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# Online platforms and pricing: Adapting abuse of dominance assessments to the economic reality of free products



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## ABSTRACT

Online platforms, which are at the forefront of today's economy, are subject to intensive competition law enforcement. However, the platform business model presents challenges for the application of competition law. Most notably, they appear to offer consumers a great number of their products for free. The explanation for most of these supposedly free products is offered by two-sided market theory: consumers may not be paying, but the 'other' side of the market is. This other side of the market often consists of advertisers, which pay the platform for access to the consumers' information (to target advertisements) and attention (to show the advertisements). As many of these platforms are now potentially dominant, they come within the scope of competition law's abuse of dominance provision, including the doctrines of predatory and excessive pricing. These price-based theories need to adapt to the often price-less platform business model in order to prevent competition authorities from making both type I and type II enforcement errors. At the same time, competition law enforcement needs to consider—and at times give priority to—other branches of law that address abusive behaviour concerning free products. Through the use of case studies, this article therefore suggests ways in which abuse of dominance assessments can take into account the economic reality of free products.

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## 1. Introduction

Platforms are at the forefront of today's economy. They can be described as intermediaries operating in two-sided markets, in which they seek to facilitate interactions between different user groups (the 'sides' of the market). Think, for example, of how app stores connect consumers with app developers, or of how online marketplaces connect consumers with retailers.

Platforms profit from this facilitating role by charging a fee on each successful interaction.<sup>1</sup>

Platforms are not governed by the traditional economic maxim according to which firms set their price at marginal cost in order to maximize profits. Consider hotel booking platforms such as Booking.com. Consumers make free use of the booking services; to them, the platform prices below cost. Hotels, however, pay a (hefty) commission fee on every booking; to them, the platform prices above cost. Social networks

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<sup>1</sup> Charging commission fees is only possible if the platform can monitor successful interactions; if not (i.e. when users can bypass the platform once they found each other), then the platform must resort to membership fees, see Bernard Caillaud and Bruno Jullien, 'Chicken & egg: competition among intermediation service providers' (2003) 34 RAND Journal of Economics 309, 310.

such as Facebook operate by a similar dynamic: consumers use them for free, while advertisers foot the bill.

The new economics governing platforms were first systematized by Rochet and Tirole in 2003.<sup>2</sup> What sets platforms apart, they argued, is their possibility to effectively cross-subsidize between the different user groups that are party to a transaction. This means that the volume of the transactions (and thus the profit of a platform) depends not only on the total price charged to the parties to the transaction, but also on its division between those parties. In other words, platforms must choose not only a price level, but also a price structure for their service.<sup>3</sup>

Looking at a number of case studies, Rochet and Tirole observed—in line with the examples above—that ‘platforms often treat one side as a profit center and the other as a loss leader, or, at best, as financially neutral’.<sup>4</sup> Economic modelling by Parker and Van Alstyne confirmed that ‘a firm can rationally invest in a product it intends to give away into perpetuity’.<sup>5</sup> However, to competition enforcers—who operate based on neoclassical economics—*free* is a suspicious price. Before going into the implications of *free* for competition law, I take a deeper look at the phenomenon itself. **Section 2** therefore offers a broader insight into *free*, taking, amongst others, the technological, economic and psychological perspective.

I then turn to what *free* means for competition law. It is important to note that I will not discuss how *free* affects the exercise of market definition. Suffice it to say that the European Commission (‘Commission’) has ruled repeatedly that free services can constitute a market<sup>6</sup>—for further discussion, I refer to the authors in footnote.<sup>7</sup> Neither does this paper go

into how market power assessments should deal with *free*.<sup>8</sup> In that respect, the General Court’s judgment in *Cisco v Commission* is guiding:

*[T]he fact that the services are offered free of charge is a relevant factor in assessing the market power of the new entity. In so far as users expect to receive consumer communications services free of charge, the potential for the new entity to set its pricing policy freely is significantly restricted.*<sup>9</sup>

In other words, the General Court held that market power should be less prevalent with regard to free services.<sup>10</sup> However, rather than these preliminary steps in an abuse of dominance investigation, I explore how potentially abusive behaviour involving free products (both goods and services) can be assessed under competition law, with the help of a number of case studies.<sup>11</sup> In some instances, other branches of law (primarily consumer and data protection) may also be applicable to the same or similar conduct; in those cases, their potential as alternative or complementary tool is discussed shortly.

The most obvious conflict of *free* with competition law lies in the predatory pricing doctrine. After all, one would assume that when something is offered for free, it is offered below cost, which said doctrine prohibits under certain circumstances. **Section 3** therefore seeks to bring the predatory pricing assessments in line with the reality of *free* by studying the two most prominent business models that are responsible for free products, namely (i) two-sided markets, discussed above, and (ii) ‘freemium’,<sup>12</sup> a pricing strategy used by many technology companies.

The predatory pricing doctrine prohibits undertakings from charging prices that are *too low*. Conversely, the excessive pricing doctrine prohibits them from charging prices that are *too high*. Intuitively, there seems to be little room for applying this doctrine to free services: how can consumers pay too much when they pay nothing? Consumers are, however, ceding something in return for these supposedly free services, namely their information and attention. **Section 4** therefore

<sup>2</sup> Jean-Charles Rochet and Jean Tirole, ‘Platform competition in two-sided markets’ (2003) 1 *Journal of the European Economic Association* 990.

<sup>3</sup> *ibid* 990 and 1013; see also Jean-Charles Rochet and Jean Tirole, ‘Two-sided markets: a progress report’ (2006) 37 *RAND Journal of Economics* 645, 665.

<sup>4</sup> Jean-Charles Rochet and Jean Tirole, ‘Platform competition in two-sided markets’ (2003) 1 *Journal of the European Economic Association* 990, 991-2 and 1013-7.

<sup>5</sup> Geoffrey Parker and Marshall Van Alstyne, ‘Two-Sided Network Effects: A Theory of Information Product Design’ (2005) 51 *Management Science* 1494, 1503.

<sup>6</sup> With regard to free consumer communications services, see *Microsoft/Skype* (Case COMP/M.6281) Commission Decision, paras 18-63; confirmed on appeal: Case T-79/12 *Cisco v Commission* EU:T:2013:635, paras 65-74; the same market has been defined in subsequent cases: *Microsoft/Nokia* (Case COMP/M.7047) Commission Decision, paras 43-5; *Facebook/WhatsApp* (Case M.7217) Commission Decision, paras 20-34; *Microsoft/LinkedIn* (Case M.8124) Commission Decision, paras 77-83.

<sup>7</sup> See notably Fabio Polverino, ‘Hunting the wild geese: competition analysis in a world of “free”’ (2012), 25 p. <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2145545](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145545)>; Miguel Sousa Ferro, ‘Ceci n’est pas un marché: Gratuité and competition law’ (2015) *Concurrences*, 13 p.; John Newman, ‘Antitrust in Zero-Price Markets: Applications’ (2016) 94 *Washington University Law Review* 49, 60-71; Miguel Sousa Ferro, ‘De Gratis Non Curat Lex: Abuse of Dominance in Online Free Services’ (2017) 12 *Competition Law Review* 153, 155-8. See also Competition Bureau of Canada, ‘Big data and Innovation: Implications for Competition Policy in Canada’ (Draft Discussion Paper) 2017, 12-4, available via <<http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04304.html>>.

<sup>8</sup> For guidance, see John Newman, ‘Antitrust in Zero-Price Markets: Applications’ (2016) 94 *Washington University Law Review* 49, 71-3.

<sup>9</sup> Case T-79/12 *Cisco v Commission* EU:T:2013:635, para 73.

<sup>10</sup> As to one of the main reasons for free services, i.e. data collection, the Dutch Competition Authority states: ‘the relationship between data collection and market power requires assessment on a case-by-case basis’. See Authority for Consumers and Markets, ‘A closer look at online video platforms’ (Report) 2018, 3 and 54. For more guidance on data as a source of market power, see Bundeskartellamt, ‘The market power of platforms and networks’ (Working Paper) 2016, 11-3.

<sup>11</sup> The choice for a case study approach is motivated by two considerations. First, the online platform economy is relatively young, which means precedent is not plenty. At the same time, competition law is a highly factual field of law. Therefore, the use of case studies will be particularly helpful to illuminate broader points. (Note that the case study approach is also explicitly taken in Michal Gal and Daniel Rubinfeld, ‘The Hidden Costs of Free Goods: Implications for Antitrust Enforcement’ (2016) 80 *Antitrust Law Journal* 521.)

<sup>12</sup> For the first description of ‘freemium’, at least under that name, see Fred Wilson, ‘The Freemium Business Model’ (AVC, 23 March 2006) <[http://avc.com/2006/03/the\\_freemium\\_bu/](http://avc.com/2006/03/the_freemium_bu/)>

looks at how to take account of such consideration in excessive pricing assessment, using the German Competition Authority's decision on Facebook's exploitative practices as a case study.

## 2. Free

Online, *free* has become so ubiquitous that we now expect nothing less (or actually: more): we communicate through a free e-mail program, navigate using a free map service, are entertained by a free video platform—the examples are endless. In his popular book *Free: The Future of a Radical Price*,<sup>13</sup> Chris Anderson explains why:

*The rise of “freeconomics” is being driven by the underlying technologies that power the Web. Just as Moore’s law dictates that a unit of processing power halves in price every 18 months, the price of bandwidth and storage is dropping even faster. Which is to say, the trend lines that determine the cost of doing business online all point the same way: to zero.*<sup>14</sup>

The technologies underlying free services (processing power, bandwidth, storage) are thus not free yet, but they are getting closer. Of course, buying a rack of servers is not cheap—far from it. However, these hard drives constitute a fixed cost that can be spread out over thousands of users, which means the marginal cost of adding an extra user is very low.<sup>15</sup> Moreover, tech companies do not even need to buy servers anymore; they can simply lease server space.<sup>16</sup>

Chris Anderson is aware that the cost of online services is not zero yet.<sup>17</sup> Accordingly, the old adage holds: there is still no such thing as a free lunch.<sup>18</sup> Instead, ‘all forms of Free boil down to variations of the same thing: shifting money around from product to product, person to person, between now and later, or into nonmonetary markets and back out again.’<sup>19</sup> More specifically, there are three business models that support the supply of free products.<sup>20</sup>

1. *Direct cross-subsidies*. When you are acquiring two products from the same company, they can offer you one for free and have you pay for the other. In other words, they can cross-subsidize directly (contrary to the indirect cross-subsidization by platforms). For example, Amazon can offer you free shipping on orders over 29 EUR because it is making a profit on the order itself. This cross-subsidy can also be spread out over time. Platforms such as Uber give first-time users a credit, which may make their first ride free, because they expect to profit from these users afterwards (a practice called ‘penetration pricing’).<sup>21</sup>
2. *Two-sided markets*. As explained above, platforms—which operate in two-sided markets—are able to offer their service for free to one user group by having the other pay for it. Media markets, which subsidize consumers while letting advertisers pay, are an important category in this respect. Online news, for example, is free because you are subjected to the website's advertisements. In fact, a large part of the internet is free in the sense that you are paying by watching (targeted) advertisements, all of which falls in the two-sided market category.
3. *Freemium*. A freemium model consists in offering any customer a free service, while convincing some of them to pay a premium for extra or enhanced services. This model in particular is made possible by the extremely low marginal cost of providing a product online. Consider, for example, news websites such as the *New York Times* and the *Wall Street Journal* which operate a ‘pay wall’, allowing you to read  $x$  articles for free over a certain period of time, but requiring a subscription for article  $x+1$  onwards. Other examples of free services include LinkedIn, Dropbox and Skype, which all offer an enhanced, paid version (LinkedIn Premium, Dropbox Plus and Skype for Business).

This typology of *free* has also been influential in legal scholarship.<sup>22</sup> In what follows, I will focus on the two-sided market and freemium models.<sup>23</sup> It must be noted, however, that there is no strict division between the categories. As

<sup>13</sup> Chris Anderson, ‘Free: The Future of a Radical Price’ (Hyperion 2009), 288 p.

<sup>14</sup> Quotation taken from an article summarizing the main points of the book: Chris Anderson, ‘Free! Why \$0.00 is the Future of Business’ (Wired, 25 February 2008) <[www.wired.com/2008/02/ff-free/](http://www.wired.com/2008/02/ff-free/)>.

<sup>15</sup> The initial development of the application or content that draws users would also be considered a fixed cost.

<sup>16</sup> Using server space as shorthand for the various technologies underpinning an online business, including computing, storage, networking, analytics, etc. Companies such as Amazon Web Services offer all of those on a subscription basis, see <<https://aws.amazon.com/>>.

<sup>17</sup> He knows they will never be, but does contend that at some point ‘they’re cheap enough to be safely disregarded’.

<sup>18</sup> The quote was popularized by a fable written Walter Morrow working for the Scripps-Howard newspaper chain, and gained further prominence by serving as the title for a book by Milton Friedman, see <<https://quoteinvestigator.com/2016/08/27/free-lunch/>>.

<sup>19</sup> Chris Anderson, ‘Free: The Future of a Radical Price’ (Hyperion 2009) [e-book].

<sup>20</sup> In the initial article, Chris Anderson breaks the priceless economy down to six categories, namely (i) freemium, (ii) advertising,

(iii) cross-subsidies, (iv) zero marginal cost, (v) labor exchange, and (vi) gift economy. However, at the end of the follow-up book, he only distinguishes three categories of business models built on free, see Chris Anderson, ‘Free: The Future of a Radical Price’ (Hyperion 2009) [e-book].

<sup>21</sup> See e.g. Geoffrey Parker and Marshall Van Alstyne, ‘Two-Sided Network Effects: A Theory of Information Product Design’ (2005) 51 *Management Science* 1494, 1497, who define penetration pricing as a situation ‘in which a good is subsidized initially on expectation of future exploitation.’

<sup>22</sup> See David Evans, ‘The Antitrust Economics of Free’ (2011) 7 *Competition Policy International* 71, 73-77; John Newman, ‘Antitrust in Zero-Price Markets: Foundations’ (2015) 164 *University of Pennsylvania Law Review* 149, 154-7, where he sets out these categories as the ‘sustainable models’ of free with the exception of penetration pricing, which he classifies as a non-sustainable strategy; Michal Gal and Daniel Rubinfeld, ‘The Hidden Costs of Free Goods: Implications for Antitrust Enforcement’ (2016) 80 *Antitrust Law Journal* 521, 525-6, who refer to ‘complementary products’ rather than ‘cross-subsidies’—an only subtly different category.

<sup>23</sup> Direct cross-subsidies are left out for two reasons: (i) firstly, they have been around for a long time, and have thus been studied to an appreciable extent; (ii) secondly, their most interesting/novel

set out above, certain newspapers combine the two-sided (advertising-based) model with a freemium (pay-wall) strategy. And penetration pricing, a form of cross-subsidy, is a 'natural outcome' in two-sided markets.<sup>24</sup> In such markets, attracting users on the consumer side is especially important, because they will attract suppliers, which will in turn attract more consumers (the so-called 'positive feedback loop'). Penetration pricing may also intersect with a freemium strategy. Adobe, for example, gives its file reader away for free in order to popularize the PDF standard; at the same time, it also profits from selling an enhanced version (Acrobat Pro).<sup>25</sup>

Before we look at the two-sided and freemium models through the lens of competition law, let us take a psychological perspective.<sup>26</sup> After all, an economist may argue that 'a "free price" simply means that the competitive market or the profit-maximizing firms sets a price of zero. Zero is just another number.'<sup>27</sup> This must be nuanced from a psychological perspective. Indeed, in his book *Predictably Irrational*, Dan Ariely explains how '[z]ero is not just another price [...]. Zero is an emotional hot button—a source of irrational excitement.'<sup>28</sup>

In a telling experiment,<sup>29</sup> Ariely (together with Kristina Schampanier and Nina Mazar) set up a stand selling two kinds of chocolate: a delicate Swiss truffle for 15 cents and an ordinary American chocolate for one cent. Consumers were apparently duly aware of the quality difference, as 73% went for the truffle. The experimenters then decreased the price of each chocolate by one cent (thus keeping the price difference unchanged), which meant the ordinary chocolate was now free. Standard economic theory predicts that customers would still choose the truffle by the same margin of preference.<sup>30</sup> In reality, however, the truffle was now chosen only 31% of time.<sup>31</sup>

manifestation is technological tying (e.g. between an OS/app store and applications), which goes beyond the scope of this paper.

<sup>24</sup> Mark Rysman, 'The economics of two-sided markets' (2009) 23 *Journal of Economic Perspectives* 125, 131.

<sup>25</sup> *ibid.*

<sup>26</sup> Also taking the psychological perspective: John Newman, 'Antitrust in Zero-Price Markets: Foundations' (2015) 164 *University of Pennsylvania Law Review* 149, 182-9; Michal Gal and Daniel Rubinfeld, 'The Hidden Costs of Free Goods: Implications for Antitrust Enforcement' (2016) 80 *Antitrust Law Journal* 521, 528-31.

<sup>27</sup> David Evans, 'The Antitrust Economics of Free' (2011) 7 *Competition Policy International* 71,

<sup>28</sup> Dan Ariely, 'Predictably Irrational: The Hidden Forces that Shape our Decisions' (HarperCollins 2009), 348 p. The quote is taken from page 55, what follows from the chapter 'The Cost of Zero Cost: Why We Often Pay Too Much When We Pay Nothing' (pp. 55-72).

<sup>29</sup> For the original paper, see Kristina Schampanier, Nina Mazar and Dan Ariely, 'Zero as a Special Price: The True Value of Free Products' (2007) 26 *Marketing Science* 742. For a follow-up experiment involving free tattoos (and confirming *free* as a source of irrational excitement), see Dan Ariely, 'The Power of Free Tattoos' (*Dan Ariely Blog*, 10 November 2010) <<http://danariely.com/2010/11/10/the-power-of-free-tattoos/>>.

<sup>30</sup> Dan Ariely, 'Predictably Irrational: The Hidden Forces that Shape our Decisions' (HarperCollins 2009), 73-4.

<sup>31</sup> To eliminate transaction costs as a possible cause for this change, they carried out a similar test at the register of a cafeteria where people already had to pay for another product, and thus did not need to go looking for change. The results did not differ.

Ariely has dubbed this sway of free products over consumer behaviour the 'zero price effect'.<sup>32</sup>

Ariely saw the zero price effect confirmed in a natural experiment involving Amazon. At some point, the online retailer started offering free shipping on orders over a certain amount. This led to an increase in consumer spending (adding an extra item to the shopping cart to qualify for free shipping always seems like a good idea), except in France. There, the competent division priced the shipping for those orders at one franc. When Amazon later made the shipping completely free, France joined all other countries in a dramatic sales increase. In other words, 'whereas shipping for one franc—a real bargain—was virtually ignored by the French, FREE! shipping caused an enthusiastic response.'<sup>33</sup> (In an interesting turn of events, France banned the free shipping of books in 2014 to protect brick-and-mortar bookstores<sup>34</sup>—to which Amazon responded by pricing its shipping at one eurocent.<sup>35</sup>)

Having considered *free* from a technological, economic and psychological angle, we now take the competition law perspective. Before we proceed, a remark on terminology is in order. Thus far, I have used the term 'free' in the strict sense of the word, namely not costing any *money*. However, many of the examples of free products do cost something, primarily our personal information and attention, which is why the term 'zero-price' is more accurate.<sup>36</sup> They will be used interchangeably in the remainder of this paper.

### 3. Predatory pricing

Under this section, I explore the primary competition law concern that arises from free products: are they the result of predatory pricing? In the landmark *Akzo* case, the European Court of Justice (ECJ) established two criteria to underpin this doctrine. Firstly, there is a 'black zone':

<sup>32</sup> As to the reason of this—at least to standard economic theory—irrational behaviour, Ariely theorizes as follows: 'Most transactions have an upside and a downside, but when something is FREE! we forget the downside. FREE! gives us such an emotional charge that we perceive what is being offered as immensely more valuable than it really is.' See Dan Ariely, 'Predictably Irrational: The Hidden Forces that Shape our Decisions' (HarperCollins 2009), 60.

<sup>33</sup> *ibid.* 65.

<sup>34</sup> Loi n° 2014-779 du 8 juillet 2014 encadrant les conditions de la vente à distance des livres, art 1, which modifies Loi n° 81-766 du 10 août 1981 relative au prix du livre, art 1. The law also prohibits online booksellers from discounting books (under the 'fixed book price' regime, brick-and-mortar booksellers are allowed to discount books up to 5% from the publisher's price).

<sup>35</sup> See Amazon, 'Changements apportés aux modalités de la livraison Rapide gratuite sur Amazon.fr' <[www.amazon.fr/gp/help/customer/display.html?ie=UTF8&nodeId=201360370](http://www.amazon.fr/gp/help/customer/display.html?ie=UTF8&nodeId=201360370)>; for reporting in English, see Alison Griswold, 'France Banned Free Shipping. So Amazon Made It Cost One Cent.' (*Slate*, 11 July 2014) <<https://slate.com/business/2014/07/france-banned-free-shipping-so-amazon-made-it-cost-one-cent.html>>.

<sup>36</sup> See John Newman, 'Antitrust in Zero-Price Markets: Foundations' (2015) 164 *University of Pennsylvania Law Review* 149, 151-2.

Prices below average variable costs (that is to say, those which vary depending on the quantities produced) by means of which a dominant undertaking seeks to eliminate a competitor must be regarded as abusive.<sup>37</sup>

The reasoning goes that a dominant undertaking ‘has no interest in applying such prices except that of eliminating competitors so as to enable it subsequently to raise its prices by taking advantage of its monopolistic position’.<sup>38</sup> After all, when pricing below average variable costs, ‘each sale generates a loss, namely the total amount of the fixed costs (that is to say, those which remain constant regardless of the quantities produced) and, at least, part of the variable costs relating to the unit produced.’<sup>39</sup> Thus, pricing below average variable costs is *prima facie* abusive.<sup>40</sup>

The ECJ also established a ‘grey zone’:

Moreover, prices below average total costs, that is to say, fixed costs plus variable costs, but above average variable costs, must be regarded as abusive if they are determined as part of a plan for eliminating a competitor.<sup>41</sup>

The ECJ holds that such prices ‘can drive from the market undertakings which are perhaps as efficient as the dominant undertaking but which, because of their smaller financial resources, are incapable of withstanding the competition waged against them.’<sup>42</sup> Thus, pricing below average total costs but above average variable costs is abusive when part of a plan for eliminating a competitor. On top of the objective measure of price, there must be intent.

The Akzo test for predatory pricing has since been consistently confirmed.<sup>43</sup> What lingers is the question of ‘recoupment’. In the United States, in order for predatory pricing to be unlawful:

A plaintiff must prove (1) that the prices complained of are below an appropriate measure of its rival’s costs and (2) that the competitor had a reasonable prospect of recouping its investment in below-cost prices.<sup>44</sup>

The Supreme Court considers recoupment<sup>45</sup> necessary as below-cost prices may also have pro-competitive effects: ‘[E]ven if predatory pricing causes the target painful losses, it produces lower aggregate prices in the market, and consumer welfare is enhanced.’<sup>46</sup> The ECJ has addressed this point in the *France Télécom* case, clarifying its contrary position:

[I]t does not follow from the case-law of the Court that proof of the possibility of recoupment of losses suffered by the application, by an undertaking in a dominant position, of prices lower than a certain level of costs constitutes a necessary precondition to establishing that such a pricing policy is abusive.<sup>47</sup>

However, one nuance narrows the gap between the EU and the US position. The ECJ accepts that finding a possibility of recoupment may still be relevant: (i) in the ‘black zone’: to exclude economic justifications other than the elimination of a competitor, and (ii) in the ‘grey zone’: to assist in establishing that a plan to eliminate a competitor exists.<sup>48</sup>

Under the theory set out above, free products look suspicious. After all, a price of zero is necessarily below cost: digital products may have low marginal costs, but the cost is certainly not zero. Therefore, the provision of any free product seems *prima facie* abusive under the predatory pricing doctrine. At the same time, consumers love free products. As Google’s Dana Wagner puts it:

Keep in mind that competition laws are concerned with what’s best for consumers, not for competing companies, and there’s little doubt that from a consumer perspective, free products are usually a great thing.<sup>49</sup>

The question is how to achieve harmony between the law as it stands and the consumer benefit resulting from free. The answer lies in the fact, mentioned earlier, that digital products are not actually free: somewhere, somehow, someone is paying. In the following section, I discuss whether and how predatory pricing law should adapt to free products, focusing on the two-sided market and freemium models.

### 3.1. Two-sided markets

The introduction already offered the basics on two-sided markets and the platform economy they drive. Remember that platforms connect (at least) two user groups, maintaining an unbalanced price structure in order to optimize participation from each side. Accordingly, Caillaud and Jullien hold that a key pricing strategy for platforms consists in ‘subsidizing the

<sup>37</sup> Case C-62/86 *Akzo Chemie v Commission* EU:C:1991:286 [1991] ECR I-3359, para 71.

<sup>38</sup> *ibid.*

<sup>39</sup> *ibid.*

<sup>40</sup> The ECJ has later confirmed that ‘the eliminatory intent of the undertaking at issue could be presumed in view of that undertaking’s application of prices lower than average variable costs’, see Case C-202/07 P *France Télécom v Commission* EU:C:2009:214 [2009] ECR I-02369, para 110.

<sup>41</sup> Case C-62/86 *Akzo Chemie v Commission* EU:C:1991:286 [1991] ECR I-3359, para 72.

<sup>42</sup> *ibid.*

<sup>43</sup> See recently Case C-202/07 P *France Télécom v Commission* EU:C:2009:214 [2009] ECR I-02369, para 109; Case C-209/10 *Post Danmark v Konkurrencerådet* EU:C:2012:172, paras 27–8. Note that the Commission uses average avoidable costs rather than average variable costs as the appropriate benchmark, but the differences are subtle, see Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C45/7, para 64.

<sup>44</sup> US Supreme Court 21 June 1993, Case No. 92–466, *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 210. On top of this, there must be likely injury to competition in the relevant market.

<sup>45</sup> In short, for recoupment to occur, ‘the pricing must be capable, as a threshold matter, of producing the intended effects on the firm’s rivals’, see *ibid.*

<sup>46</sup> *ibid.*

<sup>47</sup> Case C-202/07 P *France Télécom v Commission* EU:C:2009:214 [2009] ECR I-02369, para 110.

<sup>48</sup> *ibid.*, para 111.

<sup>49</sup> Dana Wagner, ‘Is free an antitrust issue?’ (*Google Public Policy Blog*, 10 July 2009) <<https://publicpolicy.googleblog.com/2009/07/is-free-antitrust-issue.html>>.

participation of one side [...] and recovering the loss on the other side'.<sup>50</sup>

Which side will receive the subsidy and which side will have to pay? This business decision (at least when made consciously) depends on a complex combination of the price elasticity of each user group, the relative strength of indirect network effects and the users' ability to multi-home (i.e. connect with several platforms).<sup>51</sup> A more intuitive shortcut to determine who will receive the subsidy is asking which user group is more 'valuable'. In an online marketplace, is it the retailers or the customers? With a search engine, is it the advertisers or the potential customers looking for something? Consumers are often the most valuable side of the market, and will thus get a free service.

Offering consumers a free service can thus make perfect sense from a business point of view, as retailers or advertisers foot the bill. This is the origin of the famous saying: 'If you are not paying for it, you're not the customer; you're the product being sold.'<sup>52</sup> However, the fact remains that these zero-priced services are provided to consumers below cost. Is this therefore a case for the application of the predatory pricing doctrine? In fact, this is one of the more explored competition law implications of two-sided markets.<sup>53</sup> David Evans and Richard Schmalensee reflect the consensus when they hold that 'standard cost-based tests for detecting predatory pricing generally make no economic sense for a multi-sided business.'<sup>54</sup>

<sup>50</sup> Bernard Caillaud and Bruno Jullien, 'Chicken & egg: competition among intermediation service providers' (2003) 34 *RAND Journal of Economics* 309, 310.

<sup>51</sup> David Evans, 'The antitrust economics of multi-sided platform markets' (2003) 20 *Yale Journal on Regulation* 325, 343-7; Jean-Charles Rochet and Jean Tirole, 'Two-sided markets: a progress report' (2006) 37 *RAND Journal of Economics* 645, 658-60; Mark Armstrong, 'Competition in two-sided markets' (2006) 37 *RAND Journal of Economics* 668, 668-70; Mark Rysman, 'The economics of two-sided markets' (2009) 23 *Journal of Economic Perspectives* 125, 129-31.

<sup>52</sup> See <<https://quoteinvestigator.com/2017/07/16/product/>> for the complex history of this quote.

<sup>53</sup> Amelia Fletcher, 'Predatory Pricing in Two-Sided Markets: A Brief Comment' (2007) 3 *Competition Policy International* 221; David Evans and Richard Schmalensee, 'The antitrust analysis of multi-sided platform businesses' (2012) Coase-Sandor Institute for Law and Economics Working Paper No. 623, 33-5; Miguel Rato and Nicolas Petit, 'Abuse of Dominance in Technology-Enabled Markets: Established Standards Reconsidered' (2013) 9 *European Competition Journal* 1, 49-52; Stefan Behringer and Lapo Filistrucchi, 'Areeda-Turner in Two-Sided Markets' (2015) 46 *Review of Industrial Organization* 287; Michal Gal and Daniel Rubinfeld, 'The Hidden Costs of Free Goods: Implications for Antitrust Enforcement' (2016) 80 *Antitrust Law Journal* 521, 556-8; John Newman, 'Antitrust in Zero-Price Markets: Applications' (2016) 94 *Washington University Law Review* 49, 102-5; Gönenç Gürkaynak, Öznur Inanılır, Sinan Diniz and Ayşe Gizem Yasar, 'Multi-sided markets and the challenge of incorporating multi-sided considerations into competition law analysis' (2017) 5 *Journal of Antitrust Enforcement* 100, 111-2.

<sup>54</sup> David Evans and Richard Schmalensee, 'The antitrust analysis of multi-sided platform businesses' (2012) Coase-Sandor Institute for Law and Economics Working Paper No. 623, 34.

To illustrate the above statement, let us start with a cautionary tale.<sup>55</sup> In the 1990s, British quality newspapers (the Times, the Independent, the Guardian and the Daily Telegraph) were engaged in a price war. The Times was leading the fight, slashing the price of its newspaper in half and selling certain issues for as little as 10 pence, which led to complaints by the other three newspapers. The Director General of Fair Trading intervened, holding that News International (which owned the Times) 'had deliberately made a loss on The Times [...] by pricing the Monday edition at 10p, and that this affected competition in the national daily newspaper market.'<sup>56</sup> The Office of Fair Trading did not go as far as to bring these predatory pricing charges to the Competition Commission, probably because the pricing policy had ended by then. However, it did receive an assurance from News International that it would not cut the Times's cover price without providing a detailed explanation and financial information 10 days in advance.<sup>57</sup> Looking only at the price that readers pay for the Times, a predatory pricing claim did indeed seem justified.<sup>58</sup>

However, the newspaper business is a two-sided market connecting readers with advertisers. Some newspapers are free to readers and financed fully by advertisements, while the cost of quality newspapers is usually shared between reader and advertiser. Considering this two-sided business model, a predatory pricing claim can no longer be supported. Research by Behringer and Filistrucchi reveals that the price cuts 'can be rationalized by the boom in the advertising market, which shifted the optimal business model of publishers towards more advertising financing.'<sup>59</sup>

The general lesson is that in two-sided markets, the two sides should be taken into account when examining whether prices are predatory. But how exactly do we adapt the standard test to fit the platform business model?

Shortly after Rochet and Tirole's 2003 article laid the groundwork for platform economics, authors (mostly economists) started looking at the predatory pricing implications of platforms' skewed price structures. In Julian Wright's 2004 article *One-sided Logic in Two-sided Markets*, for example, he listed eight fallacies, one of them being that '[a] price below marginal cost indicates predation.'<sup>60</sup> But the first substantial discussion came from David Evans, who proposed

<sup>55</sup> Also discussed by Stefan Behringer and Lapo Filistrucchi, 'Areeda-Turner in Two-Sided Markets' (2015) 46 *Review of Industrial Organization* 287, 298-300.

<sup>56</sup> United Kingdom, Competition policy report to the OECD (1999) 2407625, 19.

<sup>57</sup> *ibid.*

<sup>58</sup> Stefan Behringer and Lapo Filistrucchi, 'Areeda-Turner in Two-Sided Markets' (2015) 46 *Review of Industrial Organization* 287, 300.

<sup>59</sup> More specifically, the price cut by the Times led to a substantial increase in circulation, which in turn led to an increase in advertising revenue: Stefan Behringer and Lapo Filistrucchi, 'Areeda-Turner in Two-Sided Markets' (2015) 46 *Review of Industrial Organization* 287, 300; for the data and modeling, see Stefan Behringer and Lapo Filistrucchi, 'Price Wars in Two-Sided Markets: The case of the UK Quality Newspapers' (2010), 43 p., unpublished paper (available via <[https://editorialexpress.com/cgi-bin/conference/download.cgi?db\\_name=JEL2010&paper\\_id=101](https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=JEL2010&paper_id=101)>).

<sup>60</sup> Julian Wright, 'One-sided Logic in Two-sided Markets' (2004) 3 *Review of Network Economics* 44, 48.

the following—relatively simple—modification to predatory pricing tests: ‘In multi-sided markets, one needs to compare the combined price charged to all sides to the combined costs incurred for all sides.’<sup>61</sup>

Similar proposals followed. Fletcher, for example, wrote that predation occurs ‘where a platform prices its total service at a level that fails to cover its avoidable costs of providing the total service, taking revenues from both sides of the market into account.’<sup>62</sup> Rato and Petit confirm that ‘any price-cost analysis of predatory abuse allegations should be based on the price charged [...] to indirect users in the case of multi-sided markets’, adding—for good measure—that ‘low or zero prices should generally be deemed to benefit consumers’.<sup>63</sup>

Dedicating a full article to the issue, Behringer and Filistrucchi were the first ones to economically model the predatory pricing test in two-sided markets.<sup>64</sup> In line with the previously mentioned authors, they argue that predatory pricing occurs when a dominant undertaking is making an overall loss at the margin.<sup>65</sup> More specifically:

*Testing for predatory pricing in a two-sided market [...] has to recognize that price-cost margins on the two sides of the market are interrelated. We thus show that one needs to compare the overall price level with the joint marginal cost of the two-sides of the market. Since [...] marginal cost data are difficult to obtain, one should compare the overall price level with the overall average variable cost.*<sup>66</sup>

Thus, a finding of negative profit margins on both sides of the market would be sufficient to justify a presumption of predatory pricing, but it would not be necessary.<sup>67</sup> A negative margin on one side could also constitute predatory pricing, depending on how negative the margin is and how financially dominant that side is.

Some authors have discussed the same problem of predatory pricing in two-sided markets, but with different solutions.

<sup>61</sup> David Evans, ‘The antitrust economics of multi-sided platform markets’ (2003) 20 *Yale Journal on Regulation* 325, 367. About ten years later, Evans confirmed his original position, writing that one should ‘determine whether the platform has adopted an unprofitable set of prices’, see David Evans and Richard Schmalensee, ‘The antitrust analysis of multi-sided platform businesses’ (2012) Coase-Sandor Institute for Law and Economics Working Paper No. 623, 34. Endorsing this test, see Gönenç Gürkaynak, Öznur Inanlı, Sinan Diniz and Ayse Gizem Yasar, ‘Multi-sided markets and the challenge of incorporating multi-sided considerations into competition law analysis’ (2017) 5 *Journal of Antitrust Enforcement* 100, 112.

<sup>62</sup> Amelia Fletcher, ‘Predatory Pricing in Two-Sided Markets: A Brief Comment’ (2007) 3 *Competition Policy International* 221, 223. She added that ‘more subtly, it may be possible in some circumstances for a dominant platform to predate through asymmetric pricing between the two sides of the market.’ While stating that this might merit competition policy intervention, she did not detail how to test for such predation.

<sup>63</sup> Miguel Rato and Nicolas Petit, ‘Abuse of Dominance in Technology-Enabled Markets: Established Standards Reconsidered’ (2013) 9 *European Competition Journal* 1, 52.

<sup>64</sup> Stefan Behringer and Lapo Filistrucchi, ‘Areeda-Turner in Two-Sided Markets’ (2015) 46 *Review of Industrial Organization* 287.

<sup>65</sup> *ibid.* 296.

<sup>66</sup> *ibid.* 290.

<sup>67</sup> *ibid.* 297.

Gal and Rubinfeld point out that EU law may create false positives: indeed, ‘when narrowly applied, a price of zero seems to be the worst type of predation’.<sup>68</sup> They suggest that ‘[a] requirement of potential recoupment, as required in the United States, solves this false positive problem’, specifying that recoupment should be sought not only in the market for the free product but also in interrelated markets.<sup>69</sup> However, the ECJ has rejected any recoupment requirement (*supra*, Section 3), and a reversal seems unlikely.

John Newman confirms that a recoupment assessment that takes interrelated markets into account may prevent errors.<sup>70</sup> He also worries that not considering the information and attention costs consumers incur when making use of free services may lead to errors. To prevent this, he recommends courts consider the ‘all-in price charged’, including information and attention costs, when carrying out a predatory pricing assessment.<sup>71</sup> Quantifying information and attention in monetary units is, however, a difficult task (*infra*, Section 4.1). Therefore, it appears more appropriate to use advertising revenue as a proxy, and carry out the two-sided predatory pricing test as set out above.

The most sophisticated test, finally, comes from Michael Katz. Katz discusses Behringer and Filistrucchi’s test to determine costs and prices, but argues it is imperfect as even then, ‘there can be above-cost pricing that lowers welfare by weakening rivals and below-cost pricing that raises welfare.’<sup>72</sup> In order to remedy the observed failure of the price-cost test, Katz proposes to follow it up with a form of no-economic-sense test, which delves into the rationale of the pricing strategy:

*Is below-cost pricing profitable for the platform because it makes the platform a stronger competitor by building up its user base? Or is the below-cost pricing profitable only because it also weakens competition by preventing rivals from building their own user bases?*<sup>73</sup>

However, such addition to Behringer and Filistrucchi’s price-cost test seem unnecessary. Their test provides a solid foundation for predatory pricing assessments in two-sided markets—and it should not do more. Indeed, the Commission will in any case go beyond the price-cost test by examining the market conditions to determine the likelihood of foreclosure.<sup>74</sup> The updated price-cost analysis can thus serve as the basic test for predation in two-sided markets, having in

<sup>68</sup> Michal Gal and Daniel Rubinfeld, ‘The Hidden Costs of Free Goods: Implications for Antitrust Enforcement’ (2016) 80 *Antitrust Law Journal* 521, 556.

<sup>69</sup> *ibid.* 557–8.

<sup>70</sup> John Newman, ‘Antitrust in Zero-Price Markets: Applications’ (2016) 94 *Washington University Law Review* 49, 105.

<sup>71</sup> *ibid.* 104–5.

<sup>72</sup> Michael Katz, ‘Exclusionary Conduct in multi-sided markets’ in OECD (ed.), *Rethinking Antitrust Tools for Multi-Sided Platforms*, 110.

<sup>73</sup> *ibid.*, 113.

<sup>74</sup> Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C45/7, paras 20, 23, 63 and 67–73; Katz recognized this to some extent, see Michael Katz, ‘Exclusionary Conduct in multi-sided markets’ in OECD (ed.), *Rethinking Antitrust Tools for Multi-Sided Platforms*, 107–8.

particular the potential to prevent false positives (such as in the OFT's newspaper case).

Practical issues with predatory pricing assessments in two-sided markets have thus far been limited, which may indicate that competition authorities are generally aware of the pitfalls. This awareness also shows from the work of the International Competition Network (ICN). In its Unilateral Conduct Workbook's chapter on predatory pricing, the authors qualify 'pricing to balance the two sides of a two-sided market' as a justification for below-cost pricing.<sup>75</sup> Inspired perhaps by the UK newspaper price wars, they illustrate their point as follows: 'For example, a newspaper may choose to sell its publications below cost in order to increase circulation, with the aim of covering its costs through higher advertising rates.'<sup>76</sup>

In conclusion, free (or low-priced) services offered by online platforms do not constitute predatory pricing as long as (i) the overall price level exceeds the average total cost of providing the service to the different sides of the market; or (ii) the overall price level exceeds the average variable but not total cost, and there is no intention to eliminate a competitor. As is (almost) always the case in abuse of dominance assessments, an accompanying foreclosure analysis may nuance the initial results.

All of this is not to say, however, that online platforms are inherently unlikely to engage in predatory pricing. In fact, the economics guiding platforms may just give them a reason to do so.<sup>77</sup> As explained above, platforms need to attract users on both sides of the market in order to be successful. Importantly, as the value of the platform is determined by the quantity (and quality) of the users on either side, attracting users will attract yet more users—and so on (the 'positive feedback loop' mentioned earlier). Platforms are thus engaged in a race to attain a workable number of users ('critical mass'), especially as—in the end—no more than a few platforms (and often even one) dominate the market.<sup>78</sup>

Platforms are therefore said to compete for the market rather than in the market.<sup>79</sup> In doing so, they often pursue a growth-over-profits strategy, opting to reinvest rather than to turn a profit.<sup>80</sup> While certainly not problematic in itself, Amazon's devotion to such a strategy has prompted predatory pricing

allegations.<sup>81</sup> The platform may even go one step further, i.e. suffering losses beyond simply foregoing profits. Uber, for example, has been raking up losses in its battle for ride-hailing dominance (through low prices and various bonuses for both drivers and riders).<sup>82</sup> This conduct has spurred competitors to bring predatory pricing cases.<sup>83</sup> While these cases have generally been unsuccessful, the premise they rest on remains valid: the best platform should win, not the one with the largest amount of venture capital to burn through.<sup>84</sup>

### 3.2. The freemium model

*On the one hand, information wants to be expensive, because it's so valuable. The right information in the right place just changes your life. On the other hand, information wants to be free, because the cost of getting it out is getting lower and lower all the time. So you have these two fighting against each other.*<sup>85</sup>

The above quote by futurist Stewart Brand captures the tension between the low costs of producing digital products and their potentially high value. A common way to manage this tension is the freemium model. Fred Wilson, the venture capitalist who coined the term,<sup>86</sup> explains this business model as follows:

<sup>81</sup> Lina Khan, 'Amazon's Antitrust Paradox' (2017) 126 Yale Law Journal 710, 722-30, 747-53, 756-68 and 791-2; discussing Khan, see Niamh Dunne, 'OECD Roundtable on the Implications of E-commerce for Competition Policy' (Background Note) DAF/COMP(2018)3, 31-3. See also Alexis Madrigal, 'A Silicon Valley Congressman Takes On Amazon' (*The Atlantic*, 19 June 2017) <<https://www.theatlantic.com/technology/archive/2017/06/ro-khanna-amazon-whole-foods/530805/>>.

<sup>82</sup> Leslie Hook, 'Uber losses mount amid tough global competition' (*Financial Times*, 29 November 2017) <[www.ft.com/content/4e8c89ce-d4a5-11e7-a303-9060cb1e5f44](http://www.ft.com/content/4e8c89ce-d4a5-11e7-a303-9060cb1e5f44)>.

<sup>83</sup> For an overview, see Parveer Ghuman, 'Analysis of Competition Cases Against Uber Across the Globe' (CUTS International View Point Paper, March 2017), available via <[http://www.cuts-ccier.org/pdf/Analysis\\_of\\_Competition\\_Cases\\_Against\\_Uber\\_Across\\_the\\_Globe.pdf](http://www.cuts-ccier.org/pdf/Analysis_of_Competition_Cases_Against_Uber_Across_the_Globe.pdf)>. On the US case, see Nick Passaro, 'Uber has an Antitrust Litigation Problem, Not an Antitrust Problem' (2018) CPI Antitrust Chronicle May, 41-2.

<sup>84</sup> See David Evans and Richard Schmalensee, 'The antitrust analysis of multi-sided platform businesses' (2012) Coase-Sandor Institute for Law and Economics Working Paper No. 623, 34-5, where they discuss how an incumbent platform can exclude competition from rival start-ups by charging unprofitably low prices, thereby preventing them from obtaining the essential critical mass.

<sup>85</sup> A quote by Stewart Brand; for some indication as to its meaning from the speaker himself, see Jennifer Lai, 'Information wants to be free... And expensive' (*Fortune*, 20 July 2009) <<http://fortune.com/2009/07/20/information-wants-to-be-free-and-expensive/>> and Chris Anderson, 'Free: The Future of a Radical Price' (Hyperion, 2009) [e-book].

<sup>86</sup> See Fred Wilson, 'The Freemium Business Model' (AVC, 23 March 2006) <[http://avc.com/2006/03/the\\_freemium\\_bu/](http://avc.com/2006/03/the_freemium_bu/)>, where he enthusiastically writes: 'I hope the name sticks because I love it.' Economists had discussed the business model (without the great name) before; for example, Parker and Van Alstyne discussed 'upgrades with externalities between novice and pro users', distinguishing it from price discrimination, see Geoffrey Parker and Marshall Van Alstyne, 'Two-Sided Network Effects: A Theory of Information Product Design' (2005) 51 *Management Science* 1494, 1503.

<sup>75</sup> ICN Unilateral Conduct Working Group, 'Unilateral Conduct Workbook Chapter 4: Predatory Pricing Analysis' (presented at the 11th Annual ICN Conference, Rio de Janeiro, April 2012), 57.

<sup>76</sup> *ibid* 60.

<sup>77</sup> On this point, see also Kenneth Bamberger and Orly Lobel, 'Platform Market Power' (2017) 32 *Berkeley Technology Law Journal* 1051, 1081-2.

<sup>78</sup> David Evans and Richard Schmalensee, 'Failure to Launch: Critical Mass in Platform Businesses' (2010) 9 *Review of Network Economics* 1.

<sup>79</sup> See Inge Graef, *EU competition law, data protection and online platforms: data as essential facility* (Kluwer Law International 2016), chapter 3.

<sup>80</sup> See e.g. Lina Khan, 'Amazon's Antitrust Paradox' (2017) 126 *Yale Law Journal* 710, 746-55 and 803, and Nick Srnicek, *Platform Capitalism* (polity 2017), 119-21 ('there is a complete lack of profitability for most of these businesses. [...] The 'growth before profit' model dictates that taking significant losses is simply part of the strategy, though').

*Give your service away for free, possibly ad supported but maybe not, acquire a lot of customers very efficiently through word of mouth, referral networks, organic search marketing, etc, then offer premium priced value added services or an enhanced version of your service to your customer base.*<sup>87</sup>

In other words, the freemium model consists in letting users operate a free version of the product while having some of them pay for an upgrade to the premium version. Examples previously listed include the *New York Times*, LinkedIn, Dropbox and Skype. Vineet Kumar, who has been studying the freemium model in-depth, states it is already ‘the dominant business model among internet start-ups and smart-phone app developers’ while still being ‘destined to grow more attractive.’<sup>88</sup>

However, notwithstanding the success of the above companies, operating a freemium model is difficult, in particular because of what venture capitalist Josh Kopelman has coined the ‘penny gap’. He argues that price elasticity is not a constant, and definitely not for that first penny. In his words:

*The truth is, scaling from \$5 to \$50 million is not the toughest part of a new venture—it’s getting your users to pay you anything at all. The biggest gap in any venture is that between a service that is free and one that costs a penny.*<sup>89</sup>

In other words, it is very hard to get users to pay for anything—especially when they already benefit from a free version.<sup>90</sup> The penny gap finds support in the available numbers: on average, only 1–2% of free users are willing to go premium.<sup>91</sup> Despite these numbers, adding a premium tier remains the optimal strategy for certain advertising platforms.<sup>92</sup> Freemium models can, however, muddle predatory pricing cases. To illustrate the problem, and to formulate an answer, let us dive into the world of digital cartography.

Online maps are an important aspect of our lives, whether it is to locate our nearest caffeine fix or that dentist you swear was here last year. Mapping services are increasingly making use of drivers’ data on the state of traffic, which is either communicated explicitly by the drivers (making the service part social media), or simply transmitted while their app is open.<sup>93</sup> This move, led by navigation app Waze, allows for traffic eva-

sion and thus faster rides. Finally, it is a business that’s set to grow tremendously as autonomous cars depend crucially on the guidance of navigation services.

In the world of online mapping, Google is the undisputed leader: more than 1 billion people use the Google Maps smart-phone app every month (and it also owns Waze).<sup>94</sup> Moreover, the future looks bright as Google can build on this mapping dominance through its autonomous driving venture Waymo. For now, however, Google monetizes its mapping service mainly through advertising. *The Economist* explains how:

*Local search ads allow firms to place adverts inside the search results of a person who is physically near their premises, along with maps showing their locations. And promoted pins permit businesses to highlight their own positions along routes that Google calculates for navigation—a pin for a Starbucks en route to Central Park in New York, say. Morgan Stanley, an investment bank, projects that such ads will generate \$1.4bn of revenue for Google in 2017, rising to \$3.3bn by 2020.*<sup>95</sup>

Google also allows companies to embed its mapping applications (‘Maps API’) in their website or mobile phone app. Users of those websites or apps then have access to Google’s services including directions, estimated travel times and its Street View feature. Ride-hailing app Lyft, for example, makes use of Maps API to connect drivers with riders.<sup>96</sup> Importantly, Maps API is provided for free.

In France, the company Bottin Cartographes also provided online mapping applications for websites, licensing its services through an annual subscription model. In 2009, Bottin Cartographes started proceedings against Google, accusing it of abusing its dominant position by predatory pricing in the market for ‘mapping application to be embedded in websites’.<sup>97</sup> The Paris commercial court considered the claim.<sup>98</sup>

First, the court discussed how Google has a *de facto* monopoly on the search engine market. Given that the search engine market is closely connected to the digital cartography market, the court held Google’s dominant position to be ‘perfectly transposable’ from one to the other. The court then turned to the behavioural aspect, noting that the selling price of Maps API (which is zero) does not cover the costs of producing and distributing the product.

which means more accurate navigation, which in turn draws more users—and so on (the positive feedback loop mentioned earlier).

<sup>94</sup> ‘The battle for territory in digital cartography: Not all roads lead to Google Maps’ (*The Economist*, 8 June 2017) <[www.economist.com/news/business/21723173-not-all-roads-lead-google-maps-battle-territory-digital-cartography](http://www.economist.com/news/business/21723173-not-all-roads-lead-google-maps-battle-territory-digital-cartography)>.

<sup>95</sup> *ibid.*

<sup>96</sup> See <<https://developers.google.com/maps/>>.

<sup>97</sup> Also discussing this case, see Miguel Rato and Nicolas Petit, ‘Abuse of Dominance in Technology-Enabled Markets: Established Standards Reconsidered’ (2013) 9 *European Competition Journal* 1, 51-3 and Michal Gal and Daniel Rubinfeld, ‘The Hidden Costs of Free Goods: Implications for Antitrust Enforcement’ (2016) 80 *Antitrust Law Journal* 521, 550 and 556-8.

<sup>98</sup> Tribunal de commerce de Paris, case 2009061231, *Bottin Cartographes/Google France, Google Inc.*, 31 January 2012, available (in French) at <[www.legalis.net/jurisprudences/tribunal-de-commerce-de-paris-15eme-chambre-jugement-du-31-janvier-2012/](http://www.legalis.net/jurisprudences/tribunal-de-commerce-de-paris-15eme-chambre-jugement-du-31-janvier-2012/)>.

<sup>87</sup> Fred Wilson, ‘My Favorite Business Model’ (AVC, 23 March 2006) <[http://avc.com/2006/03/my\\_favorite\\_bus/](http://avc.com/2006/03/my_favorite_bus/)>.

<sup>88</sup> Vineet Kumar, ‘Making “Freemium” Work’ (*Harvard Business Review*, May 2014) <<https://hbr.org/2014/05/making-freemium-work>>.

<sup>89</sup> Josh Kopelman, ‘The Penny Gap’ (*Redeye VC*, 10 March 2007) <[http://redeye.firstround.com/2007/03/the\\_first\\_penny.html](http://redeye.firstround.com/2007/03/the_first_penny.html)>.

<sup>90</sup> Venture capitalist intuition is backed up by behavioural economics on this point. See Richard Thaler, *Misbehaving: The Making of Behavioral Economics* (Norton 2015), 131, noting that the endowment effect, i.e. feeling entitled to the terms of trade to which one is accustomed, is particularly strong with regard to goods or services that have traditionally been given away for free.

<sup>91</sup> Sarah Needleman and Angus Loten, ‘When Freemium Fails’ (*Wall Street Journal*, 22 August 2012) <[www.wsj.com/articles/SB10000872396390443713704577603782317318996](http://www.wsj.com/articles/SB10000872396390443713704577603782317318996)>.

<sup>92</sup> Susumu Sato, ‘Freemium as Optimal Menu Pricing’ (2017) MPRA Paper No. 81599, 24 p., available via <<http://mpra.ub.uni-muenchen.de/81599/1/FreemiumDP.pdf>>.

<sup>93</sup> Which means that network effects play an important role in the growth of navigation services: more users means more data,

This is where the assessment becomes muddled. The court quoted the French Supreme Court in holding that abnormally low prices are in themselves a form of abusive exploitation when charged by a company with a dominant position—yet predatory pricing is an exclusionary strategy as it seeks to drive competitors from the market. The court subsequently quoted the French Competition Authority (FCA) in holding that exclusion is proven when prices fall below variable costs—yet the costs it lists, namely for sourcing location data or aerial views from multiple providers and then processing this data, constitute fixed costs of building the mapping service.

Finally, the court decided that the zero-pricing of Maps API was part of a general strategy of exclusion aimed at the long-term objective of optimizing the marketing of targeted advertisements. Once competitors were driven out, the court reasoned, nothing would prevent Google from inserting advertising in its maps—as already foreseen in the terms and conditions.<sup>99</sup> The court thus found Google guilty of abusing its dominant position and ordered it to pay Bottin Cartographes 500,000 EUR. Google pursued the case before the Paris court of appeals.<sup>100</sup>

The Paris court of appeals returned to the dominance question, exploring in particular the connection of the online advertising market with the online mapping market.<sup>101</sup> The court decided that Google is dominant on the online advertising market, failing to provide proof both for this broad market definition and for Google's dominant position on it. Yet in combination with Google's leading position in the connected market for online mapping services for websites, the court considered the dominance question settled.

When it comes to the predatory nature of Google's pricing policy, the court held it is not in possession of the necessary information to decide, and thus asked the FCA for an opinion.<sup>102</sup> The FCA took an in-depth look at Google's business model, paying specific attention to the paid version of Maps API, called 'Maps API for Business'. While the free version is restricted, this premium version offers increased functionality such as a higher resolution, more itinerary options and real-time tracking of vehicles. Moreover, while Google had the (unused) contractual possibility to insert advertisements in the free version, the premium version was guaranteed to be ad-free. Businesses could license this premium version starting at 10,000 USD/year.

<sup>99</sup> The court even went one step further, holding that such advertising is actually already present. In order to come to this conclusion, the court argued that companies were choosing for the free Google Maps API (over the maps of Bottin Cartographes) because they rightly believed this would favour their ranking in Google's general search results. This reasoning is a stretch at best.

<sup>100</sup> Cour d'appel de Paris, case 12/02931, *Google France, Google Inc./Bottin Cartographes*, 20 November 2013, available (in French) at <[www.legalis.net/jurisprudences/cour-dappel-de-paris-pole-5-chambre-4-arret-du-20-novembre-2013/](http://www.legalis.net/jurisprudences/cour-dappel-de-paris-pole-5-chambre-4-arret-du-20-novembre-2013/)>.

<sup>101</sup> The court of first instance focused on the general search market, i.e. the other side of the online advertising market, but also noted the connection with the online advertising market.

<sup>102</sup> Autorité de la concurrence, Avis 14-A-18, *Bottin Cartographes/Google France, Google Inc.*, 16 December 2014, available (in French) at <[www.autoritedelaconcurrence.fr/pdf/avis/14a18.pdf](http://www.autoritedelaconcurrence.fr/pdf/avis/14a18.pdf)>.

The FCA turned to the predatory pricing test, looking first at the costs. In line with EU precedent, it determined that average variable costs are the relevant measure. In case of Google, the costs of acquiring and processing mapping data should not be counted towards the variable cost of Maps API, as they are unavoidable: even without Maps API, Google would need this data for Google Maps—a product of far greater commercial importance to Google. The FCA then examined the revenue Google derives from Maps API, in particular the licensing fees for Maps API for Business. The FCA noted that revenue from advertisements should also be counted (if Google decided to start inserting advertisements in the free version of Maps API). As the margin between these revenues and costs was quite substantial, the FCA concluded that Google did not engage in predatory pricing.

Quoting the FCA's opinion extensively, the Paris court of appeals finally overturned the ruling of the Paris commercial court.<sup>103</sup> The saga makes clear that freemium models—like two-sided markets—may lead courts to commit type I errors, i.e. find false positives. To prevent this, two lessons should be kept in mind:

1. *Understand low marginal costs.* As explained before, the marginal cost of digital products is low—and still decreasing. This was also the case in Google, but the commercial court erred by also taking into account fixed costs such as the sourcing of data. This cost was unavoidable for Google (as it in any case needed the data for Google Maps),<sup>104</sup> but it could be considered fixed for any company.<sup>105</sup>
2. *Take account of all revenue.* Most importantly, a predatory pricing assessment should consider all revenue (and all costs) generated by the company's business model.<sup>106</sup> If it consists in a premium strategy, the revenue derived from selling or licensing the upgraded version of the product should be included (along with any advertising revenue from both the free and the premium version).<sup>107</sup>

<sup>103</sup> Cour d'appel de Paris, case 12/02931, *Google France, Google Inc./Bottin Cartographes*, 25 November 2015, available (in French) at <[www.autoritedelaconcurrence.fr/doc/google\\_ca\\_25nov\\_15.pdf](http://www.autoritedelaconcurrence.fr/doc/google_ca_25nov_15.pdf)>.

<sup>104</sup> For a nuance to considering costs common to several services as avoidable, see Autorité de la concurrence, Avis 14-A-18, *Bottin Cartographes/Google France, Google Inc.*, 16 December 2014, 19–20.

<sup>105</sup> Which is not to say that the costs of mapping the world are not a huge entry barrier, especially when—like Google—you map it by having self-driving cars drive all over it, acquiring other companies such as Waze (for 1 billion USD) and Skybox (for 500 million USD), see Liz Gannes, 'Ten Years of Google Maps, From Slashdot to Ground Truth' (*Recode*, 8 February 2015) <[www.recode.net/2015/2/8/11558788/ten-years-of-google-maps-from-slashdot-to-ground-truth](http://www.recode.net/2015/2/8/11558788/ten-years-of-google-maps-from-slashdot-to-ground-truth)>.

<sup>106</sup> In 2003 already, David Evans used the example of Adobe's premium model to argue that a predatory pricing test should compare the total revenue 'with the total variable costs incurred for providing the multiple products—e.g., the total revenues from Adobe readers and writers versus the total variable costs of these software packages.' However, he warned that this methodology 'would identify extreme forms of predation but would not identify all situations in which incremental costs are less than incremental revenue.' See David Evans, 'The antitrust economics of multi-sided platform markets' (2003) 20 *Yale Journal on Regulation* 325, 368.

<sup>107</sup> Michal Gal and Daniel Rubinfeld offer that a predatory pricing requirement of recoupment, as in the United States, would also

Finally, it is worth noting that freemium also has consumer protection implications. The Unfair Commercial Practices Directive classifies as misleading and therefore illegal: ‘Describing a product as “gratis”, “free”, “without charge” or similar if the consumer has to pay anything other than the unavoidable cost of responding to the commercial practice and collecting or paying for delivery of the item.’<sup>108</sup> Freemium apps, whereby downloading the app itself is free but the user can then pay for upgrades through in-app purchases,<sup>109</sup> have particularly ran into legal issues. The Commission has held that ‘[g]ames advertised as “free” should not mislead consumers about the true costs involved’,<sup>110</sup> while the US Federal Trade Commission has secured large refunds from app stores that made in-app purchases too easy, especially for children.<sup>111</sup>

### 3.3. Conclusion

The discussion of predatory pricing, and the cautionary tales that accompanied it, can be summarized in three lessons.

1. *Understand the sector.* As explained already in Section 2, the marginal cost of products distributed online is low. This feature of digital product should be kept firmly in mind in any predatory pricing assessment.
2. *In two-sided markets, count advertising revenue.* The business model of many platforms consists in offering consumers a free product, to then monetize it by letting advertisers

solve the false positive problem, see Michal Gal and Daniel Rubinfeld, ‘The Hidden Costs of Free Goods: Implications for Antitrust Enforcement’ (2016) 80 Antitrust Law Journal 521, 557-8.

<sup>108</sup> Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market [2005] OJ L149/22, annex 1 (the so-called ‘blacklist’), practice no. 20.

<sup>109</sup> To get a sense of how prevalent this business model is in the app industry, consider that in Google Play—the largest app store—freemium apps account for 98% of worldwide revenue. See Vlad Savov, ‘Freemium apps account for 98 percent of worldwide Google Play revenue’ (*The Verge*, 24 June 2014) <[www.theverge.com/2014/6/24/5837254/freemium-apps-dominant-google-play-revenues](http://www.theverge.com/2014/6/24/5837254/freemium-apps-dominant-google-play-revenues)>.

<sup>110</sup> Commission, ‘In-app purchases: Joint action by the European Commission and Member States is leading to better protection for consumers in online games’ (press release, 18 July 2014) IP/14/187.

<sup>111</sup> FTC, ‘Apple Inc. Will Provide Full Consumer Refunds of At Least \$32.5 Million to Settle FTC Complaint It Charged for Kids’ In-App Purchases Without Parental Consent’ (press release, 15 January 2014) <[www.ftc.gov/news-events/press-releases/2014/01/apple-inc-will-provide-full-consumer-refunds-least-325-million](http://www.ftc.gov/news-events/press-releases/2014/01/apple-inc-will-provide-full-consumer-refunds-least-325-million)>; FTC, ‘Google to Refund Consumers at Least \$19 Million to Settle FTC Complaint It Unlawfully Billed Parents for Children’s Unauthorized In-App Charges’ (press release, 4 September 2014) <[www.ftc.gov/news-events/press-releases/2014/09/google-refund-consumers-least-19-million-settle-ftc-complaint-it](http://www.ftc.gov/news-events/press-releases/2014/09/google-refund-consumers-least-19-million-settle-ftc-complaint-it)>; FTC, ‘FTC Alleges Amazon Unlawfully Billed Parents for Millions of Dollars in Children’s Unauthorized In-App Charges’ (press release, 10 July 2014) <[www.ftc.gov/news-events/press-releases/2014/07/ftc-alleges-amazon-unlawfully-billed-parents-millions-dollars](http://www.ftc.gov/news-events/press-releases/2014/07/ftc-alleges-amazon-unlawfully-billed-parents-millions-dollars)>; Amazon took the case to court, but lost: FTC, ‘Federal Court Finds Amazon Liable for Billing Parents for Children’s Unauthorized In-App Charges’ (press release, 27 April 2016) <[www.ftc.gov/news-events/press-releases/2016/04/federal-court-finds-amazon-liable-billing-parents-childrens](http://www.ftc.gov/news-events/press-releases/2016/04/federal-court-finds-amazon-liable-billing-parents-childrens)>.

- reach those consumers on the platform. In these situations, this advertising revenue should be counted as the (aggregate) ‘price’ of the product, to be compared to its cost.
3. *With freemium models, count the premium revenue.* When a company operates a freemium model, the revenue of the paying users must be weighed against the cost to the company of both the paying and the free users. Additionally, any advertising revenue (usually from the free version) should be added.

One difference with the traditional predatory pricing assessment has not been put explicitly: in two-sided markets and freemium models, the relevant metric on the price side of the equation is the total revenue rather than the price to a single user. The reason is obvious: in two-sided markets, the advertising gain per user is hard to determine<sup>112</sup>; in freemium models, the price per user is uneven (zero in one case, more in the other), and therefore impossible to use.

## 4. Excessive pricing

It has been noted above that zero-priced services are not actually free; rather, the consideration for such services consists of the consumers’ information and attention. One may wonder, then, whether a business could demand too much information or attention from its users, so that its conduct amounts to excessive pricing. To put it somewhat more provocatively: can consumers pay too much when they pay nothing? While this proposition may seem absurd, a recent decision of the Bundeskartellamt (German Competition Authority) raises the question: it has condemned Facebook, which offers its services for free, for an infringement that resembles excessive pricing. Under this section, I therefore examine how to account for information and attention in abuse of dominance proceedings, using the Bundeskartellamt’s Facebook decision as a case study.<sup>113</sup>

### 4.1. The data-driven business model: information and attention costs

Data is being pointed to as ‘the currency of the 21st century’<sup>114</sup>—the idea being that you pay for the use of online services with your personal data.<sup>115</sup> The idea is also catching

<sup>112</sup> Even when it can be determined (in case of online platforms with detailed metrics), the results would be skewed: some users engage (click on) a lot of advertisements, others never do.

<sup>113</sup> Some of the content under this section has been published in a duo of blog posts: Friso Bostoen, ‘Can consumers pay too much when they pay nothing? The Bundeskartellamt’s Facebook case’ (CoRe Blog, 15 March 2018) <<http://coreblog.lexxion.eu/bundeskartellamt-facebook-case/>> and Friso Bostoen, ‘When competition law met data protection: the Bundeskartellamt’s Facebook decision’ (CoRe Blog, 18 February 2019) <<https://coreblog.lexxion.eu/bundeskartellamt-facebook-decision/>>.

<sup>114</sup> David Zax, ‘Is Personal Data the New Currency?’ (*MIT Technology Review*, 20 November 2011) <[www.technologyreview.com/s/426235/is-personal-data-the-new-currency/](http://www.technologyreview.com/s/426235/is-personal-data-the-new-currency/)>.

<sup>115</sup> Hoofnagle and Whittington have used a transaction cost economics approach to elucidate the true costs of these allegedly free

on in competition law circles; EU Competition Commissioner Vestager, for example, has described social networks such as Facebook in these terms:

*Social networks let people keep in touch with friends [and] they don't pay a single penny for those services. Instead, they pay with their data. That doesn't have to be a problem, as long as people are happy that the data they share is a fair price to pay for the services they get in return. Personal data has become a valuable commodity.*<sup>116</sup>

Personal data has become so valuable it is being referred to as 'the oil of the digital era'.<sup>117</sup> The oilrigs of this new era are online platforms.<sup>118</sup> Indeed, a whole category of platforms (advertising platforms)<sup>119</sup> has made it their business to extract personal data from their users, offering some functionality in return (e.g. social networking in case of Facebook, search in case of Google...). They then charge advertisers for access to these users—allowing, for example, a gym short manufacturer to target its ads to the group of males aged 20 to 25 in the Brussels area who frequent gyms. Importantly, the advertisers are not given direct access to the personal data, only to the users. In other words, data is not being sold, access is.<sup>120</sup>

It must be noted, however, that personal data does not constitute the full cost for consumers. Echoing Newman,<sup>121</sup>

services, see Chris Jay Hoofnagle Jan Whittington, 'Free: Accounting for the Costs of the Internet's Most Popular Price' (2014) 61 UCLA Law Review 606.

<sup>116</sup> Margrethe Vestager, 'Making data work for us' (Data Ethics event on Data as Power, Copenhagen, 9 September 2016) <[https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/making-data-work-us\\_en](https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/making-data-work-us_en)>.

<sup>117</sup> 'The world's most valuable resource is no longer oil, but data' (The Economist, 6 May 2017) <[www.economist.com/news/leaders/21721656-data-economy-demands-new-approach-antitrust-rules-worlds-most-valuable-resource](http://www.economist.com/news/leaders/21721656-data-economy-demands-new-approach-antitrust-rules-worlds-most-valuable-resource)>.

<sup>118</sup> Howard Shelanski, 'Information, Innovation, and Competition Policy for the Internet' (2013) 161 University of Pennsylvania Law Review 1663, 1678 ('While customer information is perhaps always valuable for a business, it is even more so for digital platforms. There are two main reasons for this: (1) digital platforms generally have much greater access than conventional businesses to a broad range of information about their consumers, and (2) digital businesses may be better able to process and use that data for a variety of purposes.'). See also Nick Srnicek, *Platform Capitalism* (polity 2017), 42-3 and 88 ('the platform has become an increasingly dominant way of organising businesses so as to monopolise these data, then extract, analyse, use, and sell them').

<sup>119</sup> As opposed to transaction platforms such as Amazon Marketplace and eBay, which facilitate transactions rather than advertising.

<sup>120</sup> For a description of this business model with regard to Facebook, see Aleksandra Gebicka and Andreas Heinemann, 'Social media and competition law' (2014) 37 World Competition 149, 165 ('the remuneration for social media services paid by the user is not monetary in character, but instead consists of his attention (to the website, including advertisements which generate income for the website's owner) and in his personal data (allowing personalized advertising and data marketing)').

<sup>121</sup> John Newman, 'Antitrust in Zero-Price Markets: Foundations' (2015) 164 University of Pennsylvania Law Review 149, 166-7 ('Along with attention costs, [...] information costs are one of the primary media of exchange that underlie sustainable business models featuring products offered at zero prices.').

it is useful to distinguish between information and attention costs.

The information cost for users consists in handing over their personal data such as name, gender, e-mail address, phone number, etc. This data is surrendered consciously to gain access to certain free services. However, many information costs are subtler: for example, you tell Google what you are looking for by typing in a search query, and you signal Facebook your preferences by liking certain pages or posts. Moreover, many apps track their users' location. Research shows that consumers are not oblivious with regard to the value of this data, although they are in the dark about which data precisely companies gather.<sup>122</sup>

Companies put this data to a variety of uses, the most benign one being the improvement of its products. More profitably, however, data is used to target consumers with advertising. This is where attention costs come into play. Sometimes these costs will be quite tangible. Think, for example, of how you are forced to watch 15 s of advertising before you can watch certain content on Google's video platform Youtube. At other times, such as when you are scrolling through your Facebook newsfeed glossing over advertisement after advertisement, the cost is subtler. In any case, 'costs arise because advertisements take time to watch, view, or hear.'<sup>123</sup> Therefore, time is quite literally money.<sup>124</sup> Note, finally, how cost of attention is ingrained in the English language: we are said to 'pay' attention, which plainly implies that the process extracts a cost.<sup>125</sup>

The cost of information and attention became quite tangible when the General Data Protection Regulation (GDPR) entered into force in May 2018.<sup>126</sup> In order to comply with the GDPR, the US newspaper *The Washington Post* added a new online subscription option. Apart from the 'Basic Subscription', users can now choose the 'Premium EU Subscription'. The

<sup>122</sup> See Timothy Morey, Theodore Forbath and Allison Schoop, 'Customer Data: Designing for Transparency and Trust' (*Harvard Business Review*, May 2015) <<https://hbr.org/2015/05/customer-data-designing-for-transparency-and-trust>> and Autorità Garante della Concorrenza e del Mercato, 'First results of the knowledge survey on big data' (press release, 8 June 2018) <<http://www.agcm.it/stampa/comunicati/9334-ic53-primi-risultati-dell-indagine-conoscitiva-sui-big-data-congiunta-con-agcom-e-garante-privacy.html>>.

<sup>123</sup> John Newman, 'Antitrust in Zero-Price Markets: Foundations' (2015) 164 University of Pennsylvania Law Review 149, 170; see also James Grimmelman, 'The Platform is the Message' (2018) 2 Georgetown Law Technology Review 217, 228 ('there is no need to sell people something else once you have a bit of their attention. Their attention itself is the commodity').

<sup>124</sup> For a good analogy illustrating the point, see Tim Wu, 'Blind Spot: The Attention Economy and the Law' (2017) <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2941094](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2941094)> ('the spender of attention is like a man with a large supply of gold dust in a pocket with a small hole at the bottom that leaks at a constant rate, enriching whichever place he chooses to spend his time').

<sup>125</sup> Robert Cialdini, *Pre-Suasion: A Revolutionary Way to Influence and Persuade* (Random House 2016), 28.

<sup>126</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data [2016] OJ L199/1, art 99.

latter option excludes on-site advertising and third-party ad tracking—for an additional \$30.<sup>127</sup>

Yet while data is being touted as currency, modern competition law is still heavily fixated on price, especially when it comes to forms of abuse such as predatory and excessive pricing. Predatory pricing is an exclusionary abuse (it targets competitors) centered around profitability, which means its price-based tests can be adapted to platforms by considering the total price charged by the platform (*supra*, Section 3.1). Excessive pricing, on the other hand, is an exploitative abuse (it targets consumers), and looking simply at the price charged to the ‘other’ side of the market, i.e. advertisers, does not tell us whether consumers are actually being exploited.<sup>128</sup> Until effective methods to account for the ‘cost’ of information and attention are found, competition authorities will rely on non-price-based theories, which is what happened in the Bundeskartellamt’s case against Facebook.<sup>129</sup>

#### 4.2. The Bundeskartellamt’s Facebook case

In March 2016, the Bundeskartellamt broke the news that it was initiating proceedings against Facebook.<sup>130</sup> After publishing a preliminary assessment in December 2017,<sup>131</sup> the Bundeskartellamt adopted its final decision in February 2019.<sup>132</sup> So what exactly does the authority take issue with?

<sup>127</sup> See <[https://www.washingtonpost.com/gdpr-consent/?utm\\_term=.e14fc0429e12](https://www.washingtonpost.com/gdpr-consent/?utm_term=.e14fc0429e12)>.

<sup>128</sup> It may be more correct to say exploitative abuses target customers. Indeed, not only consumers but also advertisers could be subject to excessive pricing by the online platform.

<sup>129</sup> If Margrethe Vestager’s intuition is right, the Bundeskartellamt’s case will not be the last one, making the need for effective theories all the more salient. See Margrethe Vestager, ‘I think more investigations for Facebook are coming’ (CNBC, 13 April 2018) <<https://www.cnbc.com/video/2018/04/13/i-think-more-investigations-for-facebook-are-coming-says-top-eu-antitrust-regulator.html>>.

<sup>130</sup> Bundeskartellamt, ‘Bundeskartellamt initiates proceeding against Facebook on suspicion of having abused its market power by infringing data protection rules’ (press release, 2 March 2016) <[https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2016/02\\_03\\_2016\\_Facebook.html](https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2016/02_03_2016_Facebook.html)> [link not included in subsequent references].

<sup>131</sup> Bundeskartellamt, ‘Preliminary assessment in Facebook proceeding: Facebook’s collection and use of data from third-party sources is abusive’ (press release, 19 December 2017) <[https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2017/19\\_12\\_2017\\_Facebook.html](https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2017/19_12_2017_Facebook.html)> [link not included in subsequent references]; see also Bundeskartellamt, ‘Facebook proceeding’ (background information, 19 December 2017) <[https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions\\_Hintergrundpapiere/2017/Hintergrundpapier\\_Facebook.html](https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions_Hintergrundpapiere/2017/Hintergrundpapier_Facebook.html)> [link not included in subsequent references].

<sup>132</sup> Bundeskartellamt, Case B6-22/16, Facebook, 7 February 2019, case summary available via <<https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Fallberichte/Missbrauchsaufsicht/2019/B6-22-16.html?nn=3600108>>; see also Bundeskartellamt, ‘Facebook proceeding’ (background information, 7 February 2019) <[https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Pressemitteilungen/2019/07\\_02\\_2019\\_Facebook\\_FAQs.html?nn=3600108](https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Pressemitteilungen/2019/07_02_2019_Facebook_FAQs.html?nn=3600108)> [link not included in subsequent references].

First of all, the Bundeskartellamt shows a thorough understanding of Facebook’s business model, which is not surprising: it has been researching platforms in depth for past couple of years, publishing reports on, inter alia, their market power<sup>133</sup> and their use of data.<sup>134</sup> The authority describes Facebook’s two-sided business model as follows: ‘On the one hand the social network offers a free service, on the other it offers attractive advertising space, which is so valuable because Facebook has huge amounts of personalized data at its disposal.’<sup>135</sup>

The case concerns an abuse of dominance, so the Bundeskartellamt takes care to define the market and establish Facebook’s dominant position on it.<sup>136</sup> The authority considers the relevant market that of *social networks in Germany*,<sup>137</sup> excluding professional networks such as LinkedIn, messaging services such as Snapchat, or other social media such as Youtube or Twitter. Facebook’s market power is then explained by its high market share (over 95% based on daily active users) and the characteristics that are typical for online platforms, i.e. (in)direct network effects, high barriers to entry, user lock-in, and economies of scale. Interestingly, the authority also attaches a lot of importance to Facebook’s access to user data in its dominance assessment. This is in line with a recent amendment to the German Competition Act, which added ‘access to competitively relevant data’ to the list of market power indicators.<sup>138</sup>

The abuse itself concerns the way in which Facebook processes user data. The authority notes that this practice, in principle, does not raise competition concerns; after all, ‘[u]sers have to expect a certain processing of their data if they use such a free service.’<sup>139</sup> Therefore, the Bundeskartellamt is explicitly *not* examining how Facebook processes data generated by the use of social network itself (which it labels ‘on Facebook’). Instead, it focuses on user data obtained from

<sup>133</sup> Bundeskartellamt, ‘The market power of platforms and networks’ (Working Paper) 2016, 102 p.

<sup>134</sup> Bundeskartellamt and Autorité de la concurrence, ‘Competition Law and Data’ (Common Report) 2016, 54 p.

<sup>135</sup> Bundeskartellamt, ‘Preliminary assessment in Facebook proceeding: Facebook’s collection and use of data from third-party sources is abusive’ (press release, 19 December 2017); on Facebook’s two-sided business model, see also Aleksandra Gebicka and Andreas Heinemann, ‘Social media and competition law’ (2014) 37 World Competition 149, 155-6.

<sup>136</sup> Bundeskartellamt, Case B6-22/16, Facebook, 7 February 2019, 3-7; on Facebook’s relevant market and market power, see also Aleksandra Gebicka and Andreas Heinemann, ‘Social media and competition law’ (2014) 37 World Competition 149, 156-61.

<sup>137</sup> The social network market is two-sided, and the Bundeskartellamt considers the user side a separate market, which is in line with scholarship on the issue (see Lapo Filistrucchi, Damien Geradin, Eric van Damme and Pauline Affeldt, ‘Market definition in two-sided markets: theory and practice’ (2014) 10 Journal of Competition Law & Economics 293). The fact that users make use of Facebook for free is immaterial, as the recently inserted §18(2a) of the Gesetz gegen Wettbewerbsbeschränkungen (German Competition Act) makes explicit that ‘[t]he assumption of a market shall not be invalidated by the fact that a good or service is provided free of charge.’

<sup>138</sup> Gesetz gegen Wettbewerbsbeschränkungen, §18(3a).

<sup>139</sup> Bundeskartellamt, ‘Facebook proceeding’ (background information, 19 December 2017), 2.

third-party sources (labeled ‘off Facebook’). In the words of the authority:

*Facebook is abusing [its] dominant position by making the use of its social network conditional on its being allowed to limitlessly amass every kind of data generated by using third-party websites and merge it with the user’s Facebook account. These third-party sites include firstly services owned by Facebook such as WhatsApp or Instagram, and secondly websites and apps of other operators with embedded Facebook APIs*<sup>140</sup>

Thus, two sorts of data are relevant: the data gathered from Facebook-owned services WhatsApp and Instagram on the one hand, and the data collected through websites and apps that make use of the Facebook API. Let us consider each in turn.

The first kind of data has a history to it. In October 2014, the Commission gave the green light for Facebook’s \$19 billion acquisition of messaging service WhatsApp.<sup>141</sup> Facebook thus paid \$55 for each user of a service that was suffering significant losses.<sup>142</sup> One theory of harm investigated by the Commission was whether Facebook could start collecting data from WhatsApp users to better target ads on Facebook (for those WhatsApp users that are also Facebook users).<sup>143</sup> However, this would require matching WhatsApp with Facebook accounts, and Facebook declared that ‘there are major obstacles thereto.’<sup>144</sup>

In August 2016, WhatsApp announced it would start linking WhatsApp user phone numbers with Facebook user identities in order to display more relevant advertising on WhatsApp users’ Facebook accounts. As this move contradicted statements made by Facebook during the acquisition process, the company was served with a statement of objections.<sup>145</sup> In May 2017, the Commission then fined Facebook 110 million EUR for providing misleading information.<sup>146</sup> Specifically, the

Commission found that, contrary to Facebook’s statements, it was already aware of the technical possibility of automatically matching Facebook and WhatsApp users’ identities during the merger review process.

The second kind of data concerns those collected through the use of Facebook’s APIs (or application programming interfaces). Many websites and apps make use of ‘Facebook Business Tools’, which allows users to ‘like’ or ‘share’ content or log in through their Facebook account—all of which is made technically possible via Facebook’s APIs.<sup>147</sup> However, when users visit websites or apps that have embedded such an API (even without engaging with the API, for example by pressing the ‘like’ or ‘share’ button), their data is transmitted to Facebook, which then processes it to target advertising.<sup>148</sup> Contrary to data generated on the social network itself, ‘[u]sers cannot expect data which is generated when they use services other than Facebook to be added to their Facebook account to this extent.’<sup>149</sup>

Facebook is thus processing data from related services (WhatsApp and Instagram) and unrelated websites (that use the Facebook API). In specifying how exactly this behaviour constitutes an abuse of dominance, the Bundeskartellamt relies heavily on the GDPR.<sup>150</sup>

Firstly, the Bundeskartellamt takes great care to justify its reliance on the GDPR to establish a competition law infringement.<sup>151</sup> After all, the Commission’s position is that ‘any privacy-related concerns [...] do not fall within the scope of the EU competition law rules but within the scope of the EU data protection rules.’<sup>152</sup> Instead of focusing on the Commission’s position, however, the Bundeskartellamt refers to the case law of the German Federal Court of Justice, which considers contract terms abusive if they violate the German Civil Code (in particular when such terms are imposed by a party with superior power). By analogy, the Bundeskartellamt holds that ‘the European data protection regulations [...] can or, considering the case-law of the highest German court [...], must be considered when assessing whether data processing terms are appropriate under competition law.’<sup>153</sup> As the GDPR does not aspire to full consistency of enforcement, competition authorities can also consider and interpret its provisions.

More specifically, Facebook’s terms and conditions violate the GDPR as there is no effective consent for such extensive processing of data pursuant to Article 6(1a). The problem lies

<sup>140</sup> Bundeskartellamt, ‘Preliminary assessment in Facebook proceeding: Facebook’s collection and use of data from third-party sources is abusive’ (press release, 19 December 2017).

<sup>141</sup> Facebook/WhatsApp (Case M.7217) Commission Decision, paras 20–34.

<sup>142</sup> See Alison Deutsch, ‘WhatsApp: The Best Facebook Purchase Ever?’ <[www.investopedia.com/articles/investing/032515/whatsapp-best-facebook-purchase-ever.asp](http://www.investopedia.com/articles/investing/032515/whatsapp-best-facebook-purchase-ever.asp)>.

<sup>143</sup> Facebook/WhatsApp (Case M.7217) Commission Decision C(2014)7239, para 180.

<sup>144</sup> *ibid.*, para 185.

<sup>145</sup> Commission, ‘Commission alleges Facebook provided misleading information about WhatsApp takeover’ (press release, 20 December 2016) IP/16/4473.

<sup>146</sup> Commission, ‘Commission fines Facebook €110 million for providing misleading information about WhatsApp takeover’ (press release, 18 May 2017) IP/17/1369. The Italian Competition Authority also fined Whatsapp (3 million EUR) for *de facto* forcing its users to accept in full the new Terms of Use, and specifically the provision to share their personal data with Facebook, see Autorità Garante della Concorrenza e del Mercato, ‘WhatsApp fined for 3 million euro for having forced its users to share their personal data with Facebook’ (press release, 12 May 2017) <<http://www.agcm.it/en/newsroom/press-releases/2380-whatsapp-fined-for-3-million-euro-for-having-forced-its-users-to-share-their-personal-data-with-facebook.html>>. For additional information, see Nicolo Zingales, ‘Between a rock and two hard places: WhatsApp at the crossroad of competition, data

protection and consumer law’ (2017) 33 Computer Law & Security Review 553.

<sup>147</sup> Facebook Analytics is another Facebook Business Tool used by many websites and apps.

<sup>148</sup> See Bundeskartellamt, ‘Preliminary assessment in Facebook proceeding: Facebook’s collection and use of data from third-party sources is abusive’ (press release, 19 December 2017).

<sup>149</sup> *ibid.*

<sup>150</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data [2016] OJ L199/1.

<sup>151</sup> Bundeskartellamt, Case B6-22/16, Facebook, 7 February 2019, 7–9.

<sup>152</sup> Facebook/WhatsApp (Case M.7217) Commission Decision, para 164.

<sup>153</sup> Bundeskartellamt, Case B6-22/16, Facebook, 7 February 2019, 8.

in the voluntary nature of the consent, which cannot be assumed if such consent is a prerequisite for using Facebook in the first place. In other words, if users want to use Facebook, they do not have a choice except than to accept all terms and conditions.

How does such a violation of the GDPR constitute an abuse of dominance? The Bundeskartellamt qualifies Facebook's behaviour as an exploitative (as opposed to an exclusionary) abuse.<sup>154</sup> German competition law recognizes two kinds of exploitative abuse: excessive prices and unfair business terms.<sup>155</sup> As users can be considered to 'pay' for Facebook with their data, one might expect that demanding too much data is a form of excessive prices. Gebicka and Heinemann confirm that 'an undue increase in the use of personal data may very well be compared to excessive prices'<sup>156</sup> However, the authority qualifies Facebook's data processing as a case of unfair business terms,<sup>157</sup> which may have something to do with the high bar set by the excessive pricing doctrine.<sup>158</sup>

Coming up with an effective theory of harm is more difficult, given that users do not pay an obvious price for Facebook. The Bundeskartellamt tries to tackle this objection by acknowledging that Facebook offers its services for free, and its users therefore do not suffer a direct financial loss due to the exploitative business terms. However, the Bundeskartellamt argues that '[t]he damage for the users lies in a loss of control: they are no longer able to control how their personal data are used.'<sup>159</sup>

Facebook's practices are related to its market power in two ways. Firstly, Facebook is only able to impose such an intrusive data policy on its users *because* it has market power.<sup>160</sup> Secondly, *because* Facebook inappropriately processes user data, it has 'gained a competitive edge over its competitors in an unlawful way and increased market entry barriers, which in turn secures Facebook's market power towards end customers.'<sup>161</sup> In short, the Bundeskartellamt finds that the infringement of

data protection law is 'a manifestation of Facebook's market power'.<sup>162</sup>

The Bundeskartellamt does not impose a fine for Facebook's infringement, but it does impose a remedy.<sup>163</sup> Facebook can no longer combine the data it collects from WhatsApp and Instagram with Facebook user accounts without obtaining voluntary consent. Such voluntary consent is also required when collecting data from third-party websites. According to the Bundeskartellamt, 'voluntary' means that 'the use of Facebook's services must not be subject to the users' consent.'<sup>164</sup> When Facebook does not obtain such consent, it can only combine data from various sources to a highly restricted extent. Facebook was given twelve months to implement the necessary changes, but its appeal to the Düsseldorf Higher Regional Court may suspend this deadline.

We can now return to the initial question: can consumers pay too much when they pay nothing? The Bundeskartellamt's answer is positive, with two nuances. First, consumers do not exactly pay nothing. Rather, they pay with their information and attention, although the authority has not put it this way explicitly yet.<sup>165</sup> Secondly, the authority chooses not to go with 'too much' or 'excessive', but rather with 'unfair'—a broad term that is becoming more and more popular in European competition enforcement.<sup>166</sup>

#### 4.3. Alternative ways of assessing data processing

The Bundeskartellamt's approach to Facebook's data processing may be legally safe, as it is difficult to disprove *unfair* business terms. However, it does not offer a high degree of legal certainty to companies that wish to know how much data they are allowed to process, and through which means. One way of doing so is bringing the assessment of data processing practices more in line with the doctrine of excessive pricing.

According to the ECJ, a price is 'excessive because it has no reasonable relation to the economic value of the product supplied'.<sup>167</sup> In *United Brands*, the ECJ operationalized this basic formula by adopting a two-pronged test:

*The questions therefore to be determined are whether the difference between the costs actually incurred and the price actually charged is excessive, and, if the answer to this question is in the*

<sup>154</sup> *ibid.*, 7 and Bundeskartellamt, 'Facebook proceeding' (background information, 7 February 2019), 5–6.

<sup>155</sup> Bundeskartellamt, 'Facebook proceeding' (background information, 19 December 2017), 4. Article 102 TFEU also distinguishes 'unfair [read: excessive] selling prices' and 'other unfair trading conditions' in paragraph (a).

<sup>156</sup> Aleksandra Gebicka and Andreas Heinemann, 'Social media and competition law' (2014) 37 *World Competition* 149, 165.

<sup>157</sup> On the EU case law on unfair business terms, see Marco Botta and Klaus Wiedemann, 'EU Competition Law Enforcement vis-à-vis Exploitative Conducts in the Data Economy: Exploring the Terra Incognita' (2018) Max Planck Institute for Innovation and Competition Research Paper No. 18-08, 17–9.

<sup>158</sup> For an overview of the EU enforcement practice with regard to this abuse, see OECD Working Party No. 2 on Competition and Regulation, Excessive Prices (Contribution of the European Union) DAF/COMP/WP2/WD(2011)54. Most recently, additional clarification was offered in Case C-177/16 *Autortiesību un komunicešanas konsultāciju agentūra v Latvijas Autoru apvienība v Konkurences padome* EU:C:2017:689.

<sup>159</sup> Bundeskartellamt, 'Facebook proceeding' (background information, 7 February 2019), 5.

<sup>160</sup> *ibid.*

<sup>161</sup> Bundeskartellamt, Case B6-22/16, *Facebook*, 7 February 2019, 11.

<sup>162</sup> *ibid.*

<sup>163</sup> *ibid.*, 12 and Bundeskartellamt, 'Facebook proceeding' (background information, 7 February 2019), 1–3.

<sup>164</sup> Bundeskartellamt, 'Facebook proceeding' (background information, 7 February 2019),

<sup>165</sup> The European Commission has been clearer in this regard, see Commission, 'Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service' (press release, 27 June 2017) IP/17/1784 ('the Google search engine, which provides search results to consumers, who pay for the service with their data').

<sup>166</sup> See e.g. Margrethe Vestager, 'Fairness and Competition' (GCLC Annual Conference, Brussels, 25 January 2018) <[https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/fairness-and-competition\\_en](https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/fairness-and-competition_en)>.

<sup>167</sup> Case 27/76 *United Brands Company v Commission* EU:C:1978:22 [1978] ECR 207, para 250; see most recently Case C-177/16 *Autortiesību un komunicešanas konsultāciju agentūra v Latvijas Autoru apvienība v Konkurences padome* EU:C:2017:689, para 35.

*affirmative, whether a price has been imposed which is either unfair in itself or when compared to competing products.*<sup>168</sup>

To determine whether a price is excessive (or in the ECJ's words: 'unfair'), one has to examine, first, whether the profit margin is excessive. However, a high profit margin may simply be the result of high efficiency/innovation. If that is the case, the price cannot be said to be unfair in itself. One then still has to compare the price, not to the costs, but to other prices. This comparison can take many forms, but the reference price is often (i) the price charged by the company in different markets (where it does not have market power); (ii) the price charged by the company at a different point in time; and/or (iii) the price charged for comparable products by other companies in different markets.<sup>169</sup>

Facebook's profit margin is certainly high (around 40%),<sup>170</sup> also in comparison to other companies is the digital advertising business,<sup>171</sup> but perhaps not excessively so. Even if it were, one would have to compare Facebook's 'price' to various reference points: Is there an 'appreciable' difference between Facebook's privacy policy and those of other social networks? Or is it 'appreciably' more intrusive now than in the past? In its most recent excessive pricing case, the ECJ has defined 'appreciable' as 'significant and persistent'<sup>172</sup>—open-ended terms that complicate the initial assessment and invite appeals.

However, maybe the problem is that these traditional assessment methods are not suited to the specific characteristics of the digital economy. And in *United Brands* already, the ECJ recognized that 'other ways may be devised [...] of selecting the rules for determining whether the price of a product is unfair.'<sup>173</sup>

What if we went back to the ECJ's basic formula, namely that a price is 'excessive because it has no reasonable relation to the economic value of the product supplied',<sup>174</sup> but instead of looking at economic value from the producer side (i.e. costs and therefore profit margins, *supra*), we look at the consumer side? This is also what Vestager hinted at when stating that paying with data is not a problem 'as long as people are happy that the data they share is a fair price to pay for the services they get in return.'<sup>175</sup>

Facebook's price and its economic value to consumers can only be meaningfully compared when expressed in monetary terms. As far as price goes, we have a good monetary proxy of the value of data consumers 'pay' for use of the social network, namely Facebook's average revenue per user (ARPU), i.e. the value Facebook derived from your data.<sup>176</sup> For the last reported year (four quarters), this ARPU for users in Europe amounts to \$34.<sup>177</sup> In the United States and Canada, however, Facebook's ARPU is three times that number.

Again, the conclusion is that our data is valuable to Facebook. A more difficult question is how to measure how consumers value Facebook. A preliminary question is whether consumers would even want to pay for free services—in return for their privacy. It appears they do: a survey by the Italian Competition Authority indicates that half of users would be willing to pay for services/apps provided for free today in order to avoid exploitation of their data, including advertisements.<sup>178</sup> (In the United States, this number appears lower.<sup>179</sup>)

The follow-up question is *how much* consumers would want to pay. With regard to this question, only studies from the US are available, and their results differ significantly. In one survey, almost half of the users who wanted to pay anything reported that amount to be \$1–5 per month for an *ad-free*

<sup>176</sup> There are now calls to oblige online platforms to provide users with an (annual) estimate of what their data is worth to the platform. See Senator Mark Warner, 'Potential Policy Proposals for Regulation of Social Media and Technology Firms' (White Paper) 2018, available via <<https://www.axios.com/mark-warner-google-facebook-regulation-policy-paper-023d4a52-2b25-4e44-a87c-945e73c637fa.html>>.

<sup>177</sup> See <<https://investor.fb.com/financials/?section=secfilings>> for a comprehensive overview of Facebook's filings to the Securities and Exchange Commission (SEC), in which the company reports on these numbers quarterly and for each fiscal year. The ARPU from advertising for the past four quarters combined equals \$34,03, or \$8,71 (2017 Q4) + \$8,01 (2018 Q1) + \$8,62 (2018 Q2) + \$8,69 (2018 Q3).

<sup>178</sup> Autorità Garante della Concorrenza e del Mercato, 'First results of the knowledge survey on big data' (press release, 8 June 2018) <<http://www.agcm.it/stampa/comunicati/9334-ic53-primi-risultati-dell-indagine-conoscitiva-sui-big-data-congiunta-con-agcom-e-garante-privacy.html>>. Vestager joins this group, see Jorge Valero, 'Vestager: "I'd like a Facebook that I pay, with full privacy"' (Euractiv, 27 June 2018) <<https://www.euractiv.com/section/competition/interview/vestager-id-like-a-facebook-that-i-pay-with-full-privacy/>>.

<sup>179</sup> Only 23% of users would want to pay for the use of Facebook without data collection/advertisements, see Rani Molla, 'How much would you pay for Facebook without ads?' (Recode, 11 April 2018) <<https://www.recode.net/2018/4/11/17225328/facebook-ads-free-paid-service-mark-zuckerberg>>; in another survey, 54% of users were willing to pay to use Facebook, see Cass Sunstein, 'Willingness to Pay to Use Facebook, Twitter, YouTube, Instagram, Snapchat, and More: A National Survey' (2018), 2 available at <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3192498](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3192498)>. Note, finally, that the idea is not that far-fetched: Mark Zuckerberg hinted at a paying, ad-free version of Facebook during Congressional hearings, see Josh Constine, 'The psychological impact of an \$11 Facebook subscription' (TechCrunch, 15 April 2018) <<https://techcrunch.com/2018/04/15/would-it-make-us-love-or-hate-ads/>>.

<sup>168</sup> Case 27/76 *United Brands Company v Commission* EU:C:1978:22 [1978] ECR 207, para 252.

<sup>169</sup> OECD Working Party No. 2 on Competition and Regulation, Excessive Prices (Contribution of the European Union) DAF/COMP/WP2/WD(2011)54, 11-2.

<sup>170</sup> See <[https://ycharts.com/companies/FB/profit\\_margin](https://ycharts.com/companies/FB/profit_margin)>.

<sup>171</sup> Such as Alphabet (Google), see <[https://ycharts.com/companies/GOOGL/profit\\_margin](https://ycharts.com/companies/GOOGL/profit_margin)>.

<sup>172</sup> Case C-177/16 *Autotiesību un komunikēšanas konsultāciju aģentūra v Latvijas Autoru apvienība v Konkurences padome* EU:C:2017:689, para 61.

<sup>173</sup> Case 27/76 *United Brands Company v Commission* EU:C:1978:22 [1978] ECR 207, para 253.

<sup>174</sup> *ibid*, para 250; see most recently Case C-177/16 *Autotiesību un komunikēšanas konsultāciju aģentūra v Latvijas Autoru apvienība v Konkurences padome* EU:C:2017:689, para 35.

<sup>175</sup> Margrethe Vestager, 'Making data work for us' (Data Ethics event on Data as Power, Copenhagen, 9 September 2016) <[https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/making-data-work-us\\_en](https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/making-data-work-us_en)>.

Facebook.<sup>180</sup> Cass Sunstein also asked users how much they would pay for the use of Facebook.<sup>181</sup> On average, people were willing to pay \$16,7 per month. However, when asking users how much they would have to be paid to stop using Facebook, the number jumped to \$98,80 per month—a reflection of the ‘endowment effect’ familiar to behavioural economists.<sup>182</sup> Using a different method (a discrete choice experiment), Brynjolfsson and others found that it would take almost \$50 (median) to have users give up Facebook for a month.<sup>183</sup>

Juxtaposing the ‘price’ of Facebook per year (\$34) with its value per month (previous paragraph), it appears that consumers are getting value for their money—or rather, value for their data. From this perspective, Facebook’s data processing practices appear less problematic. Indeed, adopting this lens would caution against an abuse of dominance investigation—at least an excessive pricing one. It must be noted, however, that while the above ‘data as currency’ paradigm has its merits, it also has its faults. The main criticism is that data is not rivalrous: when a user hands over its data to one company, this does not prevent another company from using the same data.<sup>184</sup> The term ‘consideration’ may therefore be more appropriate than terms such as ‘currency’ and ‘paying’.

Finally, while I have discussed exploitative data processing from a more price-based competition law perspective, at least three alternative approaches are worth considering.

*Deference to the GDPR.* It is fair to question whether the Bundeskartellamt’s decision unnecessarily blurs the lines between competition and data protection law. The connection between the two, which the Bundeskartellamt finds in Facebook’s market power, is somewhat tenuous. Indeed, as Justus Haucap remarks, ‘there is little evidence that would suggest that larger firms violate data protection and privacy standards in a more systematic fashion than smaller firms – if at all, the contrary appears to be true.’<sup>185</sup>

Therefore, it might be better to defer to the GDPR when it comes to data protection. Any violation would be the exclu-

sive responsibility of the designated data protection supervisor, and competition authorities can expend their time and resources on other matters. This would also make sense given that, despite some overlaps, data protection and competition each have their own conceptual, analytical, and enforcement framework.<sup>186</sup>

The first reactions from the Commission appear to support such an approach. A spokesperson said it ‘took note’ of the decision and is ‘closely following’ the Bundeskartellamt’s work, but added that ‘[t]he European legislator has made sure that there is now a regulation in place that addresses this type of conduct’, namely the GDPR.<sup>187</sup> Vestager has also stated that she doesn’t believe the Facebook decision can serve as a template for EU action as it sits ‘in the zone between competition law and privacy’ and was based in part on German law.<sup>188</sup>

*Consumer law.* Perhaps there are cases where neither competition nor data protection law offer the right tools to assess and remedy exploitative practices with regard to data. This appears to be the position of the Italian Competition Authority. Not unlike its German counterpart, the Authority investigated Facebook for collecting user data, both on Facebook and on third-party websites, without conscious consent.<sup>189</sup> Rather than a competition law offense, however, it considered such conduct an unfair commercial practice in violation of the Consumer Code.<sup>190</sup> Relying on consumer law may make more sense than competition law when the allegation is not so much the excessive data collection but rather its deceptive nature.<sup>191</sup> In practice, however, those two allegations will often be made in the same breath. Moreover, now that the GDPR

<sup>180</sup> Rani Molla, ‘How much would you pay for Facebook without ads?’ (Recode, 11 April 2018) <<https://www.recode.net/2018/4/11/17225328/facebook-ads-free-paid-service-mark-zuckerberg>>.

<sup>181</sup> Cass Sunstein, ‘Willingness to Pay to Use Facebook, Twitter, YouTube, Instagram, Snapchat, and More: A National Survey’ (2018), 2 available at <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3192498](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3192498)>. See also Cass Sunstein, ‘How Much Is It Worth to Use Facebook? It Depends’ (Bloomberg, 3 May 2018) <<https://www.bloomberg.com/view/articles/2018-05-03/facebook-users-want-to-be-paid-a-lot-to-quit>>.

<sup>182</sup> The median willingness to pay only amounted to \$4, the median willingness to accept (i.e. be paid to stop using Facebook) to \$98,5. See *ibid.*, 3.

<sup>183</sup> Erik Brynjolfsson, Felix Eggers and Avinash Gannamaneni, ‘Using massive online choice experiments to measure changes in well-being’ (2018) National Bureau of Economic Research Working Paper 24514, 18–28, available via <<http://www.nber.org/papers/w24514>>.

<sup>184</sup> Justus Haucap, ‘“Consumers Paying with Data” Is a Bad Analogy’ (CoRe Blog, 1 March 2018) <<https://coreblog.lexxion.eu/dice-director-justus-haucap-consumers-paying-with-data-is-a-bad-analogy/>>.

<sup>185</sup> Justus Haucap, ‘The Facebook decision: first thoughts by Haucap’ (D-Kart Blog, 7 February 2019) <<https://www.d-kart.de/en/the-facebook-decision-first-thoughts-by-haucap/>>.

<sup>186</sup> Harri Kalimo and Klaudia Majcher, ‘The Concept of Fairness: Linking EU Competition and Data Protection Law in the Digital Marketplace’ (2018) 42 European Law Review 210. See also Marco Botta and Klaus Wiedemann, ‘EU Competition Law Enforcement vis-à-vis Exploitative Conducts in the Data Economy: Exploring the Terra Incognita’ (2018) Max Planck Institute for Innovation and Competition Research Paper No. 18-08, 37–9.

<sup>187</sup> Simon Van Dorpe, ‘Germany hits Facebook at heart of its business model’ (Politico, 7 February 2019) <<https://www.politico.eu/article/germany-hits-facebook-at-heart-of-its-business-model/>>.

<sup>188</sup> Aoife White and Lenka Ponikelska, ‘Germany’s Facebook Order Will Be Studied by EU, Vestager Says’ (Bloomberg, 8 February 2019) <<https://www.bloomberg.com/news/articles/2019-02-08/germany-s-facebook-order-will-be-studied-by-eu-vestager-says>>.

<sup>189</sup> Autorità Garante della Concorrenza e del Mercato, ‘Facebook fined 10 million Euros by the ICA for unfair commercial practices for using its subscribers’ data for commercial purposes’ (press release, 7 December 2018) <<http://en.agcm.it/en/media/press-releases/2018/12/Facebook-fined-10-million-Euros-by-the-ICA-for-unfair-commercial-practices-for-using-its-subscribers%E2%80%99-data-for-commercial-purposes>>.

<sup>190</sup> At the European level, consumer rights for free services are now also being strengthened, see Commission, ‘A New Deal for Consumers: Commission strengthens EU consumer rights and enforcement’ (press release, 11 April 2018) IP/18/3041 (the so-called ‘New Deal for Consumers will now extend [the withdrawal right] to “free” digital services for which consumers provide their personal data, but do not pay with money’).

<sup>191</sup> Of course, consumer law does not have the ‘bite’ of competition law, especially when it comes to fines. Underdeterrence of tech companies with deep pockets is therefore a valid concern when applying consumer law.

is in full force, it offers a more specific framework to assess deceptive data collection.

*Quality as parameter.* Lastly, maybe competition law is the right lens, but ‘data as price’ is not. Rather, one should look at data processing, and therefore privacy, as affecting the quality of services—another parameter of competition. Such point of view is apparently held by the Competition Bureau of Canada.<sup>192</sup> Increased data processing then means a degradation of the quality of the service. However, one would then also face the difficulty of determining when a quality degradation becomes abusive.

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## 5. Conclusion

It is no exaggeration to say that free is the preferred price for online services—a price that finds its roots in two-sided market theory or freemium models. An actual price is still being paid, however, either by advertisers, which pay the platform for access to consumers’ information and attention, or by premium users. As abuse of dominance assessments are essentially price-centered, and traditionally focus on one rather than multiple markets, they require a methodological update.

The implications of these new business models for predatory pricing assessments have been recognized and discussed for some time now. It is crucial to look not (only) at the consumer side, but to consider the advertising and premium revenue generated. This price must then be compared to the marginal cost of the service—a cost that is often low in digital

sectors. While competition authorities have made mistakes in this regard, the solution is now more or less established.

A less explored theory in digital markets is excessive pricing. Indeed, there is not (yet) an effective way of accounting for the information and attention costs borne by users in an excessive pricing case. In its Facebook decision, the Bundeskartellamt therefore chose to base its case on the related exploitative abuse of unfair trading conditions. While this may provide an interim solution, the proliferation of data-based services requires new rather than alternative methods. In this article, I have offered one such method, namely setting off the ‘price’ (or ARPU) of zero-priced services against their economic value to consumers. While certainly not a panacea, it may offer companies increased guidance with regard to their data processing practices. Alternative mechanisms—in particular giving priority to GDPR enforcement by data protection supervisors—may be preferable, but it is early to judge their effectiveness.

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<sup>192</sup> See Competition Bureau of Canada, ‘Big data and innovation: key themes for competition policy in Canada’ (Report) 2018, 8-9 (‘while the Bureau recognizes that other enforcement agencies may have oversight of certain aspects relevant to the quality of goods and services, including privacy, that oversight does not limit the Bureau’s responsibility to enforce the [Competition] Act’ (emphasis added)).