.eu/dgs/competition/economist/consumer_welfare_2013_en.pdf.

^{43.} Townley et al., *supra* note 9, at 721 (“Nevertheless, we have identified two circumstances in which the values of efficiency and fairness/equity converge in their assessment. First, if consumers who currently make online purchases typically do so in the mistaken belief that the assumption of uniform pricing which typically applies in the offline world also applies in the online environment, then ACPD [algorithmic consumer price discrimination] might in this context constitute a form of unfair dealing and reduce consumer surplus because it leads to mistakes in the valuation of online goods and services. To address this problem, we have suggested that mandatory disclosure by retailers that they engage in ACPD is an appropriate legal response. Second, we saw that ACPD may mean that vulnerable groups of consumers who lack the digital literacy and sophistication required to search for the best deal, and fail to switch providers in circumstances where it would otherwise be economically rational for them to do

price discrimination may not function in the same way as *offline* price discrimination. For offline price discrimination to occur, there is some consensus that certain conditions must be present, such as the firm's market power, the firm's ability to sort consumers according to their willingness to pay, and the firm's ability to prevent or limit the reselling of goods by consumers who paid a lower price to those who would pay a higher price.⁴⁴ On the other hand, with online price discrimination, these conditions are not typically necessary, and there may be unintuitive results.⁴⁵ A firm with market power that practices price discrimination may improve consumer welfare, and a firm that lacks market power that practices price discrimination may be to the detriment of consumers.⁴⁶ Therefore, for the purposes of this section, it will be assumed that online price discrimination is harmful to some degree (i.e. "welfare decreasing"), at least in the particular instance under review.⁴⁷

The Treaty on the Function of the European Union (TFEU) underpins competition law in the EU. TFEU Article 102, which will be the focus of this section, prohibits the abuse of a dominant position within the European internal market.⁴⁸ Article 101, which

so, pay more. In some circumstances, the failure of consumers of this kind to shop around or switch providers may be misinterpreted by online suppliers as an indication of brand preference and willingness to pay, and so they may be charged higher prices than those offered to more informed, savvy consumers.”).

^{44.} Damien Geradin & Nicolas Petit, *Price Discrimination under EC Competition Law: Another Antitrust Doctrine in Search of Limiting Principles?*, 2 J. COMPETITION L. & ECON. 479, 482-83 (2006) (“In the absence of one or several of these conditions, price discrimination is unlikely to succeed, at the least, or is impossible.”).

^{45.} Townley et al., *supra* note 9, at 724.

^{46.} *Id.*

^{47.} Geradin, *supra* note 44, at 486 (“[A] *per se* prohibition on price discrimination cannot be justified on the basis of economic theory as price discrimination may, depending on the facts of each case, enhance welfare.”); Pinar Akman, *To Abuse, or Not to Abuse: Discrimination Between Consumers*, 32 EUR. L. REV. 492, 511-12 (2007).

^{48.} Consolidated Version of the Treaty on the Functioning of the European Union art. 102, June 7, 2016, 2016 O.J. (C 202) 47 [hereinafter TFEU]. Article 102 states:

Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.

Such abuse may, in particular, consist in:

- (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
- (b) limiting production, markets or technical development to the prejudice of consumers;
- (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

prohibits collusion among other acts,⁴⁹ is unlikely to have any bearing on online price discrimination. While *tacit* collusion may be combined with online price discrimination—algorithmic personalized pricing may be used to induce “high value” buyers to become loyal customers, after which firms use algorithms to tacitly collude in relation to “low value” and loyal customers⁵⁰—such tacit collusion is not forbidden under Article 101, as it would not amount to a concerted practice.⁵¹ In such a scenario, the tacit collusion would be best addressed by collective dominance under Article 102, and abuse would still have to be found under one of the subsections.⁵² These provisions are given force under Council Regulation 1/2003, and organizations that violate them are liable for up to 10% of their worldwide annual revenue⁵³—although actual liabilities rarely approach this amount.⁵⁴ The fines are to function “as a deterrent and punishment for a wrong committed.”⁵⁵

Through 2018, there are no known cases of online price discrimination examined under competition law.⁵⁶ There have been price discrimination cases more generally, but they are typically at the business-to-business level as opposed to the business-to-consumer level.⁵⁷ For instance, in *United Brands v. Commission*, a firm selling bananas for different prices to companies in different member states was found to be abusing its dominant position, as the product was identical and the costs of shipping were extremely similar.⁵⁸

(d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

^{49.} In Article 101, the TFEU forbids agreements, decisions, and concerted practices that restrict or distort competition within, which includes “directly or indirectly fix[ing] purchase or selling prices.” *Id.*

^{50.} Maurice E. Stucke & Ariel Ezrachi, *Antitrust, algorithmic pricing and tacit collusion*, in RESEARCH HANDBOOK ON THE LAW OF ARTIFICIAL INTELLIGENCE 624, 627-28 (Woodrow Barfield & Ugo Pagallo eds., 2018).

^{51.} *Id.* at 637 n.57.

^{52.} *Id.*

^{53.} Council Regulation 1/2003 of 16 December 2002 on the Implementation of the Rules on Competition Laid Down in Articles 81 and 82 of the Treaty, art. 23, 2003 O.J. (L 1) 1, 16 (EC).

^{54.} Before 2004, the fines never amounted to more than 1% of revenue, and the highest ever given was 7% in the *Tomra* case. THE EU LAW OF COMPETITION 337 (Jonathan Faull & Ali Nikpay eds., 3d ed. 2014) [hereinafter Faull & Nikpay].

^{55.} *Id.*; see also Guidelines on the Method of Setting Fines Imposed Pursuant to Article 23(2)(a) of Regulation No 1/2003, 2006 O.J. (C 210) 2.

^{56.} *Personalised Pricing*, *supra* note 12, at 26; Townley et al., *supra* note 9, at 723. The author is not aware of any cases concerning online price discrimination since the publication of this report.

^{57.} Akman, *supra* note 47, at 492-93.

^{58.} Case 27/76, *United Brands v. Comm'n*, 1978 E.C.R. 207, ¶¶ 204-34.

The principle of non-discrimination has also been asserted in the competition context.⁵⁹ In *Scippacercola v. Commission*, the appellants argued that “the imposition of higher charges for passengers on intra-Community and international flights than for passengers on domestic flights constitutes a breach of the general principle of non-discrimination, a fundamental principle of the European Union which the Commission is required to apply by reason of its ‘duty of care.’”⁶⁰ The Court responded by stating that “the mere assertion of an alleged breach of the principle of non-discrimination is too general and imprecise to be assessed by the Court.”⁶¹

The most likely provision in competition law under which online price discrimination would be analyzed is Article 102 of the TFEU. The first hurdle would be to establish the dominant position of the firm or undertaking, without which there can be no abuse.⁶² The finding of a dominant position has been relatively rare,⁶³ as it has been stated to signify “a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately of the consumers. Such a position does not preclude some competition.”⁶⁴ In short, there needs to be “substantial market power” within a relevant market;⁶⁵ this

^{59.} Non-discrimination as a basis in itself to limit online price discrimination will be examined in Section 5.

^{60.} Case C-159/08 P, *Scippacercola v. Comm’n*, 2009 E.C.R. I-46, ¶ 91. This was an appeal of Case T-306/05, *Scippacercola v. Commission*, 2008 E.C.R. II-4.

^{61.} *Id.* ¶ 96 (citing Case C-51/92 P, *Hercules Chems. v. Comm’n*, 1999 E.C.R. I-4235, ¶ 113).

^{62.} Townley et al., *supra* note 9, at 724 (“[F]irms that are *not* dominant are legally free to engage in practices that would be unlawful if undertaken by a firm occupying a dominant position.”). *Personalised Pricing*, *supra* note 12, at 7 (“Rules on abuse of dominance only apply to firms that have substantial market power.”).

^{63.} Dominant positions were found in Case T-219/99, *British Airways plc v. Commission*, 2003 E.C.R. II-5917, ¶¶ 189-225; Joined Cases C-147 & C-148/97, *Deutsche Post AG v. Gesellschaft für Zahlungssysteme mbH (GZS)*, 2000 E.C.R. I-825, ¶¶ 37-38; Case 322/81, *NV Nederlandsche Banden Industrie Michelin v. Comm’n*, 1983 E.C.R. 3461, ¶¶ 53-61; and Case T-201/04, *Microsoft Corp. v. Commission*, 2007 E.C.R. II-3601, ¶¶ 30-35.

^{64.} Case 85/76, *Hoffmann-La Roche & Co. AG v. Comm’n*, 1979 E.C.R. 461, ¶¶ 38-39.

^{65.} RICHARD WHISH & DAVID BAILEY, *COMPETITION LAW* 25 (9th ed. 2018); *Personalised Pricing*, *supra* note 12, at 7. Defining the relevant market can itself be difficult, and the European Commission has provided guidance on the matter. Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law, 1997 O.J. (C 372) 5. However, a recent report for the Commission stated that authorities “should put less emphasis on analysis of

determination hinges upon the market share of the dominant undertaking and its competitors, barriers to expansion and entry, and countervailing buyer power.⁶⁶

If this bar were met, the next analysis would be whether the dominant firm abused its position under Article 102(a) for unfair pricing or under Article 102(c) for discriminatory pricing. According to Article 102(a), abuse can be found when a dominant firm is “directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions.” Alleged abuses have been examined under this provision in a number of cases. Prices that do not have a reasonable relation to the value or cost of the goods or services provided have been found to be abusive.⁶⁷ This is most often the case when the price is excessively high,⁶⁸ but abuse has also been found when the price is excessively low to price out competitors.⁶⁹

market definition, and more emphasis on theories of harm and identification of anti-competitive strategies.” Jacques Crémer et al., *Competition Policy for the Digital Era*, 2019 EUR. COMMISSION DIRECTORATE-GEN. FOR COMPETITION, at 3-4 (2019).

^{66.} Guidance on the Commission’s Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, 2009 O.J. (C 45) 7 [hereinafter Enforcement Priorities Guidance]. The smallest amount of market share where a company was found to hold a dominant position was 39.7%. Case T-219/99, *British Airways plc v. Comm’n*, 2003 E.C.R. II-5917, ¶ 183, *appeal dismissed*, Case C-95/04 P, *British Airways plc v. Comm’n*, 2007 E.C.R. I-2331. Today, there is a rebuttable presumption of dominance at 50% market share. Case C-62/86, *AKZO v. Comm’n*, 1991 E.C.R. I-3359, ¶ 60. *See also* Faull & Nikpay, *supra* note 54, at 363 (citing ROBERT O’DONOGHUE & A. JORGE PADILLA, *THE LAW AND ECONOMICS OF ARTICLE 102*, at 177 (2d ed. 2008)) (“Ever since *AKZO*, it is believed that EU case law adopts a rebuttable presumption of dominance at a 50 per cent market share.”). The Commission has also stated that dominance is not likely to be found with a market share lower than 40%. Enforcement Priorities Guidance, ¶ 14. However, it should also be noted that the conception of market power may be shifting. In the same report for the Commission referenced in the previous footnote, it was noted that there may still be market power in a fragmented marketplace, particularly where it is connected to the concept of “unavoidable trading partner,” or where incumbents have data that is not available to market entrants. Crémer et al., *supra* note 65, at 4.

^{67.} Case 27/76, *United Brands Co. v. Comm’n*, 1978 E.C.R. 207, ¶¶ 250-66; Case 26/75, *General Motors Cont’l NV v. Comm’n*, 1976 E.C.R. 1367, ¶ 12; *cf.* Case C-52/07, *Kanal 5 Ltd v. Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa*, 2008 E.C.R. I-9275, ¶¶ 29-37 (finding that royalties that were paid on the basis of revenue were reasonable in relation to the economic value of the service provided).

^{68.} Case 226/84, *British Leyland Pub. Co. v. Comm’n*, 1986 E.C.R. 3263, ¶¶ 25-30; Case C-242/95, *GT-Link A/S v De Danske Statsbaner (DSB)*, 1997 E.C.R. I-4449, ¶ 39; Case C-159/08 P, *Scippacercola v. Comm’n*, 2009 E.C.R. I-46, ¶¶ 44-49.

^{69.} Case 66/86, *Ahmed Saeed Flugreisen v. Zentrale zur Bekämpfung Unlauteren Wettbewerbs e.V.*, 1989 E.C.R. 803, ¶¶ 42-44.

Price discrimination appears to be directly referenced in one case: “grant[ing] price reductions to certain consumers and at the same time to offset such reductions by an increase in the charges to other consumers”; yet it was just one practice among several found to be abusive, such as charging “disproportionate prices” and demanding payments for services not rendered.⁷⁰ With online price discrimination, there is thus an argument to be made that there is no reasonable relation between the different prices charged to different consumers and the value or cost of the product, particularly where excessive prices were charged. However, a limitation on online price discrimination through this provision is unlikely:

[T]emporarily high prices are generally part of a normal competitive scenario and therefore not abusive. Case practice suggests that the Commission would not intervene in markets where it is likely that over time normal competitive forces, including parallel trade, will eliminate the possibility for a dominant company to charge high prices.⁷¹

Intervention is only likely where there the market has “very high and long-lasting barriers to entry and expansion,” which “would be the case for legal and natural monopolies.”⁷²

Article 102(c) directly addresses price discrimination, although there are difficulties in its application to the typical online variety that consumers experience. Abuse may be found under this provision when a dominant firm applies “dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage.”⁷³ A number of factors have to be met in order for Article 102(c) to be applicable.

First, other trading parties must be “plac[ed] . . . at a competitive disadvantage.” While far from clear from the text alone,⁷⁴ the Commission has stated that Article 102(c) should apply to end consumers.⁷⁵ However, it is difficult to imagine consumers

^{70.} Case C-179/90, *Merci Convenzionali Porto di Genova SpA v Siderurgica Gabrielli SpA*, 1991 E.C.R. I-5889, ¶¶ 18-19. There was a legal monopoly to perform dock work in this instance.

^{71.} Faull & Nikpay, *supra* note 54, at 337.

^{72.} *Id.*

^{73.} TFEU art. 102(c).

^{74.} Akman, *supra* note 47, at 497-98; *see also Personalised Pricing, supra* note 12, at 7 (“It is often unclear whether competition rules against discrimination apply to business-to-consumer relationships.”).

^{75.} Commission Decision, *Deutsche Post AG*, 2001 O.J. (L 331) 40, ¶¶ 133-34. *See* LIZA LOVDAHL GORMSEN, A PRINCIPLED APPROACH TO ABUSE OF

being placed at a competitive disadvantage to other consumers. Finding a competitive disadvantage in comparison to another trading partner (or consumer, in the present case) has been an inconsistent endeavor;⁷⁶ while this factor was often ignored,⁷⁷ more recent cases suggest that there must be such a disadvantage.⁷⁸ The CJEU has stated that Article 102(c) covers a situation in which a dominant firm uses discriminatory pricing between trade partners on the downstream market where the practice is capable of distorting competition:

A finding of such a “competitive disadvantage” does not require proof of actual quantifiable deterioration in the competitive situation, but must be based on an analysis of all the relevant circumstances of the case leading to the conclusion that that behaviour has an effect on the costs, profits or any other relevant interest of one or more of those partners, so that that conduct is such as to affect that situation.⁷⁹

Further, the difference in price resulting from online price discrimination must be in regards to “equivalent transactions”, a standard which is legally unclear and may be practically difficult to determine. It has been argued that “‘equivalence’ must extend

DOMINANCE IN EUROPEAN COMPETITION LAW 107-09 (2010) [hereinafter GORMSEN]; Akman, *supra* note 47, at 500.

^{76.} Townley et al., *supra* note 9, at 727; Inge Graef, *Algorithms and Fairness: What Role for Competition Law in Targeting Price Discrimination Towards End Consumers?*, 24 COLUM. J. EUR. L. 541, 546-48 (2018).

^{77.} THE EC LAW OF COMPETITION 176 (Jonathan Faull & Ali Nikpay eds., 1999); Geradin, *supra* note 44, at 489; cf. Faull & Nikpay, *supra* note 54, at 535.

^{78.} British Airways plc v. Comm’n, 2007 E.C.R. I-2331, ¶ 144; Case C-52/07, Kanal 5 Ltd and TV 4 AB v. Föreningen Svenska Tonsättares Internationella Musikbyrå (STIM) upa, 2008 E.C.R. I-9275, ¶ 25; Case C-525/16, MEO – Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência, ECLI:EU:C:2018:270, ¶ 37. It has also been argued that there could also be a claim of discriminatory conduct under Article 102 generally without resorting to Article 102(c). Townley et al., *supra* note 9, at 728. This might be favorable in cases of online price discrimination as a competitive disadvantage does not have to be shown. However, this position is somewhat dubious in that the authors cite cases in which the Commission and the CJEU found violations of Article 82(c)—as Article 102(c) was formerly known—including finding a competitive disadvantage, regardless of whether a general claim was originally made as opposed to one made under subsection (c). See, e.g., Commission Decision, Deutsche Post AG, 2001 O.J. (L 331) 40, ¶ 134; Case T-301/04, Clearstream Banking AG v. Comm’n, 2009 E.C.R. II-3155, ¶¶ 169-71, 194. Both of these cases were cited by the authors to support their proposition. Townley et al., *supra* note 9, at 728.

^{79.} Case C-525/16, MEO – Serviços de Comunicações e Multimédia SA v. Autoridade da Concorrência, ECLI:EU:C:2018:270, ¶ 37.

beyond ‘identical’ transactions, yet it is unclear how far ‘equivalence’ can be stretched.”⁸⁰ Some have argued that both the European Commission and courts typically consider two transactions to be equivalent with little analysis.⁸¹ However, detecting online price discrimination is difficult, and uncovering exactly why users received different offers may not currently be possible.⁸² As for “dissimilar conditions,” the difference in price should suffice.⁸³ In some cases, courts have interpreted Article 102(c) broadly so that any difference in treatment regarding similar transactions is discriminatory.⁸⁴ The burden to prove an alleged Article 102 violation is on the Commission or party alleging infringement;⁸⁵ however, given the foregoing requirements, for cases involving online price discrimination, the burden may prove too much to bear.

For any allegedly abusive conduct under Article 102(c), an “objective justification,” such as a difference in costs, may serve as a defense.⁸⁶ There are two such defenses: (1) “objective necessity” and (2) “efficiencies,” i.e. where the exclusionary effects of the conduct should be outweighed by efficiency advantages that benefit consumers.⁸⁷ For the latter, courts consider whether certain cumulative conditions have been fulfilled. The company must show the conduct (1) results in efficiency gains that “counteract any likely negative effects on competition and consumer welfare”; (2) actually resulted in those gains, or likely will; (3) is necessary to achieve those

^{80.} Townley et al., *supra* note 9, at 726 (citing Case T-301/04, Clearstream Banking AG v. Comm’n, 2009 E.C.R. II-3155, ¶¶ 73, 172-80 and Case C-163/99, Portuguese Republic v. Comm’n, 2001 E.C.R. I-2613, ¶¶ 51-54).

^{81.} Geradin, *supra* note 44, at 487 (citing IVO VAN BAEL & JEAN FRANCOIS BELLIS, COMPETITION LAW OF THE EUROPEAN COMMUNITY 915 (4th ed. 2004)).

^{82.} HANNAK ET AL., *supra* note 13, at 311.

^{83.} Case 27/76, United Brands v. Comm’n, 1978 E.C.R. 207, ¶ 224; Case C-95/04 P, British Airways plc v. Comm’n, 2007 E.C.R. I-2331, ¶ 134. On the other hand, in an online price discrimination scheme that implemented extremely small differences in prices, it could be argued that such prices are not “dissimilar.”

^{84.} GORMSEN, *supra* note 75, at 105-07; Akman, *supra* note 47, at 495; Townley et al., *supra* note 9, at 727.

^{85.} Faull & Nikpay, *supra* note 54, at 333.

^{86.} Commission Decision of 10 February 1999 Relating to a Proceeding Pursuant to Article 90 of the Treaty, 1999 O.J. (L 69) 31, ¶ 27 (“There must be an objective justification for any difference in treatment of its various clients by an undertaking in a dominant position.”). *See also* Akman, *supra* note 47, at 495; Townley et al., *supra* note 9, at 730.

^{87.} Case C-209/10, Post Danmark A/S v. Konkurrencerådet, 2012 E.C.R. I-172, ¶ 41. The former, “objective necessity,” is unlikely to be applicable here. Examples include “health and safety considerations, or technical or commercial requirements relating to the product or service in question.” Faull & Nikpay, *supra* note 54, at 395.

efficiency gains; and (4) does not eliminate effective competition.⁸⁸ Depending on the form of online price discrimination and how it is implemented, some companies may be able to make a plausible argument that these conditions are indeed met.⁸⁹

There are thus several major hurdles to overcome for an online price discrimination claim to be successful under EU competition law. The largest issue is likely to be the requirement that the company occupy a dominant position in the market.⁹⁰ Additionally, while competition law has been stated to apply to business-to-consumer transactions, the question remains as to the extent to which the law will actually be enforced against these transactions; although consumer organizations are able to file complaints before competition authorities, “such claims are rare due to legal fees and low awareness of consumer rights.”⁹¹ Injured parties are entitled to claim damages for harms caused by infringements of competition law; however, the right to compensation is limited to “actual loss” (with interest),⁹² and thus may result in relatively small awards in cases involving online price discrimination, which may not be worth pursuing by individuals. Further, there is a considerable amount of ambiguity in the case law on matters that are directly relevant to how online price discrimination might be examined under competition law.⁹³

One final point to keep in mind is that “exploitative abuses” are rarely investigated in practice in the EU. Exploitative abuses include practices such as price discrimination, excessive pricing, and unfair

^{88.} *Post Danmark A/S*, 2012 E.C.R. I-172, ¶¶ 41-42. These four conditions closely follow what the Commission previously outlined. Enforcement Priorities Guidance, *supra* note 66, at 12. *See also* Faull & Nikpay, *supra* note 54, at 355, 395-96; Townley et al., *supra* note 9, at 730.

^{89.} One can imagine an online price discrimination scheme that enables the seller to increase output and ultimately lower the average price. Some commentators have argued that a form of online price discrimination that increases the aggregate welfare of consumers should be objectively justified, albeit with some caveats. Townley et al., *supra* note 9, at 742-43.

^{90.} *See supra* text accompanying notes 65 and 66.

^{91.} EUROPEAN DATA PROT. SUPERVISOR, PRIVACY AND COMPETITIVENESS IN THE AGE OF BIG DATA 31, ¶ 69 (2014) [hereinafter EUROPEAN DATA PROT. SUPERVISOR].

^{92.} Directive 2014/104/EU, of the European Parliament and of the Council of 26 November 2014 on Certain Rules Governing Actions for Damages Under National Law for Infringements of the Competition Law Provisions of the Member States and of the European Union, art. 3, 2014 O.J. (L 349) 1, 12. The Directive explicitly excludes “overcompensation” through punitive or other types of damages. *Id.*

^{93.} *See generally* Townley et al., *supra* note 9.

commercial terms and conditions;⁹⁴ taken together they have only amounted to 7% of the abuse of dominance cases enforced by the European Commission between 2000 and 2017.⁹⁵ Further, it has been observed that abuse cases involving discrimination “may no longer be a priority for the Commission.”⁹⁶ The European Data Protection Supervisor has also stated that “consumers in the digital economy suffer discrimination partly due to lack of attention in the application of competition law.”⁹⁷ Despite the European Commission seemingly opening the door for competition law to apply to end consumers,⁹⁸ as it currently stands, competition law may not reliably limit online price discrimination.

III. ONLINE PRICE DISCRIMINATION AND CONSUMER PROTECTION LAW

Another important area of law that may affect the extent to which online price discrimination is permitted is consumer protection law. Certain aspects may make consumer protection law more amenable to handle online price discrimination cases than competition law, as it more clearly applies to business-to-consumer transactions and it would not have to overcome certain hurdles such as a finding of market power in abuse of dominance cases. However, consumer protection law is still developing.

Discrete legislation protecting consumers is a relatively recent phenomenon, and such legislation varied among individual states in Europe in scope and operation prior to its development as part of European Community policy.⁹⁹ Due to increasing market

^{94.} The European Commission has considered discriminating between customers and charging higher prices to those with a higher willingness to pay and less switching possibilities as “direct exploitation.” EUROPEAN COMM’N, DG COMPETITION DISCUSSION PAPER ON THE APPLICATION OF ARTICLE 82 OF THE TREATY TO EXCLUSIONARY ABUSES 40, ¶ 141 (2005). *But see* Faull & Nikpay, *supra* note 54, at 387 (classifying discriminatory abuses as a separate category of abuses, but acknowledging that such abuses are considered as exploitative abuses by some).

^{95.} *See Personalised Pricing*, *supra* note 12, at 27.

^{96.} Faull & Nikpay, *supra* note 54, at 332. The authors note that “[t]he practical enforcement of price discrimination law has decreased tremendously over the course of the last decade, with very few cases brought after the advent of the effects-based approach to Article 102.” *Id.* at 538.

^{97.} EUROPEAN DATA PROT. SUPERVISOR, *supra* note 91, at 31 (citing EUROPEAN PARLIAMENT, DIRECTORATE GENERAL FOR INTERNAL POLICIES, DISCRIMINATION OF CONSUMERS IN THE DIGITAL SINGLE MARKET (2013)).

^{98.} In particular, under TFEU art. 102(c). *See* Commission Decision, *Deutsche Post AG*, 2001 O.J. (L 331) 40, ¶ 133-34.

^{99.} IRIS BENÖHR, *EU CONSUMER LAW AND HUMAN RIGHTS* 14-15 (Oxford Univ. Press 2013).

integration, the need for a more harmonized approach to consumer protection became apparent, ultimately resulting in its elevation to a fundamental rights objective of the EU.¹⁰⁰ Similar to previous instruments,¹⁰¹ it provides a general protection in Article 38, stating that EU policies “shall ensure a high level of consumer protection.”¹⁰²

With time, a number of directives in the EU aimed at the protection of consumers provided more specific protections for consumers. Among them are the Consumer Rights Directive 2011/83/EU (CRD),¹⁰³ the Unfair Commercial Practices Directive 2005/29/EC (UCPD),¹⁰⁴ and the Unfair Contract Terms Directive 93/13/EEC (UCTD),¹⁰⁵ all of which may apply to alleged infringement involving online price discrimination to varying extents.

The CRD took effect throughout the entire EU in 2014. It harmonized many protections across the region, such as mandating a 14-day return period for goods bought online,¹⁰⁶ banning pre-checking boxes online that result in higher prices upon checkout,¹⁰⁷

^{100.} *Id.* at 31.

^{101.} *See* Treaty on European Union, Feb. 7, 1992, 1992 O.J. (C 224) 1. According to Article 129(a)(1), the “Community shall contribute to the attainment of a high level of consumer protection.” *See also* Treaty of Amsterdam Amending the Treaty on European Union, the Treaties Establishing the European Communities and Certain Related Acts, Oct. 2, 1997, 1997 O.J. (C 340) 1. Article 129(a)(1) was amended to state: “In order to promote the interests of consumers and to ensure a high level of consumer protection, the Community shall contribute to protecting the health, safety and economic interests of consumers, as well as to promoting their right to information, education and to organise themselves in order to safeguard their interests.”

^{102.} CFREU, *supra* note 11, art. 38.

^{103.} Directive 2011/83 of the European Parliament and of the Council of 25 October 2011 on Consumer Rights, Amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and Repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, 2011 O.J. (L 204) 64 (EU) [hereinafter Consumer Rights Directive].

^{104.} Directive 2005/29 of the European Parliament and of the Council of 11 May 2005 Concerning Unfair Business-to-Consumer Commercial Practices in the Internal Market and Amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) No 2006/2004 of the European Parliament and of the Council (“Unfair Commercial Practices Directive”), 2005 O.J. (L 149) 22 (EC) [hereinafter Unfair Commercial Practices Directive].

^{105.} Council Directive 93/13 of 5 April 1993 on Unfair Terms in Consumer Contracts, 1993 O.J. (L 95) 29 (EEC) [hereinafter Unfair Contract Terms Directive].

^{106.} Consumer Rights Directive, *supra* note 103, art. 9(1).

^{107.} *Id.* art. 22.

and requiring the total cost of a purchase including any fees to be displayed to a buyer.¹⁰⁸ Although the Directive is silent on price discrimination at the moment, provisions such as these will undoubtedly aid consumers, and certain ones – such as the 14-day return period – have the potential to help alleviate adverse effects of online price discrimination. However, this is premised upon the unlikely scenario in which the consumer becomes aware that he/she was the subject of price discrimination shortly afterwards and would favor returning the item despite the trouble, as well as that the item could be found elsewhere at a comparable or cheaper price or that was non-essential. As such, the Directive is currently unable to have much impact unless new tools for detecting online price discrimination are developed and used in combination with the provision. However, EU legislators have recognized this shortcoming, and thus a recent amendment to the CRD will require that consumers are “clearly informed when the price presented to them [was] personalised on the basis of automated decision-making.”¹⁰⁹

On the other hand, the UCPD may appear at first glance to have more direct applicability to online price discrimination. The UCPD specifically applies to business-to-consumer relationships¹¹⁰ and prohibits unfair commercial practices¹¹¹ harming consumers’ economic interests.¹¹² Under the UCPD, a commercial practice is unfair if

- (a) it is contrary to the requirements of professional diligence,
- and (b) it materially distorts or is likely to distort the economic behaviour with regard to the product of the average consumer whom it reaches or to whom it is addressed, or of the average member of the group when a

^{108.} *Id.* art. 8(2).

^{109.} Directive 2019/2161 of the European Parliament and of the Council of 27 November 2019 Amending Council Directive 93/13/EEC and Directives 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 Union Consumer Protection Rules, art. 4(4)(a)(ii), 2019 O.J. (L 328) 7 (EU) [hereinafter *New Deal for Consumers/Omnibus Directive*]. It should be noted that this requirement was clarified: “This information requirement should not apply to techniques such as ‘dynamic’ or ‘real-time’ pricing that involve changing the price in a highly flexible and quick manner in response to market demands when those techniques do not involve personalisation based on automated decision-making.” *Id.* Recital 45.

^{110.} Unfair Commercial Practices Directive, *supra* note 104, art. 3(1).

^{111.} *Id.* art. 5(1).

^{112.} *Id.* art. 1.

commercial practice is directed to a particular group of consumers.¹¹³

There are two broad categories of unfair practices, those that are “misleading” and those that are “aggressive”;¹¹⁴ however, these categories are not exhaustive.

It is unlikely that online price discrimination per se would run afoul of the UCPD. In regards to dynamic pricing, price discrimination, and personalized pricing, the Commission has stated that traders are free to determine pricing under the UCPD so long as they “duly inform consumers about the prices or how they are calculated.”¹¹⁵ Assuming consumers would need to be informed about how prices are calculated where online price discrimination is used, the practice would not be considered “aggressive” under the UCPD,¹¹⁶ and it would unlikely be considered a “misleading action” where a buyer would be “deceived” as to “the price or the manner in which the price is calculated.”¹¹⁷ More plausibly, nondisclosed online price discrimination could be viewed as a “misleading omission,” which occurs when material information is omitted “that the average consumer needs . . . 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.”¹¹⁸ However, questions remain as to whether the pricing mechanism constitutes material information, whether disclosure is needed to make an informed decision, and subsequently whether that information would influence the actions of a prospective buyer.

Additionally, there could also be a plausible general claim under the prohibition of unfair commercial practices, once again assuming consumers are not informed as to how prices are calculated.¹¹⁹ This provision could apply to online price discrimination if it were considered to materially distort the economic behavior of the average consumer. A material distortion of an average consumer’s economic behavior is the appreciable impairment of “the consumer’s ability to make an informed decision, thereby causing

^{113.} *Id.* art. 5(2).

^{114.} *Id.* art. 5(4).

^{115.} European Comm’n, Commission Staff Working Document, *Guidance on the Implementation/Application of Directive 2005/29/EC on Unfair Commercial Practices*, SWD (2016) 163 final (May 25, 2016), at 134.

^{116.} Unfair Commercial Practices Directive, *supra* note 104, art. 8, 9.

^{117.} *Id.* art. 6(1)(d).

^{118.} *Id.* art. 7(1).

^{119.} *Id.* art. 5(2)(b).

the consumer to take a transactional decision that he would not have taken otherwise.”¹²⁰ Even if online price discrimination were deemed to appreciably impair a consumer’s ability to make an informed decision – which is unlikely because, in most cases, a consumer could check prices against other sites – it would be difficult to show that it caused the consumer to make a transactional decision he or she otherwise would not have. Oddly enough, such a distortion would most likely appear in cases where the consumer benefits from price discrimination. Assuming a median price near the market rate, online price discrimination would be unlikely to change the behavior of those with a higher willingness to pay who are being charged higher prices, while those receiving the benefit of lower prices may be induced into making a purchase.¹²¹ It will thus presumably be difficult to show the purchasing decisions of the “average consumer” were impacted, as the practice would most likely only affect the behavior of the subset of consumers receiving a large discount.¹²² It may however be somewhat easier to show in cases where the price discrimination mechanism results in undercharging or overcharging vulnerable groups of consumers, due to their mental or physical infirmity, age, or credulity.¹²³ The difficulty would then lie in showing, or even detecting, that the mechanism resulted in different prices for a particular vulnerable group.

There may be situations in which online price discrimination may be covered by the UCPD, albeit only tangentially. The European Commission noted that a breach of the UCPD could occur where online price discrimination is used in conjunction with certain commercial practices, such as where profiling is used to exert undue influence.¹²⁴ However, it is really the surrounding practices that violate the UCPD, not online price discrimination or personalized pricing per se. Finally, the foregoing analysis is unlikely

^{120.} *Id.* art. 2(e).

^{121.} It should be noted that “offering of incentives which may legitimately affect consumers’ perceptions of products and influence their behavior” is explicitly permitted so long as the consumer’s ability to make an informed decision is not impaired. *Id.* rec. 6. This would result in an odd scenario where discounts are typically permissible, but perhaps not when they form part of an online price discrimination scheme.

^{122.} It should also be noted here that the average consumer test “is not a statistical test,” and where it concerns a member of a vulnerable group, the impact of the practice is to be evaluated from the perspective of an average member of that group. *Id.* art. 5(3), rec. 18.

^{123.} *Id.* art. 5(3).

^{124.} *E.g.*, where a vendor knows that a consumer is running out of time for a purchase and falsely claims that only a few tickets are left. *Guidance on the Implementation/Application of Directive 2005/29/EC on Unfair Commercial Practices*, *supra* note 115, at 135. This would be based on Article 6(1)(a) and Annex I No. 7 of the UCPD.

to differ much among member states. Under the UCPD, states “may not adopt stricter rules than those provided for in the Directive, even in order to achieve a higher level of consumer protection.”¹²⁵ On the other hand, the penalties for infringements are currently not harmonized and are left to the states to determine. As in the CRD,¹²⁶ the penalties must only be “effective, proportionate and dissuasive.”¹²⁷ However, this will change soon for all three of the directives examined in this section. Maximum penalties for infringements will be at least 4% of a company’s annual revenue in the relevant member state(s), or at least €2 million where such revenue is unavailable.¹²⁸

The UCTD is yet another consumer protection regulation; however, it is also unlikely to have any impact on online price discrimination.¹²⁹ Price adequacy is not among the factors assessed when determining whether the contract terms are unfair, “in so far as these terms are in plain intelligible language.”¹³⁰ However, the CRD left the door open for deviation from this provision. Article 33 of the CRD amended Article 8 of the UCTD, requiring states to notify the Commission where the unfairness assessment is extended to include the adequacy of the price in a transaction.¹³¹ As of November 2019, only three states had informed the Commission of such an extension: Finland, Portugal, and Sweden.¹³² However, it is not apparent that these provisions have been used to address online price discrimination, nor is it immediately clear the extent to which

^{125.} Joined Cases C-261/07 & C-299/07, *VTB-VAB NV v. Total Belgium NV*, 2009 E.C.R. I-02949, ¶ 52 (citing Unfair Commercial Practices Directive, *supra* note 104, art. 4).

^{126.} Consumer Rights Directive, *supra* note 103, art. 24(1).

^{127.} Unfair Commercial Practices Directive, *supra* note 104, art. 13. The maximum fines possible under national legislation implementing these directives vary widely; for example, for national legislation based on the UCPD, the maximum fines are up to €8,688 in Latvia and up to 10% of the company’s annual revenue in France, the Netherlands, and Poland. European Parliamentary Research Serv., *Modernisation of EU Consumer Protection Rules: A New Deal for Consumers*, at 3, PE 623.547 (Apr. 2019), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/623547/EPRS_BRI\(2018\)623547_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/623547/EPRS_BRI(2018)623547_EN.pdf).

^{128.} *See* New Deal for Consumers/Omnibus Directive, *supra* note 109, art. 1, 3(6), 4(13). It should be noted that member states will have two years to enact national legislation implementing this Directive, and six months afterwards, on May 28, 2022, member states must apply those provisions. *Id.* art. 7.

^{129.} Unfair Contract Terms Directive, *supra* note 105.

^{130.} *Id.* art. 4(2).

^{131.} Consumer Rights Directive art. 33, *supra* note 103.

^{132.} *Notifications according to Article 32 and 33 of the CRD*, EUROPEAN COMMISSION, https://ec.europa.eu/info/law/law-topic/consumers/consumer-contract-law/consumer-rights-directive/notifications-according-article-32-and-33-crd_en (last visited Nov. 14, 2019).

differences in prices would be considered unfair under them, although it is unlikely that small variations in prices would be considered so.

Therefore, there currently appears to be little direct applicability of consumer protection law to online price discrimination, with the exception of the forthcoming CRD amendment. While there is some potential for the practice to be addressed by current regulation, albeit somewhat limited, there is little evidence it has been utilized as such. As for courts, the case law on consumer protection followed the rapid evolution of the underlying instruments noted above, and thus there is a relatively small body of case law from which to predict how online price discrimination may be considered under the current framework. Some specific areas that overlap with consumer protection law, such as price discrimination based on place of residence (as covered by the Services in the Internal Market Directive, discussed below in Section 5.3), are likely more effective but clearly only in certain scenarios.

Much remains to be seen as to how online price discrimination may be further addressed by regulators and courts regarding consumer protection law. With the upcoming amendment to the CRD, authorities have signaled that online price discrimination – or more specifically, personalized pricing – falls within the ambit of consumer protection and is in need of more specific regulation. On the other hand, authorities may believe that the information requirement is sufficient or that a different area of law provides a better approach, and therefore consider further refinements of consumer protection law unwarranted.

IV. ONLINE PRICE DISCRIMINATION AND DATA PROTECTION LAW

In addition to competition and consumer protection law, data protection law may be another area which has the possibility to limit online price discrimination.

The right to privacy, which forms the underlying basis for the right to data protection,¹³³ has been recognized for 70 years, and is recognized in Article 12 of the Universal Declaration of Human Rights,¹³⁴ Article 17 of the International Covenant on Civil and

^{133.} *Data Protection*, EUR. DATA PROT. SUPERVISOR, https://edps.europa.eu/data-protection/data-protection_en (last visited Nov. 24, 2019).

^{134.} G.A. Res. 217 (III) A, Universal Declaration of Human Rights art. 12 (Dec. 10, 1948) [hereinafter UDHR].

Political Rights,¹³⁵ Article 8 of the European Convention on Human Rights (ECHR),¹³⁶ and Article 7 of the Charter of Fundamental Rights of the European Union (CFREU).¹³⁷

The CFREU is comparatively new. It introduced the right to data protection in Article 8, which includes the requirement of consent in order to process data and the establishment of an independent body to ensure compliance.¹³⁸ At the time, the Data Protection Directive (DPD) had already been in effect for several years, which created new rules and obligations for data processors throughout the EU.¹³⁹ In an effort to further strengthen and harmonize data protection regulations in the EU, the General Data Protection Regulation (GDPR) was passed in 2016 and went into effect in May 2018.¹⁴⁰ The GDPR also introduced substantial penalties for noncompliance. Depending on which provision is violated, fines can reach up to either €20 million or 4% of the worldwide annual revenue of the preceding financial year, whichever is higher.¹⁴¹

Entities that process “personal data” are subject to the GDPR.¹⁴² This personal data is most often collected through a couple of means; while data is frequently obtained through registration on a website, cookies are the most commonly-used tool to gather data about prospective buyers.¹⁴³ The Article 29 Working Party, replaced

¹³⁵. International Covenant on Civil and Political Rights art. 17, *opened for signature* Dec. 16, 1966, 999 U.N.T.S. 171 (entered into force Mar. 23, 1976) [hereinafter ICCPR].

¹³⁶. European Convention for the Protection of Human Rights and Fundamental Freedoms art. 8, Nov. 4, 1950, 213 U.N.T.S. 221 [hereinafter ECHR].

¹³⁷. CFREU, *supra* note 11, art. 7.

¹³⁸. *Id.* art. 8.

¹³⁹. Directive 95/46, of the European Parliament and of the Council of 24 October 1995 on the Protection of Individuals with Regard to the Processing of Personal Data and on the Free Movement of Such Data, 1995 O.J. (L 281) 31 (EC) [hereinafter Data Protection Directive].

¹⁴⁰. Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation), 2016 O.J. (L 119) 1 (EU) [hereinafter GDPR].

¹⁴¹. *Id.* art. 83(4)-(5).

¹⁴². *See id.* art. 4(1) for the definition of personal data (“any information relating to an identified or identifiable natural person”) and art. 4(2) for the definition of processing (“any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means”).

¹⁴³. Ibrahim Altaweel et al., *Web Privacy Census*, TECH. SCI. (Dec. 15, 2015), <https://techscience.org/a/2015121502/>; Frederik Zuiderveen Borgesius, *Personal*

by the European Data Protection Board under the GDPR,¹⁴⁴ stated that cookies with unique identifiers tied to individuals are to be deemed personal data as they “enable data subjects to be ‘singled out’ even if their real names are not known.”¹⁴⁵ Courts are likely to agree and have generally given a broad interpretation to what qualifies as personal data. The CJEU in *Scarlet Extended v. SABAM* said that IP addresses constitute personal data,¹⁴⁶ and later stated in *Breyer* that even dynamic IP addresses may be personal data.¹⁴⁷ As online price discrimination typically involves the processing of personal data, this in turn invokes EU data protection law; the personal data must thus be processed “lawfully, fairly and in a transparent manner.”¹⁴⁸

Under the GDPR, “the purposes of the processing for which the personal data are intended as well as the legal basis for the processing” – along with other information – must be given to the consumer (“data subject”) at the time the data is obtained.¹⁴⁹ Such information must be in a “concise, transparent, intelligible and easily accessible form, using clear and plain language.”¹⁵⁰ An online store would thus need to clearly inform customers that it is using their data

Data Processing for Behavioural Targeting: Which Legal Basis?, 5 INT’L DATA PRIVACY L. 163, 164 (2015); Güneş Acar, Online Tracking Technologies and Web Privacy 10, 99 (May, 2017), <https://www.esat.kuleuven.be/cosic/publications/thesis-289.pdf> (unpublished Ph.D. dissertation, Katholieke Universiteit Leuven).

^{144.} GDPR, *supra* note 140, arts. 68, 94(2).

^{145.} Article 29 Data Protection Working Party, *Opinion 2/2010 on Online Behavioural Advertising*, at 9, 00909/10/EN WP 171 (June 22, 2010). This position has been echoed by commentators. See Serge Gutwirth & Paul De Hert, *Regulating Profiling in a Democratic Constitutional State*, in PROFILING THE EUR. CITIZEN 271, 300 (Mireille Hildebrandt & Serge Gutwirth eds., 2008); Frederik Zuiderveen Borgesius, *Singling Out People Without Knowing Their Names – Behavioural Targeting, Pseudonymous Data, and the New Data Protection Regulation*, 32 COMPUT. L. & SECURITY REV. 256, 256 (2016).

^{146.} Case C-70/10, *Scarlet Extended SA v. Société Belge des Auteurs, Compositeurs et Éditeurs SCRL (SABAM)*, 2011 E.C.R. I-11959, ¶ 51.

^{147.} Case C-582/14, *Breyer v. Bundesrepublik Deutschland*, 2016 E.C.R. 779, ¶ 49. It should be noted that the court in both this case and in *Scarlet Extended* in the previous footnote were interpreting the provisions of the Data Protection Directive; however, the definitions of both “personal data” and “processing” in the Directive and the GDPR are virtually identical.

^{148.} GDPR, *supra* note 140, art. 5(1)(a). See Borgesius & Poort, *supra* note 9, at 348, 358.

^{149.} GDPR, *supra* note 140, art. 13(1). If the data is not obtained from the data subject him or herself, the controller must still provide similar information to the data subject. *Id.* art. 14(1).

^{150.} *Id.* art. 12(1).

to engage in price discrimination, and the consumer's consent would most likely serve as the legal basis for the processing.¹⁵¹

If cookies are used, as they are in most cases of personalization, the ePrivacy Directive would also be applicable.¹⁵² Under the Directive, the use of cookies that collect data is only permitted after the user has “been provided with clear and comprehensive information, in accordance with Directive 95/46/EC, *inter alia*, about the purposes of the processing,”¹⁵³ and the user has consented to it.¹⁵⁴ The user must also be offered the right to refuse.¹⁵⁵ The analysis would be largely the same under the upcoming replacement for the Directive, known as the ePrivacy Regulation.¹⁵⁶

The ePrivacy Directive and the GDPR together create what should be an adequate level of transparency. However, there are still a number of issues. Consent for tracking cookies could potentially be

^{151.} *Id.* art. 6(1)(a), 4(11), 7. The other five legal bases delineated in art. 6(1)(b)-(f) are an unlikely fit for the processing at hand. *See also* Borgesius & Poort, *supra* note 9, at 360-61. For the two runners-up, Borgesius and Poort find it unlikely that processing for personalized pricing would be “necessary for the performance of a contract” under 6(b), and that basing the processing under 6(f)’s “legitimate interests pursued” would not withstand scrutiny as those interests must be balanced with the rights of the data subject. The Article 29 Working Party addressed the latter basis actually in the context of price discrimination: “Lack of transparency about the logic of the company’s data processing that may have led to *de facto* price discrimination based on the location where an order is placed, and the significant potential financial impact on the customers ultimately tip the balance even in the relatively innocent context of take-away foods and grocery shopping. Instead of merely offering the possibility to opt out of this type of profiling and targeted advertisement, an informed consent would be necessary.” Article 29 Data Protection Working Party, *Opinion 06/2014 on the Notion of Legitimate Interests of the Data Controller Under Article 7 of Directive 95/46/EC*, at 32, 844/14/EN WP 217 (Apr. 9, 2014).

^{152.} Directive 2002/58/EC, of the European Parliament and of the Council of 12 July 2002 Concerning the Processing of Personal Data and the Protection of Privacy in the Electronic Communications Sector (Directive on Privacy and Electronic Communications), 2002 O.J. (L 201) 37 [hereinafter ePrivacy Directive].

^{153.} The Directive 95/46/EC is the Data Privacy Directive and has been replaced by the GDPR.

^{154.} *Id.* art. 5(3). *See also id.* rec. 25. However, not all cookies require such notification. *See* EUR. COMM’N, *Cookies*, EUROPA WEB GUIDE, <https://wikis.ec.europa.eu/display/WEBGUIDE/04.+Cookies> (last visited Nov. 24, 2019).

^{155.} ePrivacy Directive, *supra* note 152, art. 5(3).

^{156.} *Proposal for a Regulation of the European Parliament and of the Council Concerning the Respect for Private Life and the Protection of Personal Data in Electronic Communications and Repealing Directive 2002/58/EC (Regulation on Privacy and Electronic Communications)*, COM (2017) 10 final (Jan. 10, 2017) [hereinafter Proposal for an ePrivacy Regulation].

obtained through a link to or a display of the website's privacy policy on the cookie notification, which would then include references to the purposes of the cookies. However, this potential solution would not likely be deemed adequate under the e-Privacy Directive and the GDPR. A balance must be struck between clarity and brevity, on the one hand, and providing the information required, on the other. This is evidenced by the fact that privacy policies have substantially increased in size over the past two years, especially leading up to the GDPR's enforcement date.¹⁵⁷ Few people read such policies.¹⁵⁸

An alternative method is to obtain consent for tracking-specific cookies on the cookie notification banner itself. Very few websites use this method, which allows the user to block certain types of cookies.¹⁵⁹ Although an amendment to the ePrivacy Directive in 2009 introduced the cookie notification requirements,¹⁶⁰ a large number of websites remain noncompliant to this day. Many websites still have no such notification whatsoever, although the associated and recently-in-force GDPR, with its higher potential fines, likely triggered many website operators to recently add such a

^{157.} MARTIN DEGELING ET AL., WE VALUE YOUR PRIVACY ... NOW TAKE SOME COOKIES: MEASURING THE GDPR'S IMPACT ON WEB PRIVACY, ARXIV (June 25, 2019), <https://arxiv.org/abs/1808.05096v2>.

^{158.} In one study of nearly 50,000 customers, only 0.2% of the potential buyers accessed the accompanying End User License Agreement (EULA) for software products sold online. Yannis Bakos, Florencia Marotta-Wurgler & David R. Trossen, *Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts*, 43 J. LEGAL STUD. 1, 32 (2014). In a similar study, requiring explicit consent to a EULA contained in a link (clickwrap) only increases readership by 0.36% over having to having to seek out the terms at the bottom of the website (browsewrap). Florencia Marotta-Wurgler, *Will Increased Disclosure Help? Evaluating the Recommendations of the ALP's "Principles of the Law of Software Contracts"*, 78 U. CHI. L. REV. 165, 168 (2011). In a global survey of over 10,000 users across 20 countries found that only 16% of users reported always reading the privacy policy of websites, and 80% do not always read the policy even when they know they are sharing personal data with the site. INTERNET SOC'Y, GLOBAL INTERNET USER SURVEY SUMMARY REPORT 4 (2012), <http://wayback.archive-it.org/9367/20170907075228/https://www.internetsociety.org/sites/default/files/rep-GIUS2012global-201211-en.pdf>.

^{159.} In a 2015 study by the Article 29 Working Party, only 16% of websites surveyed offered such control. Article 29 Data Protection Working Party, *Cookie Sweep Combined Analysis – Report*, at 20, 14/EN WP 229 (Feb. 3, 2015).

^{160.} Under Article 5(3), the use of cookies or similar devices is only permissible with the informed consent of the users. Directive 2009/136/EC, of the European Parliament and of the Council of 25 November 2009 Amending Directive 2002/22/EC on Universal Service and Users' Rights Relating to Electronic Communications Networks and Services, Directive 2002/58/EC Concerning the Processing of Personal Data and the Protection of Privacy in the Electronic Communications Sector, and Regulation (EC) No 2006/2004 on Cooperation Between National Authorities Responsible for the Enforcement of Consumer Protection Laws, art. 2(5), 2009 O.J. (L 337) 11.

notification.¹⁶¹ There are a wide array of cookie consent notifications currently in use,¹⁶² and even if the tracking purpose is detailed, it could get lost among the myriad of other purposes for which cookies are used. Additionally, requiring the user to go through them all could appear less appealing to users than an “accept all” button. This would sacrifice efficacy for transparency.¹⁶³

Users have been frustrated by cookie notification banners for some time, and the upcoming ePrivacy Regulation looks to streamline methods of opting out of certain cookies (by setting a browser-level preference for which type of cookies they consent to)¹⁶⁴ and to introduce tougher rules on tracking users.¹⁶⁵

There is at least one further GDPR constraint to take into account when considering online price discrimination. Article 22 of the GDPR grants data subjects “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.”¹⁶⁶ Profiling is defined as:

any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular to analyse or predict aspects concerning that natural person’s performance at work, economic situation, health, personal

^{161.} The use of cookie consent notifications increased from 46.1% in January 2018 to 62.1% in May 2018 on websites in the EU. DEGELING ET AL., *supra* note 157, at 6.

^{162.} *Id.*

^{163.} One website monitored the proportion of people from EU states that opt-in, opt-out, or ignore the cookie notification banner and found that only 0.73% of users opted-out and 87% simply ignored the banner. Den Howlett, *Is the EU Cookie Law Proving Useful?*, DIGINOMICA (Feb. 9, 2014), <https://diginomica.com/2014/02/10/eu-cookie-law-proving-useful/>. See also *Cookies*, EUROPA WEB GUIDE, *supra* note 154.

^{164.} Most browsers already support the blocking of third-party cookies or all cookies. It should also be noted that most browsers already support a technology called ‘Do Not Track’ that requests websites to not track the user who has it enabled; however, most sites do not honor the request. Kashmir Hill, *‘Do Not Track,’ the Privacy Tool Used by Millions of People, Doesn’t Do Anything*, GIZMODO (Oct. 15, 2018), <https://gizmodo.com/do-not-track-the-privacy-tool-used-by-millions-of-peop-1828868324>.

^{165.} Proposal for an ePrivacy Regulation arts. 6-9, *supra* note 156; see also Natasha Lomas, *ePrivacy: An Overview of Europe’s Other Big Privacy Rule Change*, TECHCRUNCH (Oct. 7, 2018), <https://techcrunch.com/2018/10/07/eprivacy-an-overview-of-europes-other-big-privacy-rule-change/>.

^{166.} GDPR, *supra* note 140, art. 22(1).

preferences, interests, reliability, behaviour, location or movements.¹⁶⁷

Four conditions must be met for this provision to apply.¹⁶⁸ There must be (1) a decision (2) based solely (3) on automated processing of personal data that (4) results in legal or similarly significant effects on the individual.¹⁶⁹ With online price discrimination, the first three conditions are likely met through the use of an algorithm that decides on a price based upon automated personal data processing determining the customer's willingness to pay or economic situation.¹⁷⁰

To satisfy the fourth condition, the decision must have legal or similarly significant effects. The offer to enter into a contract with a price determined through automated means would likely qualify as having a legal effect.¹⁷¹ Alternatively, a higher price offered could be interpreted as having a significant effect,¹⁷² although the GDPR does not clearly define this aspect. In either case, online price discrimination may very well fulfill this prong.

However, the prohibition of automated decision-making is not without exceptions. It does not apply if it "is necessary for entering into, or performance of, a contract between the data subject and a data controller" or "is based on the data subject's explicit consent."¹⁷³ If either of these is relevant, the GDPR requires that "the data controller shall implement suitable measures to safeguard the data subject's rights and freedoms and legitimate interests, at least the right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision."¹⁷⁴ Unfortunately, it is unlikely that this would be of

^{167.} *Id.* art. 4(4).

^{168.} Isak Mendoza & Lee A. Bygrave, *The Right Not to be Subject to Automated Decisions Based on Profiling*, in EU INTERNET LAW 77, 87 (Tatiana-Eleni Synodinou et al. eds., 2017); Borgesius & Poort, *supra* note 9, at 362.

^{169.} Mendoza & Bygrave, *supra* note 168, at 87; Borgesius & Poort, *supra* note 9, at 362.

^{170.} Borgesius & Poort, *supra* note 9, at 362.

^{171.} The Belgian Data Protection Authority has stated that an advertisement with "a reduction and therefore a price offer" has a legal effect. COMM'N FOR THE PROT. OF PRIVACY, OPINION NO. 35/2012 OF 21 NOVEMBER 2012 ¶ 80 (2012) (unofficial translation).

^{172.} In examining the predecessor to Article 22, it was suggested that a higher price would constitute a significant effect. LEE A. BYGRAVE, DATA PROTECTION LAW: APPROACHING ITS RATIONALE, LOGIC AND LIMITS 323-24 (2002).

^{173.} GDPR, *supra* note 140, art. 22(2)(a),(c).

^{174.} *Id.* art. 22(3).

substantial use to a customer who paid a higher price due to price discrimination in arguing for a price reduction.¹⁷⁵

There are also additional transparency requirements; where automated decision-making is used, “the existence of automated decision-making, including profiling” and “meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject” must be provided to the data subject.¹⁷⁶ Therefore, companies engaging in online price discrimination where algorithms are used likely now have to abide by these requirements and provide notice to customers with this information. Noting the existence of automated decision-making and describing the anticipated consequences of its use could be useful for consumers to make decisions on whether to use the website. However, given the complicated nature of machine learning algorithms that are frequently used, describing the logic involved may be difficult, if not impossible. It would also likely be of little use to the average customer if explained in detail.¹⁷⁷ Ideally, a balance can be struck where the information is made digestible for

^{175.} Borgesius & Poort, *supra* note 9, at 362. For instance, if buyers were to find out after a purchase that they paid a premium, they would have the right to talk to a human employed by the seller and could then try to contest the difference paid. As the authors note, this “situation seems a tad far-fetched, and this right would probably not be of much help” to the buyers. *Id.*

^{176.} GDPR arts. 13(2)(f), 14(2)(g), *supra* note 140. *See also id.* art. 14(2)(f) (requiring the controller to tell the data subject “from which source the personal data originate, and if applicable, whether it came from publicly accessible sources[]”). There has been substantial debate as to whether these provisions confer a “right to explanation” on data subjects and what meaningful information entails. *See, e.g.*, Andrew D. Selbst & Julia Powles, *Meaningful Information and the Right to Explanation*, 7 INT’L DATA PRIVACY L. 233 (2017); Bryce Goodman & Seth Flaxman, *European Union Regulations on Algorithmic Decision-Making and a “Right to Explanation”*, AI MAG., Fall 2017, at 50; Sandra Wachter et al., *Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation*, 7 INT’L DATA PRIVACY L. 76 (2017). As for meaningful information, the rights of the data subject may conflict with the rights of the data controller – depending on how much information is provided – such as the freedom to choose an occupation, the freedom to conduct a business, and the right to property, protected under Arts. 15, 16, and 17 of the Charter of Fundamental Rights. The “contradictory requirements force the data controller to steer a middle course with regard to the depth of information, the degree of detail and the length of description regarding the logic involved.” STEPHAN DREYER & WOLFGANG SCHULZ, BERTELSMANN STIFTUNG, THE GENERAL DATA PROTECTION REGULATION AND AUTOMATED DECISION-MAKING: WILL IT DELIVER? 24 (2019).

^{177.} Jenna Burrell, *How the Machine ‘Thinks’: Understanding Opacity in Machine Learning Algorithms*, BIG DATA & SOC’Y, Jan.-June 2016, at 1; Lilian Edwards & Michael Veale, *Slave to the Algorithm? Why a ‘Right to an Explanation’ Is Probably Not the Remedy You Are Looking For*, 16 DUKE L. & TECH. REV. 18 (2017). *See also supra* note 176 and accompanying text.

the average user while still sufficiently explaining the logic involved, along with an option to see more detailed explanations if requested.¹⁷⁸

Finally, data subjects may lodge a complaint with the relevant data protection authority if any of the GDPR's provisions are infringed in regards to the processing of their personal data,¹⁷⁹ and they also have the right to a judicial remedy where any of their rights under the Regulation are infringed as a result of processing personal data in a noncompliant manner.¹⁸⁰ However, there remains a compliance and enforcement deficit in regards to data protection law.¹⁸¹ As the GDPR introduced stiffer penalties, compliance may be expected to increase, and although it is still early, there is some initial evidence to suggest that it has in some areas.¹⁸² On the other hand, and despite the GDPR's intention to increase the harmonization of data protection among member states, enforcement is still left to national data protection authorities, which have different budgets and capacities to enforce the law.¹⁸³ There is some indication that enforcement is starting to intensify and become more frequent across the region,¹⁸⁴ although the impact these national cases may have beyond their borders is not yet certain.

In sum, online price discrimination typically involves the processing of personal data, and thus data protection laws apply. The GDPR requires that customers are informed about the purposes for processing their personal data. Additionally, consent is most likely needed to serve as the legal basis for processing. Information must also be provided on the cookies that are used for tracking under the ePrivacy Directive, and consent would once again be necessary. Where automated decision-making is used in online price discrimination, which is common, there would be additional information requirements under the GDPR. While these measures should provide an adequate level of transparency to users, questions remain as to whether a particular implementation complies, and hence there are a wide variety of implementations and

^{178.} See *supra* text accompanying note 176.

^{179.} GDPR, *supra* note 140, art. 77.

^{180.} *Id.* art. 79.

^{181.} FREDERIK ZUIDERVEEN BORGESIU, COUNCIL OF EUROPE, DISCRIMINATION, ARTIFICIAL INTELLIGENCE, AND ALGORITHMIC DECISION-MAKING 24 (2018).

^{182.} DEGELING ET AL., *supra* note 157, at 6, 9.

^{183.} CUSTERS ET AL., EU PERSONAL DATA PROTECTION IN POLICY AND PRACTICE 225-27 (2019); Custers et al., *A Comparison of Data Protection Legislation and Policies Across the EU*, 34 COMPUTER L. & SECURITY REV. 234, 241 (2018).

^{184.} CMS, GDPR ENFORCEMENT TRACKER, <http://www.enforcementtracker.com/> (last visited Nov. 24, 2019).

a lack of uniformity between websites. Further guidance from data protection authorities is needed.

V. ONLINE PRICE DISCRIMINATION AND NON-DISCRIMINATION PROVISIONS

A. *The right to non-discrimination*

Online price discrimination algorithms could unintentionally result in prices that negatively affect protected classes of persons. This may be hard to detect if it is not tied to a geographic location.

The right to non-discrimination has been recognized since the Universal Declaration of Human Rights, in which Article 2(1) states: “Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.”¹⁸⁵

Internationally, the right to non-discrimination is codified through a series of treaties relating to specific areas or vulnerable groups, including the International Convention on the Elimination of All Forms of Racial Discrimination,¹⁸⁶ the International Covenant on Civil and Political Rights (ICCPR),¹⁸⁷ the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW),¹⁸⁸ Convention on the Rights of the Child,¹⁸⁹ the Convention on the Rights of Persons with Disabilities¹⁹⁰ and the

^{185.} UDHR, *supra* note 134, art. 2(1).

^{186.} International Convention on the Elimination of All Forms of Racial Discrimination, *opened for signature* Dec. 21, 1965, 660 U.N.T.S. 195 (entered into force Jan. 4, 1969). “Racial discrimination” is defined broadly in Article 1.1: “any distinction, exclusion, restriction or preference based on race, color, descent, or national or ethnic origin which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural or any other field of public life.” *Id.* art. 1(1).

^{187.} ICCPR, *supra* note 135, art. 2(1).

^{188.} Convention on the Elimination of All Forms of Discrimination against Women, *opened for signature* Dec. 18, 1979, 1249 U.N.T.S. 13 (entered into force Sept. 3, 1981).

^{189.} Convention on the Rights of the Child, art. 2, *opened for signature* Nov. 20, 1989, 1577 U.N.T.S. 3 (entered into force Sept. 2, 1990).

^{190.} Convention on the Rights of Persons with Disabilities, arts. 3(b), 4, 5, *opened for signature* Mar. 30, 2007, 2515 U.N.T.S. 3 (entered into force May 3, 2008).

International Covenant on Economic, Social and Cultural Rights (ICESCR).¹⁹¹

While online price discrimination is unlikely to affect civil and political rights, it could potentially impact some of the rights enshrined in the other instruments. However, a number of factors and conditions make using the individual communications procedure impractical.¹⁹² Any complaint must be directed toward the state and argue that the state is failing in its duty to protect individuals from online price discrimination as it infringes upon one of the enumerated rights.¹⁹³ In addition, all domestic remedies must be exhausted, and the same matter cannot have been submitted to another human rights body, such as the European Court of Human Rights.¹⁹⁴

Regionally, there are additional human rights instruments that include the right to non-discrimination. The European Convention on Human Rights (ECHR), similar to the aforementioned international instruments, states in Article 14 that the rights of the Convention “shall be secured without discrimination on any ground such as sex, race, color, language, religion, political or other opinion,

^{191.} International Covenant on Economic, Social and Cultural Rights, art. 2(2), *opened for signature* Dec. 16, 1966, 993 U.N.T.S. 3 (entered into force Jan. 3, 1976). The related Committee on Economic, Social and Cultural Rights uses the following definition: “discrimination constitutes any distinction, exclusion, restriction or preference or other differential treatment that is directly or indirectly based on the prohibited grounds of discrimination and which has the intention or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of Covenant rights.” Comm. on Econ., Soc. and Cultural Rights, General Comment No. 20: Non-discrimination in economic, social and cultural rights, ¶ 7, U.N. Doc. E/C.12/GC/20 (July 2, 2009). The Committee also clarified that “other status” under Article 2(2) of the Convention includes: “disability,” “age,” “sexual orientation and gender identity,” “place of residence” (including differences between rural and urban areas), and “economic and social situation.” *Id.* ¶¶ 28, 29, 32, 34, 35.

^{192.} The use of individual communications procedures is contingent upon the state becoming party to the relevant optional protocol or by making the necessary declaration under the relevant article of the convention. A number of states in Europe have not made the necessary arrangements for all of the instruments. *Acceptance of 9 Individual Complaints Procedures*, OFFICE OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS (OHCHR), https://www.ohchr.org/Documents/Issues/HRIndicators/IndividualCommunications_map.pdf (last updated June 30, 2019).

^{193.} *Procedure for Complaints by Individuals Under the Human Rights Treaties*, OFFICE OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS (OHCHR), <https://www.ohchr.org/EN/HRBodies/TBPEtitions/Pages/IndividualCommunications.aspx#theadmissibility> (last visited Nov. 23, 2019).

^{194.} *Id.*

national or social origin, association with a national minority, property, birth or other status.”¹⁹⁵

However, Article 14 does not guarantee a freestanding right to equality. Whenever a discrimination claim is made, it must be linked to one of the other guaranteed rights in the ECHR – it cannot be invoked autonomously.¹⁹⁶ However, the European Court of Human Rights has stated that “the application of Article 14 does not necessarily presuppose the violation of one of the substantive rights guaranteed by the Convention, and to this extent it is autonomous.”¹⁹⁷

Also, within the Council of Europe, the European Social Charter protects a number of social and economic rights, and Article E guarantees that they are implemented “without discrimination” using the same language as the ECHR.¹⁹⁸ Somewhat similar to the international treaties, collective complaints are enabled under an Additional Protocol,¹⁹⁹ and are then reviewed by the European Committee of Social Rights.

In the European Union, both the Treaty on the European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU) contain antidiscrimination provisions. Article 2 of the TEU states that non-discrimination is one of the foundational values of the EU, and Article 3 requires that the EU combat discrimination.²⁰⁰ Similarly, Article 10 of the TFEU states that the EU must aim to combat discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation, when defining and

^{195.} ECHR, *supra* note 136, art. 14.

^{196.} MELIK ÖZDEN, EUROPE-THIRD WORLD CENTRE (CETIM), THE RIGHT TO NON-DISCRIMINATION 17 (2011); *see also* COUNCIL OF EUROPE, COMPILATION OF CASE LAW OF THE EUROPEAN COURT OF HUMAN RIGHTS ON GENDER EQUALITY ISSUES (2018), <https://rm.coe.int/16806da342>.

^{197.} Carvalho Pinto de Sousa Morais v. Portugal, Eur. Ct. H.R. App. No. 17484/15, ¶ 34 (2017).

^{198.} European Social Charter, *opened for signature* Oct. 18, 1961, 529 U.N.T.S. 89 (entered into force Feb. 26, 1965). The Charter was revised in 1996 and entered into force in 1999; it should also be noted that while nearly all of the member states of the Council of Europe have ratified the Charter, a substantial minority has not ratified the Revised Charter.

^{199.} The 1995 Additional Protocol went into force in 1998. Additional Protocol to the European Social Charter Providing for a System of Collective Complaints, *opened for signature* Nov. 11, 1995, ETS No. 158 (entered into force July 1, 1998).

^{200.} Treaty on European Union, arts. 2, 3, Feb. 7, 1992, 1992 O.J. (C 224) 1.

implementing its policies and activities.²⁰¹ Since 2009,²⁰² the Charter of Fundamental Rights has been binding on all EU member states; it guarantees equality before the law in Article 20.²⁰³ Article 21 prohibits “[a]ny discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation.”²⁰⁴ Unlike the ECHR, the Charter creates freestanding rights to equality and non-discrimination; moreover, under the EU framework it is not necessary to show that the victim falls within one of the protected grounds to challenge a discriminatory measure—in *abstracto* claims of discrimination can be made.²⁰⁵

While the international and regional human rights instruments will likely be of limited practical utility in cases involving online price discrimination, the frameworks set the stage for EU regulatory initiatives, some of which are more suited to apply to the practice. Over time, anti-discrimination law in the EU has evolved to include several secondary law measures with different scopes and application areas. The Racial Equality Directive (2000/43/EC) prohibits discrimination on grounds of race or ethnicity in employment, accessing the welfare system and social security, and goods and services.²⁰⁶ The Employment Equality Directive (2000/78/EC) combats discrimination in employment on the basis of religion or belief, disability, age, or sexual orientation.²⁰⁷ The Gender Equality Directive (recast) (2006/54/EC) likewise concerns matters of employment and occupation, but in relation to the equal treatment of men and women.²⁰⁸ The Gender Goods and Services Directive (2004/113/EC) extended the scope of protection against

^{201.} TFEU, *supra* note 48, art. 10.

^{202.} This is when the Treaty of Lisbon entered into force. Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community, Dec. 13, 2007, 207 O.J. (C 306) 1 (entered into force Dec. 1, 2009).

^{203.} CFREU, *supra* note 11, art. 20.

^{204.} *Id.* art. 21.

^{205.} Case C-54/07, Centrum voor Gelijkheid van Kansen en voor Racismebestrijding v. Firma Feryn NV, 2008 E.C.R. I-5187.

^{206.} Council Directive 2000/43/EC of 29 June 2000 Implementing the Principle of Equal Treatment Between Persons Irrespective of Racial or Ethnic Origin, 2000 O.J. (L 180) 22 [hereinafter Racial Equality Directive].

^{207.} Council Directive 2000/78/EC of 27 November 2000 Establishing a General Framework for Equal Treatment in Employment and Occupation, 2000 O.J. (L 303) 16.

^{208.} Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the Implementation of the Principle of Equal Opportunities and Equal Treatment of Men and Women in Matters of Employment and Occupation (recast), 2006 O.J. (L 204) 23.

discrimination on the basis of gender to the area of goods and services.²⁰⁹ Of these, the Racial Equality Directive and the Gender Goods and Services Directive may apply to online price discrimination and will be examined in further detail below.

Additionally, some secondary legislation aimed at harmonizing the internal market, such as the Services in the Internal Market Directive (2006/123/EC)²¹⁰ and the Geo-Blocking Regulation (302/2018), prohibits discrimination on the basis of nationality or place of residence.²¹¹ These will also be analyzed below.

Hence, race, gender, and place of residence or nationality are the grounds that are protected in relation to the provision of goods or services. Thus, it is only when online price discrimination affects a member of one of those particular groups that they may benefit from potential protection under current EU law. Discrimination on the basis of sexual orientation, religious belief, disability, and age is prohibited only in regards to employment. However, discussions are ongoing within the EU to extend protection to the provision of goods and services through the Anti-Discrimination Horizontal Directive.²¹²

It should be noted that there is no individual complaint or communication procedure under EU law. Claims must be made in national courts. When questions arise about the correct interpretation of EU law, they are referred to the Court of Justice of the European Union (CJEU).²¹³

^{209.} Council Directive 2004/113/EC of 13 December 2004 Implementing the Principle of Equal Treatment Between Men and Women in the Access to and Supply of Goods and Services, 2004 O.J. (L 373) 37 [hereinafter Gender Goods and Services Directive].

^{210.} Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on Services in the Internal Market, 2006 O.J. (L 376) 37 [hereinafter Services in the Internal Market Directive].

^{211.} Regulation (EU) 2018/302 of the European Parliament and of the Council of 28 February 2018 on Addressing Unjustified Geo-Blocking and Other Forms of Discrimination Based on Customers' Nationality, Place of Residence or Place of Establishment Within the Internal Market and Amending Regulations (EC) No 2006/2004 and (EU) 2017/2394 and Directive 2009/22/EC, 2018 O.J. (L 60) 1 [hereinafter Geo-Blocking Regulation].

^{212.} *Proposal for a Council Directive on Implementing the Principle of Equal Treatment Between Persons Irrespective of Religion or Belief, Disability, Age or Sexual Orientation*, COM/2008/0426 final (July 2, 2008).

^{213.} The CJEU has the authority to give preliminary rulings concerning the interpretation of the Treaties under Article 267 of the TFEU; *see also* EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS AND COUNCIL OF EUROPE, HANDBOOK ON EUROPEAN NON-DISCRIMINATION LAW 17 (2018).

The following sections will examine the Racial Equality Directive and Gender Goods and Services Directive, the Services in the Internal Market Directive, and Geo-Blocking Regulation to analyze how they may apply to online price discrimination.

B. Racial Equality Directive and Gender Goods and Services Directive

If the price of a good or service online differed on the basis of race or gender, it could potentially run afoul of the Racial Equality Directive or the Gender Goods and Services Directive, respectively.

A study published by the European Parliament states that “[o]nly in exceptional cases, where refusal to sell infringes the dignity of consumers is it possible for the provisions against discrimination on grounds of race and ethnical origin of the [TFEU] and of secondary law to have been infringed.”²¹⁴ Examples include communications of “an aggressive and offensive nature” in refusing to sell; it is to such “inhuman practices” that the prohibition on grounds of race or ethnic origin is directed, although the authors were not aware of the existence of any such instances.²¹⁵

However, the Racial Equality Directive (2000/43/EC), which prohibits discrimination on grounds of race or ethnicity, does not appear to place such a high bar. The Directive prohibits both direct and indirect discrimination, the former of which occurs “where one person is treated less favourably than another is, has been or would be treated in a comparable situation on grounds of racial or ethnic origin,” and the latter “where an apparently neutral provision, criterion or practice would put persons of a racial or ethnic origin at a particular disadvantage compared with other persons, unless that provision, criterion or practice is objectively justified by a legitimate aim and the means of achieving that aim are appropriate and necessary.”²¹⁶

^{214.} EUROPEAN PARLIAMENT, DIRECTORATE-GEN. FOR INTERNAL POLICIES, DISCRIMINATION OF CONSUMERS IN THE DIGITAL SINGLE MARKET 28 (2013).

^{215.} *Id.*

^{216.} Racial Equality Directive, *supra* note 206, art. 2(1), (2)(a)-(b). For a more thorough analysis of whether online price discrimination can be objectively justified, see Frederik Zuiderveen Borgesius, *Algorithmic Decision-Making, Price Discrimination, and European Non-Discrimination Law*, EUR. BUS. L. REV. (forthcoming 2019) (manuscript at 16-22). While an argument could be made that it could be, I believe it would fail in the balancing of interests and rights under the proportionality prong. For the purposes of this article, I will presume the practice cannot be objectively justified; however, this matter has yet to be adjudicated to provide definitive guidance. It should also be noted that the defenses for direct discrimination are more limited.

Depending on how online price discrimination is carried out, it could conceivably be either direct or indirect. The Directive expressly applies to “access to and supply of goods and services which are available to the public.”²¹⁷ The “persons who consider themselves wronged” must “establish . . . facts from which it may be presumed that there has been direct or indirect discrimination.” Afterwards, the burden of proof lies on the respondent to prove that the principle of equal treatment has not been breached.²¹⁸ However, demonstrating that a person was discriminated against on the basis of race or ethnicity through online price discrimination may be quite difficult, in particular where algorithmic personalized pricing operates within a “black box.”²¹⁹ Furthermore, parameters may be used that have a dual valence, or a statistically significant correlation to both an objective and reasonable ground for differential treatment and a protected ground like race.²²⁰

Additionally, there are practical limitations to applying the Directive to online price discrimination. Awareness of the national procedures that implement the Directive appears to be low among minorities.²²¹ Other factors, such as legal costs and perceptions that the situation would not change, may also discourage their use.²²² Additionally, in cases involving online price discrimination, the difference in price may be quite minor and thus filing a claim may not be worth the hassle. While most member states provide for compensation based on the victim’s losses, nonpecuniary damages such as distress and inconvenience do not exist or are rarely awarded in some states; punitive damages are only available in two states.²²³ When filing a complaint, there will likely be difficulties in laying out facts demonstrating discrimination on the basis of race to the relevant authority or judicial body without substantial testing, due to the opacity of how online prices are often determined.

The Gender Goods and Services Directive (2004/113/EC) has virtually identical provisions for prohibiting discrimination on

^{217.} Racial Equality Directive, *supra* note 206, art 3(1)(h).

^{218.} *Id.* art. 8(1).

^{219.} Matthias Leese, *The New Profiling: Algorithms, Black Boxes, and the Failure of Anti-Discriminatory Safeguards in the European Union*, 45 SECURITY DIALOGUE 494, 503-07 (2014).

^{220.} Philip Hacker & Bilyana Petkova, *Reining in the Big Promise of Big Data: Transparency, Inequality, and New Regulatory Frontiers*, 15 NW. J. TECH. & INTELL. PROP. 1, 9-11 (2017).

^{221.} EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS (FRA), *THE RACIAL EQUALITY DIRECTIVE: APPLICATION AND CHALLENGES* 25 (2012).

^{222.} *Id.*

^{223.} *Id.* at 15.

grounds of sex, although the scope is comparatively more limited as it applies more specifically to “access to and supply of goods and services” and not to employment and other matters.²²⁴ The definitions of direct and indirect discrimination are the same,²²⁵ as is the provision concerning the burden of proof.²²⁶

Unlike the Racial Equality Directive, the Gender Goods and Services Directive has provisions specifically concerning the use of gender as an actuarial factor in determining the price of insurance or financial service premiums under Article 5.²²⁷ While Article 5 subsection 2 initially provided for a derogation based on “accurate actuarial and statistical data,” the *Test-Achats* case resulted in the annulment of the subsection due to the differences in premiums and benefits for insured men and women being ruled as incompatible with the Articles 21 and 23 Charter.²²⁸ While gender-related information may be collected, stored, and used within certain limits, it cannot be used to provide different premiums and benefits at the individual level.²²⁹ This implies that similar use of gender information would also be impermissible in the determination of prices through an online price discrimination scheme.

However, similar issues to those noted above exist in the use of the Directive as a limitation on online price discrimination. Generally, there are “high levels of underreporting and . . . low levels of rights-awareness.”²³⁰ Equality bodies were also noted to lack sufficient resources.²³¹ Additionally, there are variations in the interpretation of the Directive, particularly in regards to the derogation in Article 4(5).²³² This is evidenced by substantial

^{224.} Gender Goods and Services Directive, *supra* note 209, arts. 1, 3.

^{225.} *Id.* art. 2(a)-(b).

^{226.} *Id.* art. 9(1).

^{227.} *Id.* art. 5.

^{228.} Case C-236/09, *Association Belge des Consommateurs Test-Achats ASBL & Others v. Conseil des ministres*, 2011 E.C.R. I-773 ¶¶ 20, 22, 24.

^{229.} Guidelines on the Application of Council Directive 2004/113/EC to Insurance, in the Light of the Judgment of the Court of Justice of the European Union in Case C-236/09 (*Test-Achats*), 2012 O.J. (C 11) 1, 3. Gender can be used as a factor in the calculations at the aggregate level, so long as it does not result in differentiation at the individual level.

^{230.} European Network of Equality Bodies (EQUINET), *Equality Bodies and the Gender Goods and Services Directive 7* (Nov. 2014).

^{231.} *Id.*

^{232.} Article 4(5) states: “This Directive shall not preclude differences in treatment, if the provision of the goods and services exclusively or primarily to members of one sex is justified by a legitimate aim and the means of achieving that aim are appropriate and necessary.” Recital 16 of the Directive also gives some examples such as single-sex associations and sporting events, among others.

differences between member states in regards to how the Directive is interpreted and applied to offline price discrimination. For instance, Germany has allowed for clubs to charge men an entrance fee while women gain free entry; Finland permits discounts on days such as Women's Day, Mother's Day, and Father's Day so long as they are of minor monetary value; and in Denmark, there have been cases holding that pricing at hairdressers cannot be based on gender.²³³ Given the variation in application across member states, as well as the fact that instances in the offline world are examined on a case-by-case basis, it is difficult to envision how the Directive might be applied to online price discrimination generally without further guidance from regulators.

The biggest hurdle in the application of both Directives to online price discrimination may be in the establishment of a *prima facie* case – before the burden of proof shifts – especially where complicated algorithms are used in personalized pricing. The plaintiff must show that the only reasonable explanation for the difference in treatment is the protected characteristic of the victim, such as sex or race.²³⁴ This will undoubtedly be difficult, if not impossible, to demonstrate in cases involving online price discrimination.

Although the Racial Equality Directive and the Gender Goods and Services Directive appear to have the potential to limit online price discrimination on the grounds of, respectively, race and gender, currently, the Directives seem to have minimal utility in doing so.

C. *Services in the Internal Market Directive and Geo-Blocking Regulation*

The Services in the Internal Market Directive (2006/123/EC) was created to eliminate barriers to the establishment and development of service providers in EU member states and to facilitate the free movement of services between member states.²³⁵ Although this may appear to be largely irrelevant to online price discrimination at first glance, protections therein may apply in certain situations.

Gender Goods and Services Directive, *supra* note 209. See also European Network of Equality Bodies (EQUINET), *supra* note 230, at 7.

^{233.} European Parliament, *Gender Equal Access to Goods and Services Directive 2004/113/EC: European Implementation Assessment*, at Annex I - 33 (2017).

^{234.} This principle applies to cases concerning both direct or indirect discrimination. EUROPEAN UNION AGENCY FOR FUNDAMENTAL RIGHTS AND COUNCIL OF EUROPE, *supra* note 213, at 231.

^{235.} Services in the Internal Market Directive, *supra* note 210, art. 1, rec. 1.

Article 20(2) of the Directive holds that member states must:

ensure that the general conditions of access to a service, which are made available to the public at large by the provider, do not contain discriminatory provisions relating to the nationality or place of residence of the recipient, but without precluding the possibility of providing for differences in the conditions of access where those differences are directly justified by objective criteria.²³⁶

This provision has been clarified by the European Commission: “service” is to be interpreted broadly to include not only the narrow conception of a “service,” but also the sale of retail goods (among others), regardless of whether the transaction occurs offline or over the Internet.²³⁷ However, service providers and even enforcement authorities have argued that the sale of retail goods is not covered by the Directive.²³⁸

The scope of this Directive in relation to online price discrimination is already fairly limited. It would only cover geographic forms of price discrimination, and were it interpreted to apply only to a narrow definition of services, it would further restrict its application to a narrower set of cases. Fortunately, the CJEU relatively recently provided some certainty on the matter by ruling that “the activity of retail trade in goods constitutes a ‘service’” for purposes of the Directive.²³⁹

While this decision restricts the scope of the Directive, questions remain as to its enforcement. In one notable case, the European Commission investigated complaints of Disneyland Paris charging

^{236.} *Id.* art. 20(2).

^{237.} European Comm’n, Commission Staff Working Document, *With a View to Establishing Guidance on the Application of Article 20.2 of Directive 2006/123/EC*, at 7, SWD (2012) 146 final (June 8, 2012). *See also* Services in the Internal Market Directive, *supra* note 210, rec. 33. This interpretation is in line with the Handbook on the implementation of the Services Directive, which states that “whereas the manufacturing of goods is not a service activity, there are many activities ancillary to them (for example retail, installation and maintenance, after-sale services) that do constitute a service activity and should therefore be covered by the implementing measures.” European Comm’n, Directorate-Gen. for Internal Market and Services, *Handbook on Implementation of the Services Directive*, at 13 (2007).

^{238.} European Consumer Ctrs. Network (ECC-Net), *Do Invisible Borders Still Restrict Consumer Access to Services in the EU?* 13 (2017).

^{239.} Joined Cases C-360/15 and C-31/16, *College van Burgemeester en Wethouders van de Gemeente Amersfoort v. X BV* (C-360/15), and *Visser Vastgoed Beleggingen BV v. Raad van de Gemeente Appingedam* (C-31/16), 2018 O.J.C. 112, ¶ 97.

different prices to customers from different countries,²⁴⁰ ultimately resulting in the company changing its practice.²⁴¹ Typically, enforcement is handled by national authorities. The European Consumer Centres Network (ECC-Net) received 532 Article 20(2)-related complaints between 2013 and 2015.²⁴² Most of these complaints were in relation to price or service differentiation.²⁴³ While many of these complaints (68%) dealt with the retail sale of goods, approximately 25% of the complaints concerned services in the field of tourism and leisure, for which there should have been no ambiguity concerning its coverage under the Directive.²⁴⁴ ECC-Net actively intervened in nearly half of the complaints. However, out of 54 cases that were reported to the relevant enforcement authorities, a decision was made in only 16 of them.²⁴⁵ ECC-Net themselves fared a bit better despite having no enforcement powers.²⁴⁶ They claimed to have successfully resolved 84 cases, and claimed that in 31 cases, service providers changed their business practices following the intervention.²⁴⁷ Overall, ECC-Net found that “[o]btaining redress on an individual basis proved extremely challenging for consumers.”²⁴⁸

Hopefully, with the clarification of the CJEU, the relevant enforcement authorities consider more cases, such as those involving the sale of retail goods.²⁴⁹ However, as the Directive is currently implemented, enforcement is unlikely to deter organizations from practicing online price discrimination. Complaints to the European Consumer Centres have increased virtually every year, and 74% of the complaints in 2017 had to do with an online purchase.²⁵⁰ Out of

^{240.} The price differences were substantial. “In some cases, French consumers were paying €1,346 for a premium package, while British visitors were charged €1,870 and Germans €2,447.” *Disneyland Paris Faces Pricing Probe*, BBC NEWS (July 28, 2015), <https://www.bbc.com/news/business-33697945>.

^{241.} *Disneyland Paris: Kommission Begrüßt Änderung der Preispolitik*, European Commission (Apr. 18, 2016), https://ec.europa.eu/germany/news/disneyland-paris-kommission-begr%C3%BC%C3%9Ft-%C3%A4nderung-der-preispolitik_de.

^{242.} European Consumer Ctrs. Network (ECC-Net), *supra* note 238, at 6.

^{243.} *Id.* at 6, 20-21. This includes the refusal to supply goods or services based usually on location.

^{244.} *Id.* at 6.

^{245.} *Id.* at 7.

^{246.} *Id.*

^{247.} *Id.*

^{248.} *Id.*

^{249.} The authority to oversee the Directive’s implementation was given mostly to consumer protection authorities, however, in some countries it was delegated to regional administrative authorities or trade authorities. *Id.* at 37.

^{250.} *Single Market Scoreboard: European Consumer Centres Network (ECC-Net)*, EUROPEAN COMMISSION (June 5, 2019),

all of the cases referred to the enforcement authorities in the three-year period mentioned above, only one resulted in a fine being imposed.²⁵¹ However, as noted above, few cases are referred to enforcement bodies, and the largest share of complaints handled by ECC-Net are resolved amicably between the trader and consumer;²⁵² it is thus more likely that the organization will simply match the price given to others.

On the other hand, it may already be difficult for average consumers to determine when they are being subject to online price discrimination, much less detect when it is occurring solely on the basis of geographic region. However, stronger enforcement of the Directive has the potential to stop geographic online price discrimination, and perhaps even online price discrimination more generally for a while in cases where a complicated algorithm is used. The trader may be on the hook for the lowest price offered to someone in another locale – at least until they adapt the algorithm so that it does not take into account geographic location.

The Geo-Blocking Regulation (2018/302) has been applicable to all EU member states from December 3, 2018.²⁵³ The regulation was enacted to address online sales discrimination in the provision of goods and services “based, directly or indirectly, on the customers’ nationality, place of residence or place of establishment.”²⁵⁴ It was also intended to clarify “certain situations where different treatment cannot be justified under Article 20(2)” of the Services in the Internal Market Directive, as the provision “has not been fully effective in combatting discrimination and it has not sufficiently reduced legal uncertainty.”²⁵⁵ Under the Regulation, geo-blocking occurs where traders block or limit access to their online interfaces from customers in other member states, or when “traders apply different general conditions of access to their goods and services” to customers from other member states, both online and offline.²⁵⁶

However, the Regulation does not mandate the complete harmonization of prices. Different prices, offers, and conditions may

https://ec.europa.eu/internal_market/scoreboard/performance_by_governance_tool/european_consumer_centre_network/index_en.htm.

^{251.} European Consumer Ctrs. Network (ECC-Net), *supra* note 238, at 38.

^{252.} 44.3% of complaints in 2018 were resolved amicably after intervention. *Single Market Scoreboard: European Consumer Centres Network (ECC-Net)*, *supra* note 250, at 5.

^{252.} Geo-Blocking Regulation, *supra* note 211.

^{253.} *Id.*

^{254.} *Id.* arts. 1, 11(1).

^{255.} *Id.* art. 1, rec. 4.

^{256.} *Id.* rec. 1.

be given to customers in certain scenarios, so long as it is non-discriminatory.²⁵⁷ For example, a business could sell a product for a different price in its physical stores as compared to its website.²⁵⁸ As the Regulation has only been applicable for a short period of time, the extent to which it resolves the legal uncertainty of the Services in the Internal Market Directive remains to be seen.

VI. CONCLUSION

This article has examined different legal areas that might limit the practice of online price discrimination in Europe. While there is no legislation that addresses the practice as a whole, some of the legal frameworks examined may be applied to specific areas or certain types of online price discrimination.

Some of the frameworks will no doubt fare better than others in limiting online price discrimination. Competition law, as it is currently practiced, appears to be a poor fit for online price discrimination. While Article 102 of the TFEU could feasibly be applied to online price discrimination, a number of conditions must be met, such as the finding of a dominant position, which is often difficult. Further, exploitative abuses seem to not be a priority and are unlikely to be pursued by competition authorities.

Consumer protection law has little direct applicability to online price discrimination, with the exception of the forthcoming CRD amendment, which requires consumers to be informed where prices are personalized on the basis of automated decision making and other directives that crossover with consumer protection, such as the Services in the Internal Market Directive. Within this area, the CRD, the UCPD, and the UCTD were examined, and there is

^{257.} *Id.* at 27 (“The prohibition of discrimination against customers pursuant to this Regulation should not be understood as precluding traders from offering goods or services in different Member States, or to certain groups of customers, by means of targeted offers and differing general conditions of access, including through the setting-up of country-specific online interfaces. However, in those situations, traders should always treat their customers in a non-discriminatory manner, regardless of their nationality or the place of residence or place of establishment when a customer wishes to benefit from such offers and general conditions of access. That prohibition should not be understood as precluding the application of general conditions of access that differ for other reasons, for example membership of a certain association or contributions made to the trader, where such reasons are unrelated to nationality, place of residence or place of establishment. Neither should that prohibition be understood as precluding the freedom of traders to offer, on a non-discriminatory basis, different conditions, including different prices, in different points of sale, such as shops and websites, or to make specific offers only to a specific territory within a Member State.”).

^{258.} *Id.* at 27.

currently limited potential for the practice to be addressed by these directives. There is also a lack of evidence that they have been utilized as such.

As for data protection law, the GDPR applies to online price discrimination practices and requires that customers be informed about the purposes for processing their personal data. Consent is most likely needed to serve as the legal basis for this processing. Where tracking cookies are used, information must also be provided under the ePrivacy Directive, and consent would once again be necessary. Automated decision-making is also often used in online price discrimination, and in such instances, there would be additional information requirements under the GDPR. However, there remains a wide variety of implementations of these requirements resulting in a lack of uniformity between sites, and data protection authorities need to provide guidance to ensure that the intended transparency is achieved.

In regards to non-discrimination provisions in Europe, the ECHR and Charter will likely not provide a meaningful limit on online price discrimination. Sector-specific EU non-discrimination law—in particular, the Racial Equality Directive, Gender Goods and Services Directive, Services in the Internal Market Directive, and Geo-Blocking Regulation—are considerably more likely to be used to limit the practice, and some provisions have already had an effect. In most scenarios, there may be difficulties in establishing a *prima facie* case under the Racial Equality and the Gender Goods and Services Directives. The Services in the Internal Market Directive has already been used to limit geographic online price discrimination. The Geo-Blocking Regulation clarifies the operative provision of that Directive, but due to its recent implementation, its effects remain to be seen.

The table below compares the previously discussed areas of law, their scope, the relevant regulatory bodies, their provisions relevant to online price discrimination, and sanctions.

Table 1: Comparison of legal areas²⁵⁹

Legal area	Relevant legal framework	Scope	Important Provisions / Conditions that must be met	Regulatory body	Potential Sanctions	Sanctions as currently enforced²⁶⁰
Competition Law	Treaty on the Functioning of the European Union (TFEU)	Anti-competitive conduct	Art. 102(a) or (c) TFEU, abuse of a dominant position	European Commission, national competition authorities	Fines of up to 10% of annual revenue	No evidence of widespread enforcement in regards to online price discrimination
Consumer Protection Law	Consumer Rights Directive (CRD), Unfair Commercial Practices Directive (UCPD), Unfair Contract Terms Directive (UCTD)	Consumer rights, unfair practices with consumers, contracts between consumers and businesses	Art. 6 CRD, must inform consumers where prices are personalized (forthcoming); Art. 7(1) UCPD, “misleading omission” (potentially); Art. 8 UCTD, price adequacy in unfairness assessment (potentially)	National consumer protection authorities (sometimes the same as competition authorities)	Vary by state; for the Consumer Rights Directive and UCPD, penalties must be “effective, proportionate and dissuasive.” For all three, maximum fines must be at least 4% of a company’s annual revenue in the relevant member state(s), or at least €2 million where such information is unavailable (forthcoming)	No evidence of widespread enforcement in regards to online price discrimination
Data Protection Law	General Data Protection	Data protection, privacy	Art. 12-14, 22 GDPR, informing users about data	National data protection authorities	Fines of up to €20 million, or 4% of the worldwide	Enforced only in relation to data collection and

²⁵⁹. There are limitations to the organization of this table. It should be noted that the legal frameworks are categorized according to the manner in which they were presented in the text above. However, the principles of non-discrimination law, particularly the provisions of the ECHR and the Charter, apply to all legal areas. Other regulations examined, such as the Services in the Internal Market Directive, span across multiple areas, i.e., consumer protection and non-discrimination law.

²⁶⁰. As many of the sanctions are imposed by national authorities, it was beyond the scope of this article to research whether any claim resting on the examined provisions had ever been successful in every member state. Such an analysis would warrant further research.

	Regulation (GDPR), ePrivacy Directive		processing, automated decision-making; Art. 5(3) ePrivacy Directive, cookie notification		annual revenue of the preceding financial year, whichever is higher	cookie notifications; fines
Non-discrimination Law	European Convention on Human (ECHR), Charter of Fundamental Rights of the European Union, among others	Discrimination on the basis of sex, race, color, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status	Art. 14 ECHR, prohibition of discrimination; Art. 20-21 Charter, equality before the law and prohibition of discrimination	International bodies	“Right to an effective remedy”	No evidence of enforcement in regards to online price discrimination
	Racial Equality Directive and Gender Goods and Services Directive	Discrimination on the basis of race and gender	Art. 8(1) Racial Equality Directive, Art. 9(1), Gender Goods and Services Directive; must show that the only reasonable explanation for the difference in treatment is the protected characteristic of the victim, such as sex or race	National equality bodies	Sanctions or penalties must be “effective, proportionate, and dissuasive”; can include damages	No evidence of widespread enforcement in regards to online price discrimination
	Services in the Internal Market Directive and Geo-Blocking Regulation	Discrimination on the basis of geography (e.g. nationality, place of residence)	Art. 20(2) Services in the Internal Market Directive, conditions must be non-discriminatory; Geo-Blocking Regulation clarifies Art. 20(2) in several provisions	Various: consumer protection authorities, regional administrative authorities, trade authorities, competition authorities, or finance ministries	Vary by state: for Services in the Internal Market Directive, penalties can include fines, damages, and injunctions; for Geo-blocking Regulation, measures should be	Primarily enforced through amicable settlement with the trader; fines

					“effective, proportionate, and dissuasive”	
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There are thus a number of legal areas and various provisions within them that may limit online price discrimination, albeit in different ways. If all of the areas outlined above were utilized, they would have the potential to severely limit the ability to personalize prices and engage in online price discrimination.

Transparency increases pressure for competition;²⁶¹ it may reduce both consumers' search costs in finding the best deal and the ability of sellers to conduct price discrimination.²⁶² In this way, the transparency requirements of data protection and consumer protection law may bolster this aspect. The data protection framework can limit what data may be used to determine prices; users have to be informed of what data is being collected and how it is being used, and then consent to its use under the GDPR. Under the upcoming amendments to the CRD, consumers would have to be informed where prices are personalized.

As opposed to the GDPR, which should enable preemptive or ex ante control over whether one's personal data is used to personalize prices, the non-discrimination provisions should prevent the use of race and gender (as well as location to a certain extent)²⁶³ as data points because it could result in direct discrimination.²⁶⁴ However, even without these data points, algorithms can still result in protected groups being indirectly discriminated against, particularly where other attributes correlate with sensitive data.²⁶⁵ As noted above, this can be very difficult to detect, which can lead to underenforcement. Paradoxically, the use of sensitive personal

^{261.} Organisation for Economic Co-Operation and Development [OECD], *Unilateral Disclosure of Information with Anticompetitive Effects*, at 24, OECD Doc. No. DAF/COMP(2012)17, (2012).

^{262.} *Id.* at 11. On the other hand, it should be noted that while transparency in pricing may aid consumers in determining they are not the subject of online price discrimination, it can have unintended consequences; due to the rise of algorithmic price setting mechanisms, price transparency has been noted as a challenge in that it can contribute to implicit collusion between platforms. Stucke & Ezrachi, *supra* note 50, at 628-29.

^{263.} *See supra* text accompanying note 257 to see how location may be taken into account.

^{264.} Žliobaite Indre & Bart Custers, *Using Sensitive Personal Data May Be Necessary for Avoiding Discrimination in Data-Driven Decision Models*, 24 ARTIFICIAL INTELLIGENCE & L. 183, 185 (2016).

^{265.} Faisal Kamiran et al., *Discrimination Aware Decision Tree Learning*, PROCS. OF 10TH IEEE INT'L CONF. ON DATA MINING 869, 870 (2010); Indre & Custers, *supra* note 264. *See also* European Union Agency for Fundamental Rights (FRA), *#BigData: Discrimination in Data-supported Decision Making*, at 9-10 (May 2018), <https://fra.europa.eu/en/publication/2018/big-data-discrimination>.

data, such as race or gender,²⁶⁶ may be necessary to ensure that algorithmic decision-making is fair and non-discriminatory.²⁶⁷

The OECD has stated that “[p]olicy makers should further the dialogue between competition, privacy and also consumer protection authorities.”²⁶⁸ While this appears to be a relatively common suggestion in this area, usually as a means to address the increasing information and power asymmetries between companies and consumers, there is little practical analysis as to how these fields may be combined. A recent proposal centers around using the concept of “fairness” as an overarching principle to connect competition, consumer protection, and data protection law.²⁶⁹ Another looks at how data protection law can influence the application and enforcement of competition law standards.²⁷⁰ The alignment of these frameworks “arguably facilitates not only the bolstering of ex ante control in terms of data gathering but also the prohibiting or restricting of certain ex post personalization applications.”²⁷¹ This alignment may be driven by a lack of enforcement as opposed to inadequate substantive requirements.²⁷² However, it is not yet certain how or to what extent these areas may ultimately be aligned.

Online price discrimination is only addressed to a limited extent by any single area of law in Europe. Despite the fact that EU

^{266.} It should be noted that the categories of sensitive data are not completely harmonized between data protection and anti-discrimination law. For instance, gender is not classified as a ‘special category of personal data’ under the GDPR, but is under many non-discrimination provisions.

^{267.} Laura Drechsler & Juan Carlos Benito Sánchez, *The Price Is (Not) Right: Data Protection and Discrimination in the Age of Pricing Algorithms*, 9 EUR.J.L. & TECH., no. 3, 2018, at 14; Indre & Custers, *supra* note 264.

^{268.} Organisation for Economic Co-operation and Development [OECD], *Data-driven Innovation for Growth and Well-being: Interim Synthesis Report*, at 60 (2014).

^{269.} Inge Graef et al., *Fairness and Enforcement: Bridging Competition, Data Protection, and Consumer Law*, 8 INT’L DATA PRIVACY L. 200, 202 (2018). An older proposal in the US focuses on the common purpose of consumer sovereignty, or effective consumer choice, present in both consumer protection and competition law. Neil W. Averitt & Robert H. Lande, *Consumer Sovereignty: A Unified Theory of Antitrust and Consumer Protection Law*, 65 ANTITRUST L.J. 713 (1997). In fact, in a number of European countries, the entities tasked with enforcing competition law and consumer protection law are one and the same, such as in Ireland, Italy, the Netherlands, Poland, and the UK. Graef et al., *supra*, at 213.

^{270.} Francisco Costa-Cabral & Orla Lynskey, *Family Ties: The Intersection Between Data Protection and Competition in EU Law*, 54 COMMON MARKET L. REV. 11, 49 (2017).

^{271.} Damian Clifford & Jef Ausloos, *Data Protection and the Role of Fairness*, 37 YEARBOOK OF EUROPEAN LAW 130, 185 (2018).

^{272.} Graef et al., *supra* note 269, at 207.

residents lean more strongly towards disliking price discrimination,²⁷³ there appears to be little will on the part of regulators to address online price discrimination more directly. This may be due to lack of awareness by the populace or that there is little evidence that the practice is widespread. There is a chance that online price discrimination becomes more common in the future, and it remains to be seen whether the practice will be viewed as undesirable and hence worthy of more stringent regulation going forward.

²⁷³. European Comm'n, *Consumer Market Study on Online Market Segmentation through Personalised Pricing/Offers in the European Union*, at 146, EAHC/2013/CP/04 (2018). It should be noted that this study was in relation to personalized pricing, a form of online price discrimination, so this is admittedly a bit extrapolated.