

**A CONSUMER
INVESTIGATION
into**

PERSONALISED PRICING



moz://a



**CONSUMERS
INTERNATIONAL**
COMING TOGETHER
FOR CHANGE

ABOUT CONSUMERS INTERNATIONAL

Consumers International is the membership organisation for consumer groups around the world.

We bring together over 200 member organisations in more than 100 countries to empower and champion the rights of consumers everywhere. We are their voice in international policy-making forums and the global marketplace to ensure they are treated safely, fairly and honestly.

We are resolutely independent, unconstrained by businesses or political parties. We work in partnership and exercise our influence with integrity, tenacity and passion to deliver tangible results.

Consumers International.
Coming together for change.

ABOUT MOZILLA

Mozilla fights for a healthy internet – one where Big Tech is held accountable and individual users have real agency online.

Mozilla's work is guided by the [Mozilla Manifesto](#). Founded as a community open source project in 1998, Mozilla currently consists of two organizations: the 501(c)3 Mozilla Foundation, which leads our movement building work; and its wholly owned subsidiary, the Mozilla Corporation, which leads our market-based work. The two organizations work in close concert with each other and a global community of tens of thousands of volunteers under the single banner: Mozilla.

<https://foundation.mozilla.org>

EXECUTIVE SUMMARY



Personalised pricing is a form of price discrimination that involves setting prices at a different level for each individual consumer, based on an estimation of what they are willing and able to pay. The growth of the digital economy, along with advances in data collection and use of algorithms, has greatly expanded the capacity for companies to practice personalised pricing. However, there is still limited research on the extent to which personalised pricing is currently in use, and on the ramifications for consumer rights and protections.

This report presents the findings from a study into the prevalence of personalised pricing across six countries, using one global company as a case study, to better understand the practice and its effects on the consumer experience. The report provides an analysis of potential harms and benefits for consumers, and argues that personalised pricing is not inherently harmful to consumers, but rather is not always being implemented fairly, responsibly, and transparently, or with proper oversight. There must be effective legal, institutional, and social mechanisms in place to ensure that personalised pricing works in the best interest of all consumers.

The report situates its findings by providing an overview of the data protection contexts across the six target countries, concluding that these current regulatory frameworks are not being effectively enforced. It is also acknowledged that no uniform and comprehensive data regulation exists at an international level, nor are there any data protection measures or guidelines specifically addressing personalised pricing.

The underlying research was conducted by Consumers International in partnership with the Mozilla Foundation, and includes a case study focused on an online product available globally, namely Tinder Plus, the premium service offered by online dating platform Tinder. This study investigates the use of personalised pricing (as well as consumer attitudes towards the practice) in New Zealand, the USA, the Netherlands, the Republic of Korea, India, and Brazil. The study was conducted with support from Consumers International members, using a methodology that is easily scalable and replicable, and that was inspired by CHOICE Australia's similar study in 2020.¹

We lay out how:

- Globally, there have been few detailed investigations into the extent of personalised pricing or consumer perceptions.
- Personalised pricing is not inherently harmful to consumers. If implemented fairly, responsibly, and transparently, with proper oversight, personalised pricing can have certain benefits.
- As well as the potential for personalised pricing to be deliberately used unfairly or unethically, there is also a risk of inadvertently harming consumers if personalised pricing is not implemented responsibly, which can undermine trust in the digital marketplace.
- The expansion of personalised pricing in recent years has been accompanied by a growing interest in what governments and regulators can do to ensure that consumer welfare is not harmed

¹ 'Tinder Charges Older People More', CHOICE, 11/08/20

by these practices. There is currently no uniform and comprehensive data regulation at an international level, nor any measures or guidelines specifically addressing personalised pricing.

- Data protection regulations are not the only legal grounds that could be used to tackle personalised pricing; competition law and consumer protection law could also provide a basis for action, and would be worthy of further investigation.

The global case study and investigation brings to life the complexity of the issue, shares some consumer experience across six countries, and also proposes practical next steps:

- From a case study across six countries on an online dating app, Tinder, there is very strong evidence of personalised pricing in all markets surveyed, with consumers in every country quoted multiple different prices. Up to 31 unique price points for Tinder Plus were quoted to consumers within a single country. In four of the countries surveyed, the highest price quoted was between four and six times more than the lowest.
- There is little transparency regarding the price-setting mechanism, nor is it made clear that personalised pricing is being applied at all.
- Age appears to be a significant factor driving price personalisation, with consumers aged over 30 charged substantially more in all countries except Brazil – across the six countries, participants aged 30-49 on average paid 65.3% more than those aged 18-29. Other factors beyond age are also driving personalisation, although it is not clear what these factors are.
- Consumers feel strongly about this issue and are not naïve, understanding the pros and cons of personalised pricing. When the same consumers were asked their opinions, across all six countries, all consumer segments we surveyed raised strong concerns about the use of their personal data for price-setting, and the potential for it to be collected, used, and disseminated without their knowledge or consent. And in fact, older consumers tended to be more concerned.
- For leaders seeking to find a path towards consumer trust, there are answers. Consumers reported that perceptions of personalised pricing could be improved, building trust in the marketplace, if there were greater transparency and improved protections regarding the collection and use of their data, as well as greater transparency on the price-setting process.

Based on our understanding of the current landscape and our global case study, Consumers International sets out a series of preliminary recommendations for businesses and policymakers, centred on three pillars:

1. Transparency and the right to information – businesses must make it clear to consumers when and how personalised pricing is being used, while governments and regulators must establish and enforce such transparency requirements.

2. Consumer protection and empowerment – consumers must be given greater agency over the use and dissemination of their personal data collected for personalised pricing purposes, while measures must be introduced to uphold data protections for all.
3. Equality and anti-discrimination – businesses must work proactively to ensure that personalised pricing never violates anti-discrimination law, while providing transparency for pricing practices to be investigated and audited.

We hope this report can provide insight and support conversation about shaping a fair, safe and sustainable digital marketplace for all.



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SECTION 1 PERSONALISED PRICING





The following section defines personalised pricing, before providing a brief overview of the current literature on both the prevalence of personalised pricing and on consumer perceptions of the practice. It concludes with an assessment of the potential harms and benefits for consumers.

DEFINING PERSONALISED PRICING

Personalised pricing generally takes the form of first-degree price discrimination, the objective of which is to set prices for each individual consumer at the highest level they are willing and able to pay. Estimating this figure requires the seller to access data that provides insight into the personal characteristics and conduct of consumers, in order to determine and individualise the price they are offered for a product or service.

This stands in contrast to third-degree price discrimination, whereby prices are set at different levels for different groups of consumers (such as student discounts), or second-degree price discrimination, which sees consumers offered different prices depending on the amount or quantity consumed (such as two-for-one deals). Another form of price discrimination is dynamic pricing or surge pricing (for example used by ridesharing firms to set a price reflecting changing market conditions, such as when demand increases).

PERSONALISED PRICING IN PRACTICE

While the concept of personalised pricing has long been discussed by economists, more recent advances in data collection and use of algorithms, as well as the growth of the digital economy, have greatly expanded the practical viability of personalised pricing. Some experts have therefore noted a relative shortage of studies on two topics of great importance for consumer protection – the extent to which personalised pricing is currently being used in the marketplace; and how consumers perceive and react to these practices.²

How widespread is personalised pricing?

A small number of detailed investigations into the extent of personalised pricing have been conducted, with a bias towards Europe and North

America. A 2018 European Commission investigation into 160 websites across eight European countries “did not find evidence of consistent and systematic price differences between scenarios where the e-commerce website could observe shopper characteristics and when it could not”, although stronger evidence of personalisation was noted in specific markets such as hotels and airline tickets.³ A 2014 study on e-commerce sites in the USA found evidence of price personalisation in nine out of 16 cases, although the nature and execution of personalisation varied substantially across these examples, perhaps explaining the difficulty of running comprehensive, large-scale investigations into this issue.⁴

However, a growing number of high-profile cases of personalised pricing have emerged in recent years. British home improvement company B&Q notably used data on customers’ spending habits (collected via loyalty cards on mobile phones) to determine prices displayed on electronic price tags in stores;⁵ multinational airline AirAsia began testing the use of consumer data to personalise baggage pricing in 2017;⁶ and Brazilian online travel agency Decolar.com was recently fined R\$7.5 million for differentiating prices based on consumers’ starting location.⁷ In 2017, a representative of ride-sharing firm Uber revealed that its ‘route-based pricing’ fare system determines how much users might be willing to pay for certain routes at different times of day.⁸

How do consumers react to personalised pricing?

Studies on consumer perceptions of personalised pricing have been more frequent, especially in the last few years, although again with relatively limited geographical scope. A 2005 study, ‘Open to Exploitation: America’s shoppers online and offline’, reported that 76% of consumers agreed that “it would bother me to learn that other people pay less than I do for the same products”.⁹ A 2018 survey in the UK found that 84% of consumers felt uncomfortable with personalised pricing in essential service markets, while a 2019 investigation in India reported that, “regardless of the positive or negative purchase scenarios to which the consumers were exposed, the study shows an increasing resentment in the use of their personal data for customizing individual prices”.¹⁰ A 2017 investigation by the Consumers Council of Canada suggested that concerns about pricing based on personal information are far stronger than for second- or third-degree price discrimination, which most consumers surveyed found to be “tolerable”.¹¹

Further investigations have added greater nuance, with a number of studies finding that consumers become more receptive to personalised pricing when there is greater transparency to the price-setting process, or when they are given a chance to opt out.¹² A 2020 study, ‘Public Attitudes Towards Online Targeting’, concluded that opposition to personalisation is rooted primarily in concerns about data privacy and the potential for exploitation, rather than the simple fact of paying different prices to others, while the Consumers Council of Canada found in 2021 that caution regarding the digital economy more broadly is strongest among certain groups of consumers that are more likely to be vulnerable, including those with low incomes, and those aged over 50.¹³

Investigations into the effectiveness of mandatory disclosures – sometimes recommended as a way to improve transparency – have also intro-

² OECD, *Personalised Pricing in the Digital Era*, 2018, Centre for Data Ethics and Innovation, Landscape Summary: Online Targeting, 2019

³ European Commission, *Consumer market study on online market segmentation through personalised pricing/offers in the European Union*, 2018

⁴ Hannak, A et al, ‘Measuring Price Discrimination and Steering on E-commerce Web Sites’, Proceedings of the 2014 Conference on Internet Measurement Conference, 05/11/14

⁵ Competition and Markets Authority, *Algorithms: How they can reduce competition and harm consumers*, 2021

⁶ ‘AirAsia testing personalised baggage pricing, eyes more add-on revenues’, *Reuters*, 16/11/17

⁷ ‘Decolar.com é multada em R\$ 7.5 milhões por diferenciação de preço’, *O Globo*, 18/06/18

⁸ ‘Uber’s future may rely on predicting how much you’re willing to pay’, *Bloomberg*, 19/05/17

⁹ J Turow et al, *Open to Exploitation: America’s Shoppers Online and Offline*, 2005

¹⁰ Citizens Advice, *A price of one’s own: An investigation into personalised pricing in essential markets*, 2018

Victor, V et al, ‘Consumer Attitude and Reaction Toward Personalised Pricing in the E-Commerce Sector’, *Journal of Management and Marketing Review*, 4 (2), 10/09/19

¹¹ Consumers Council of Canada, *Dynamic Pricing – Can consumers achieve the benefit they expect*, 2017

¹² European Commission, *Consumer market study on online market segmentation through personalised pricing/offers in the European Union*, 2018

¹³ Richards, TJ et al, ‘Personalized pricing and price fairness’, *International Journal of Industrial Organization*, 44 (C), 2016, Consumers Council of Canada, *The On-Demand Consumer*, 2021

duced useful perspectives. A 2021 Organisation for Economic Co-operation and Development (OECD) study in Ireland and Chile, despite reaffirming consumers' general opposition to personalised pricing, found that in practice disclosures had little impact on improving consumer awareness. Separately, a 2020 investigation warned that disclosures framing personalised pricing as a 'discount' made consumers more vulnerable to price discrimination, not less.¹⁴

CONSUMER BENEFITS AND HARMS

"If we don't hold everyone to reasonable requirements around transparency and ethics, an insurance company, hypothetically, would be free to use sleep data from your fitness tracker and the sad songs you've been listening to on Spotify as a basis for charging you extra to get mental health cover."¹⁵

CHOICE, 2020

Personalised pricing is not inherently harmful to consumers. If implemented fairly, responsibly, and transparently, with proper oversight, personalised pricing can have certain benefits.¹⁶ However, there must also be effective legal, institutional, and social mechanisms in place to ensure that personalised pricing works in the best interest of all consumers. As well as the potential for personalised pricing to be deliberately used unfairly or unethically, there is also a risk of inadvertently harming consumers if personalised pricing is not implemented responsibly. A lack of transparency and fairness in the use of consumer data can also undermine trust in the digital marketplace, regardless of the associated benefits or harms.

¹⁴ OECD, 'The effects of online disclosure about personalised pricing on consumers: Results from a lab experiment in Ireland and Chile', 2021

Van Boom, WH et al, 'Consumers Beware: Online Personalized Pricing in Action! How the Framing of a Mandated Discriminatory Pricing Disclosure Influences Intention to Purchase' *Social Justice Research* 33, 03/02/20

¹⁵ 'Tinder Charges Older People More', *CHOICE*, 11/08/20

Benefits	Harms
<p>Potential for fairness and equity</p> <ul style="list-style-type: none"> ● Personalised pricing can ensure products and services are available at lower costs for vulnerable and low-income consumers, enabling a closer match between consumers' income and their purchases 	<p>Potential for discrimination and exploitation</p> <ul style="list-style-type: none"> ● The use of consumer data for personalised pricing can exacerbate economic inequalities if used to exploit less knowledgeable consumers, or to target behavioural biases. ● Algorithms can unintentionally breach national discrimination laws, for example when the use of postal codes drives discrimination based on race or social class.

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¹⁶ Citizens Advice, *A price of one's own: An investigation into personalised pricing in essential markets*, 2018

Benefits	Harms
<p>Supporting competition</p> <ul style="list-style-type: none"> ● Personalised pricing can aid competition in the marketplace, theoretically resulting in lower prices for consumers. ● By accessing information which signals willingness to pay, businesses with small profit margins can continue meeting their costs by varying their prices to serve more customers. 	<p>Hindering consumer right to redress</p> <ul style="list-style-type: none"> ● If consumers are unaware that their personal information has been used to tailor prices, they are unlikely to know whether their rights have been violated, or if they have been discriminated against. This can prevent consumers from receiving a fair settlement of just claims.
<p>Enhanced supply and demand management</p> <ul style="list-style-type: none"> ● Personalised pricing can be used to enhance allocative efficiency, matching the provision of goods and services to consumer needs. 	<p>Limiting choice</p> <ul style="list-style-type: none"> ● Personalised pricing provides companies that have access to more consumer data with an unfair advantage, leading to an imbalance of marketplace power, and undermining consumer choice.
	<p>Diminishing consumer trust</p> <ul style="list-style-type: none"> ● Personalised pricing may be seen as unfair or even manipulative by consumers, and can undermine their trust in the digital marketplace more broadly.
	<p>Lack of transparency</p> <ul style="list-style-type: none"> ● Without transparency via clear and reliable information, consumers are unable to provide meaningful and informed consent about the use of their data for personalised pricing. ● If the price of a product or service differs on an individual level, consumers are unable to make accurate comparisons between alternatives.

Source: Consumers International, OECD, European Commission, Citizens Advice, CHOICE Australia
 These include the OECD, the European Commission, Citizens Advice, and CHOICE Australia.

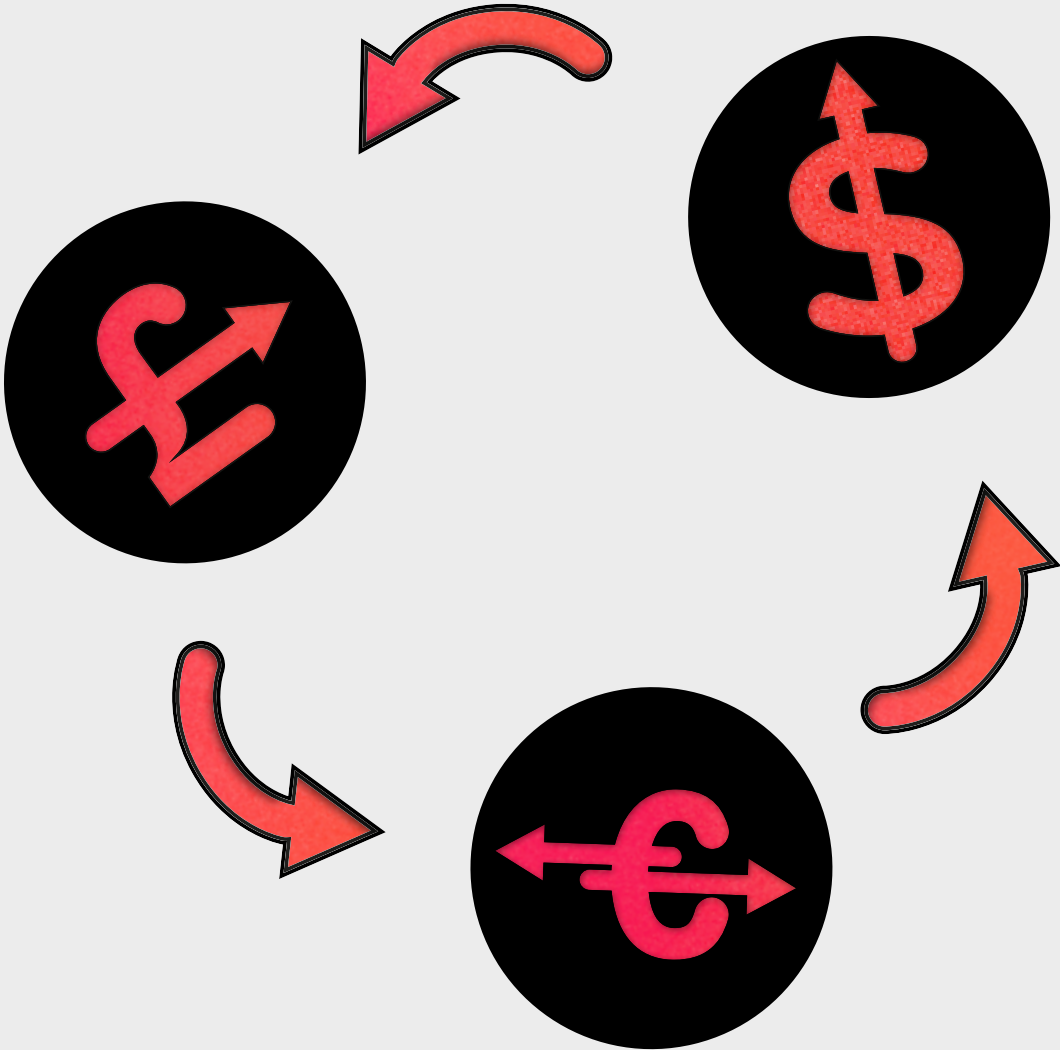
A 2018 study by a UK charity, Citizens Advice, warned of the particular risks to consumers should personalised pricing be implemented for essential services; the investigation found little evidence that this was true in the UK at the time, but highlighted the realistic prospect that personalised pricing could be rolled out in energy and telecommunications markets if preventative action was not taken.¹⁷

Essential services providers often have extensive access to personal information and usage data, which could leave consumers vulnerable to price hikes if used to target behavioural biases. For example, biases that could be targeted include financial overconfidence, with companies targeting consumers with a tendency to overspend, leading to indebtedness. Data could also be used to make inferences on how risk-averse or at-risk a consumer is, and therefore how much they may be willing to pay.

¹⁷ Citizens Advice, *A price of one's own: An investigation into personalised pricing in essential markets*, 2018

SECTION 2

CASE STUDY - TINDER





The following section introduces a current case study focused on an online dating platform, Tinder. It outlines the choice of focus for this study, and details the scope and methodology. We then present the results of the study, which includes prices quoted for Tinder Plus in six countries, and consumer attitudes towards personalised pricing more broadly.

BACKGROUND TO CASE STUDY

The primary objective of consumer organisations is the protection and promotion of consumer rights. Where possible, consumer organisations seek to combine efforts across countries to partner, leverage, and learn together.

Online dating platform Tinder was chosen as the subject of this case study investigation because it is a global company offering a consistent product across many countries, and because it has previously been investigated by one of Consumers International's members in Australia, CHOICE, in 2020. An investigation into Tinder allows for a comparison of personalised pricing across a range of markets worldwide, to deliver learnings on how to build transparency effectively on a platform available globally.

Tinder, an online dating platform established in 2012, is currently used by around 66 million people across 190 countries around the world. While the app is free to download, 5.9 million Tinder users pay for a premium Tinder Plus or Tinder Gold account, which offer special features, such as unlimited 'swipes', 'super likes', and 'boosts', designed to get your profile more attention.¹⁸

When signing up to Tinder, consumers are required to share personal information from the start of the process; at no point in the registration process does Tinder draw attention to the fact that they may be offered a different price than others for Tinder Plus. Deep within the terms of use,¹⁹ it is noted that "Tinder operates a global business, and our pricing varies by a number of factors. We frequently offer promotional rates –

¹⁸ 'Tinder Revenue and Usage Statistics', *Business of Apps*, 21/09/21

¹⁹ Tinder website, <https://policies.tinder.com/terms>

which can vary based on region, length of subscription, bundle size and more'; similarly, in the privacy policy,²⁰ that "we also use information about you to deliver offers and discounts tailored to your profile".

Tinder has previously faced scrutiny for its use of personalised pricing to charge different prices to different users. In 2020, CHOICE's study in Australia demonstrated that Tinder was not just applying different prices for different groups of consumers, but was instead using personalised pricing, applying different prices for individual consumers.²¹

While price brackets are not officially published, representatives of Tinder have previously noted that users are also charged different prices in different countries, and for different age brackets.²² National media in various countries have often highlighted the existence of two price categories, usually for those aged 18-29 and 30+, and in 2019 Tinder agreed to a settlement of US\$ 24 million in a class-action age discrimination lawsuit in the US state of California, alleging that people aged over 30 were being charged twice as much as younger users for its paid subscription services.²³

CHOICE's 2020 study, however, suggested that Tinder was not just offering different fixed prices based on age (an example of third-degree price discrimination), but was instead quoting a wide range of personalised prices, with age explaining only a portion of this variation. There is no evidence that Tinder has changed its pricing practices in Australia since this investigation.²⁴

CASE STUDY: METHODOLOGY

In partnership with the Mozilla Foundation, Consumer International adapted CHOICE's methodology to conduct fieldwork in six countries – New Zealand, the USA, the Netherlands, the Republic of Korea, India, and Brazil – between May and September 2021. Together, these countries represent around 2.14 billion consumers, and cover a diverse range of geographic and socioeconomic contexts. These countries are also among the largest markets for Tinder globally.

In order to sign up, Tinder asks users to share their name, age, gender, and sexual preference, as well as to provide access to their location data. We asked the mystery shoppers to share a screenshot of the information provided upon registration, as well as their postal code, and a screenshot of the price quoted subsequently for a one-month subscription to Tinder Plus. Participants were also asked to sign up using their phone number, rather than through email or social media accounts.

96 mystery shoppers in each country took part in the study, with quotas set based on gender (50% men and 50% women); sexual preference (50% heterosexual and 50% homosexual); age (evenly split between brackets of 18-29, 30-49, and 50+); and location (approximately 70% metropolitan and 30% regional). The only exception was the Republic of Korea, where a 48-person sample consisting solely of heterosexual participants was used, due to cultural attitudes that could have placed participants identifying as homosexual at risk. These quotas were intended to ensure a diverse range of consumers were represented,

²⁰ Tinder website, <https://policies.tinder.com/privacy>

²¹ 'Tinder Charges Older People More', CHOICE, 11/08/20

²² 'Tinder to charge older users more for premium facilities', BBC, 02/03/15

²³ 'Users More Money', Business Insider, 08/02/18, 'Tinder settles age discrimination lawsuit with \$11.5 million worth of Super Likes', The Verge, 25/01/19

²⁴ 'Tinder Charges Older People More', CHOICE, 11/08/20 'I asked Tinder for my data. It sent me 800 pages of my deepest, darkest secrets', The Guardian, 26/09/17

rather than to achieve a representative sample of national populations.

To test consumer attitudes towards personalised pricing, we also asked these same mystery shoppers a number of survey questions about personalised pricing on online platforms more broadly. Participants were asked three questions, and asked to select all the answers that applied from a list of options. These questions were:

1. What are your main concerns with regard to online personalised pricing?
2. What do you see as the main benefits of online personalised pricing?
3. What difference, if any, would the following options make to your overall perception of personalised pricing?

In Section 4, we address some of the limitations of this study, and suggest some potential avenues for further investigation.

CASE STUDY: RESULTS – PRICES QUOTED FOR TINDER PLUS

Key findings:

- The wide range of prices quoted to mystery shoppers provided very strong evidence that personalised pricing is being used in all of the markets surveyed. Substantial variations in prices were observed within each country; the highest prices quoted in New Zealand, the USA, the Netherlands, and the Republic of Korea were between four and six times higher than the lowest prices in each of these countries, while in India the highest prices quoted were more than double the lowest.
- A large number of different prices were quoted in five of the six countries – other than Brazil, where only two unique prices were quoted, the survey recorded between nine (USA) and 31 (Netherlands) unique prices in each country.
- There is strong evidence that age is a significant factor driving personalised pricing, with 18-29 year-olds charged substantially less than older users in all countries except Brazil – on average across the six countries, 30-49 year-olds were charged 65.3% more than 18-29 year-olds, while there was minimal difference between 30-49 year-olds and those aged over 50.
- However, the findings also clearly demonstrate that age is not the only relevant factor, with numerous cases observed in which older users paid less than their younger compatriots.
- Gender and sexual preference showed no statistically significant evidence of affecting pricing; while small variations were observed at national level, a larger sample size would be necessary to determine the significance of any relationship.
- The role of location proved more difficult to measure, given the specificity of the location data available to Tinder; however, the

reasonable level of variation observed here suggests that further investigation into its role in price-setting would be highly worthwhile.

- It is clear that Tinder’s price-setting mechanism is complex, drawing on age and other unknown factor/s, possibly including data points beyond those provided upon registration.

Evidence of personalised pricing

Country	Average price quoted	Lowest price quoted	Highest price quoted	Difference between highest and lowest	Unique prices quoted
New Zealand	\$15.35	\$4.95	\$24.54	+395.8%	25
USA	\$14.92	\$4.99	\$26.99	+440.9%	9
Netherlands	\$16.46	\$4.45	\$25.95	+483.1%	31
Republic of Korea	\$15.33	\$5.16	\$22.36	+333.3%	26
India	\$8.09	\$4.52	\$10.25	+126.8%	19
Brazil	\$3.49	\$3.02	\$3.61	+19.5%	2

Figure 1: Price variation by country
All prices for a one-month subscription to Tinder Plus, and converted to US dollars

The survey showed reasonable variation in the average price quoted in each of the six countries for a one-month subscription to Tinder Plus (Figure 1), broadly in keeping with relative cost of living (Annex 1). However, it also revealed significant price variation within each country: the highest-paying participants in New Zealand, the USA, the Netherlands, and the Republic of Korea were quoted between four and six times more than their lowest-paying compatriots, while the highest-paying participant in India was quoted more than double the lowest. Brazil proved to be an exception, with all participants quoted one of just two price points, \$3.02 or \$3.61. In the other five countries, far more unique prices were offered, ranging from nine in the USA to 31 in the Netherlands.

This does not appear to be straightforward third-degree price discrimination (whereby prices are set differently for different groups of consumers), but rather a complex process more akin to first-degree price discrimination (which seeks to identify the maximum price each individual consumer is willing and able to pay). Even in Brazil, where only two price points were offered, these did not correspond neatly to age, gender, sexual preference, or location. This price-setting process is likely achieved through an algorithm, using a combination of data points to determine what price to offer to each individual consumer.

Price variation by personal characteristics

Country	Average price (18-29)	Average price (30-49)	Average price (50+)	Difference between 30-49 vs 18-29	Difference between 50+ vs 30-49
New Zealand	\$11.17	\$17.73	\$17.32	+55.1%	-2.3%
USA	\$11.91	\$16.96	\$15.94	+42.4%	-6.0%
Netherlands	\$9.98	\$20.08	\$19.41	+103.2%	-3.3%
Republic of Korea	\$9.03	\$18.11	\$18.85	+100.6%	+4.1%
India	\$5.03	\$9.47	\$9.73	+88.3%	+2.7%
Brazil	\$3.44	\$3.52	\$3.49	+2.3%	-0.9%
Global				+65.3%	-0.9%

Figure 2: Price variation by age

By far the strongest evidence was for personalised pricing based on age (Figure 2). In every country surveyed except for Brazil, those aged 30-49 and 50+ were quoted substantially more on average than those aged 18-29. This difference was greatest in the Netherlands, the Republic of Korea, and India, where 30-49 year-olds were charged around twice as much as 18-29 year-olds, but in all five cases the margins were clear enough to leave no doubt as to the role of age in price-setting. There was far less difference between prices quoted to those aged 30-49 and 50+, with the older cohort generally (but not universally) being charged marginally less.

Country	Average price (women)	Average price (men)	Difference between men vs women
New Zealand	\$15.64	\$15.02	-4.1%
USA	\$14.45	\$15.38	+6.5%
Netherlands	\$16.09	\$16.82	+4.5%
Republic of Korea	\$15.54	\$15.12	-2.8%
India	\$8.15	\$8.03	-1.6%
Brazil	\$3.47	\$3.50	+0.9%
Global			+0.6%

Figure 3: Price variation by gender

Country	Average price (homosexual)	Average price (heterosexual)	Difference between heterosexual vs homosexual
New Zealand	\$15.56	\$15.10	-3%
USA	\$14.82	\$15.03	+1.5%
Netherlands	\$15.63	\$17.28	+10.6%
Republic of Korea			
India	\$8.04	\$8.13	+1.1%
Brazil	\$3.47	\$3.50	+0.9%
Global			+2.6%

Figure 4: Price variation by sexual preference

There were no statistically significant relationships identified between pricing and gender (Figure 3) or sexual preference (Figure 4). While certain cases appeared to be worthy of further investigation – for instance with male participants in the USA quoted 6.5% more on average than female participants in the same country, and heterosexual participants in the Netherlands quoted an average of 10.6% more than homosexual participants – a far larger sample size would be needed to demonstrate a significant relationship. Even assuming gender or sexual preference are not deliberately factored into Tinder’s pricing algorithm, there is potential for unintentional unfair pricing if specific demographics are consistently being charged more than their counterparts.

Country	Average price (metropolitan)	Average price (regional)	Difference between regional vs metropolitan
New Zealand	\$15.52	\$15.07	-3%
USA	\$14.42	\$16.08	+11.5%
Netherlands	\$15.66	\$17.28	+27.3%
Republic of Korea	\$16.33	\$14.16	-15.3%
India	\$8.31	\$7.16	-16.1%
Brazil	\$3.48	\$3.50	+0.6%
Global			+0.9%

Figure 5: Price variation by location

Measuring the impact of location on price-setting proved particularly difficult, given the specificity of the locational data available to Tinder, which theoretically allows for highly precise personalisation, for instance asking consumers in more affluent areas to pay more. Separating participants into 'metropolitan' and 'regional' cohorts based on postal codes, however, provided some initial insight into whether prices were being personalised by location (Figure 5). Reasonable variation was observed in four of the six countries (all except New Zealand and Brazil), although the impact of location was less significant than that for age, and was not in one consistent direction, with metropolitan participants paying less in the USA and the Netherlands, but more in India and the Republic of Korea. There is a strong possibility that location has a greater impact on price-setting than this initial analysis suggests; further research along these lines would be worthwhile.

Are there other factors at play?

While we can only be entirely confident of the role of age in determining prices, it is also clear that age is not the only factor at play, and it remains possible that factors beyond any of the four measured in this investigation are influencing the price-setting process for Tinder Plus. In all six countries, cases were observed whereby individual participants aged 30-49 or 50+ were quoted lower prices than those aged 18-29, and vice versa; in Brazil and New Zealand, the lowest or joint lowest prices quoted were to participants aged over 50, while in the Republic of Korea, Brazil, and the Netherlands, the highest or joint highest prices quoted were to participants aged 18-29. Observing the full range of prices paid within theoretically identical cohorts (Figure 6) demonstrates the extent of this variation:

\$5.59	\$5.59	\$8.88	\$8.92	\$11.61	\$22.36
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Figure 6: Examples of full range of prices paid within theoretically identical cohorts
Prices paid by metropolitan, heterosexual women from the Republic of Korea, aged 18-29

\$9.04	\$12.97	\$17.79	\$18.07	\$24.77	\$25.95
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Figure 6: Examples of full range of prices paid within theoretically identical cohorts
Prices paid by regional, homosexual men from the Netherlands, aged 50+:

\$4.99	\$8.99	\$9.99	\$9.99	\$13.49	\$17.99
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Figure 6: Examples of full range of prices paid within theoretically identical cohorts
Prices paid by metropolitan, heterosexual men from the USA, aged 18-29:

CONSUMER ATTITUDES TOWARDS PERSONALISED PRICING

Some participants were quoted prices up to four times higher than others in the same country, age group, location category, and of the same gender and sexual preference. While not all cohorts saw differences as extreme as these, the vast majority saw internal variation well beyond what can be explained by age alone, even allowing for the small sample sizes at this level of detail. It is possible that the more detailed, unexplored impact of location could explain these differences, or that Tinder's algorithm utilises the information provided upon registration in a more complex way than this study was able to measure.

There is also a strong possibility that data points beyond any of those provided upon registration are used to influence prices. Data subject access requests (DSARs), which allow consumers in certain jurisdictions to request access to the personal data that companies have collected on them, have previously demonstrated the huge quantity of information gathered by Tinder and other companies.²⁵ Further research may be able to shed light on the impact of alternative data points on price-setting, but in practice it would likely be extremely difficult to fully understand Tinder's price-setting mechanism without transparency from the company itself. Our research into consumer attitudes suggests that if such transparency is not provided, there is a strong risk of undermining consumer trust in Tinder and the marketplace more broadly.

Key findings:

- Nearly all consumers surveyed reported some level of concern regarding the use of personalised pricing; 56% cited concerns about data privacy as a top concern, while 33% highlighted the potential unfairness of charging different prices to different people.
- Participants aged over 30, who this investigation has demonstrated are routinely charged more for Tinder Plus, were nine percentage points more likely to identify the potential for price discrimination as a top concern regarding personalised pricing.
- When asked about possible benefits of personalised pricing, 40% of participants cited the potential to receive lower prices as a top benefit, while 38% cited the option for companies to tailor products and services to individual consumers' needs.
- Participants also reported that their perception of personalised pricing would be more positive if there was an option to 'opt out' of receiving personalised prices, or if there was greater transparency on data collection and sharing, and on the price-setting process.

Concerns about personalised pricing

Participants were asked to identify their main concerns about personalised pricing from a list of options, with no limit on the number of options they could select (Figure 7). Just 3% of respondents reported having no concerns about personalised pricing, while the most commonly selected issues centred on the collection and dissemination of personal data,

²⁵ 'I asked Tinder for my data. It sent me 800 pages of my deepest, darkest secrets', *The Guardian*, 26/09/17

followed by concerns about the potential for unfair price discrimination. Older consumers were broadly more likely to identify the potential for price discrimination as a top concern – 36% of over 30s selected this option, compared to just 27% of 18-29 year-olds. Tinder’s rationale for charging older users more is based on an assumption that they are more able to bear these costs,²⁶ but these findings appear to support existing evidence that older consumers are just as concerned as their younger counterparts about price discrimination, if not even more so.²⁷

²⁶ ‘Tinder Under Fire for Charging Older Users More Money’, *Business Insider*, 08/02/18

²⁷ Consumers Council of Canada, *The On-Demand Consumer*, 2021

Participants aged over 50 were also the least likely to identify the use and sharing of their personal data as a top concern - 43% did so, compared to 53% of 18-29 year-olds. This could reflect a relative lack of knowledge on the potential for price discrimination through personal data, and suggests that older consumers could be unfairly targeted.

Top concerns with personalised pricing	
1	My online data is collected/a profile is made about me (56% of responses)
2	My personal data could be used for other purposes and/or I don't know with whom it might be shared (49%)
3	It is unfair that people should pay differently for the same product (33%)
4	Cookies are installed on my computer (30%)
5	I may end up paying more when I buy a product (27%)

Figure 7: What are your main concerns with regard to online personalised pricing?

Perceived benefits of personalised pricing

Most participants also recognised some of the potential benefits of personalised pricing (Figure 8), although 14% said they saw no benefits at all. Participants responded most positively to the possibility of receiving lower prices themselves, although many also highlighted the potential for increased competition to lower prices across the board, or for poorer consumers to receive fairer prices.

Top perceived benefits of personalised pricing	
1	I get the best available price for products (40% of responses)
2	It allows e-commerce websites to offer me reductions/promotions (39%)
3	It allows companies to tailor products and services to my needs (38%)
4	It triggers competition between companies and thus lower prices (27%)
5	People with fewer resources can get discounts (i.e. citizens of low-income countries, parents with small children) (21%)

Figure 8: What do you see as the main benefits of online personalised pricing?

Improving consumer attitudes towards personalised pricing

Consumers expressed clear support for a number of actions that could improve their overall perception of personalised pricing (Figure 9). While all options suggested received support from over 50% of respondents, the results conveyed particular backing for efforts to improve the transparency of personalised pricing mechanisms, and to enhance protections on the collection, use, and dissemination of consumer data.

Most strikingly, 83% of respondents expressed support for an easy option to 'opt out' of personalised pricing, the most popular of the suggested solutions. The least-selected options tended to be ways of improving transparency without substantially strengthening consumer agency, such as simply being informed that personalised pricing was being used, or of the median price quoted. There was relatively little variation in preferred solutions between age groups, although participants over 50 were notably less likely to support the option to 'opt out' (76%, compared to 87% of under 50s), again perhaps reflecting a less widespread understanding of the potential for price discrimination.

% of respondents who said each option would improve their perception of personalised pricing	
1	If I was given an easy option to 'opt out' of personalised pricing (83% of respondents)
2	If I was given a comparison of prices across other sites/options (77%)
3	If it was explained for what purpose my personal data is collected (76%)
4	If it was explained what personal data is collected on me (74%)
5	If it was explained which third parties were given access to my personal data (67%)
6	If I was able to see/change my personal data used for such practices (67%)
7	If I was informed why I was quoted a particular price (62%)
8	If I was informed when personalised prices were shown to me (62%)
9	If I was given a median price for each product or service (55%)

Figure 9: What difference, if any, would the following options make to your overall perception of personalised pricing?

CONCLUSIONS

This investigation has provided very strong evidence to support the conclusion that Tinder is applying personalised pricing in a wide range of global markets, as consumers in all six countries were charged a range of different prices, without any transparency on the price-setting mechanism, or any explicit notification during the registration process that personalised pricing was being applied at all. In five of the six countries, age was shown to be a major determinant of pricing, with

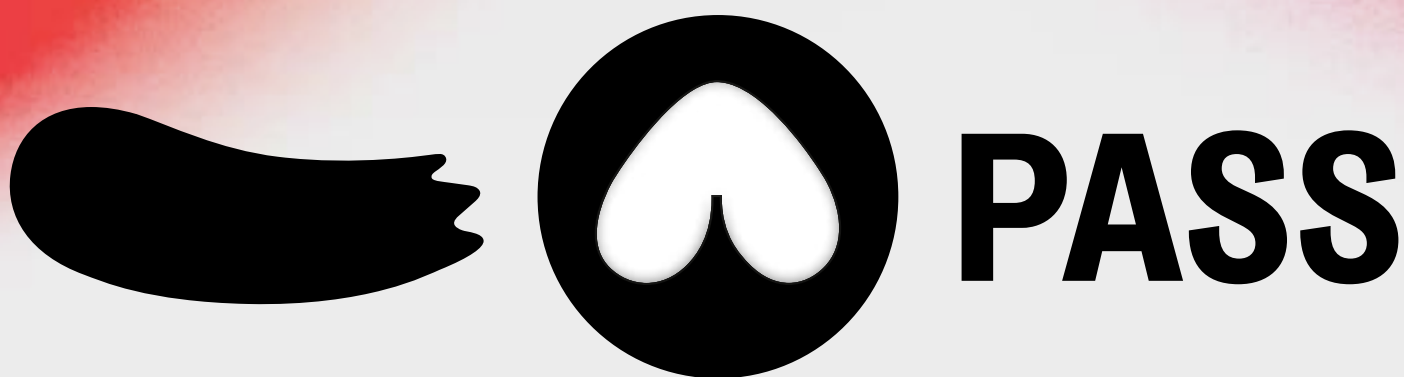
older consumers generally charged more; however, in all six countries it was also clear that other factors beyond age are affecting pricing. These findings broadly match those provided by CHOICE's 2020 investigation in Australia.²⁸

Gender and sexual preference showed no statistically significant impact on pricing, but further research would be needed to confirm that there is no unfair pricing, even unintentionally; location appeared to be more influential, but the challenges of measuring this impact again make it difficult to be certain. There is also a possibility that data points other than those provided upon registration are being used to shape prices; this would align with what our survey on consumer perceptions showed to be participants' greatest concern – that their personal data is being collected and shared without their knowledge. The potential to be charged different prices was another concern expressed by participants, especially when linked to the possibility of discrimination, but many also recognised the potential for personalised pricing to allow some consumers to receive lower prices, if managed and regulated responsibly.



²⁸ 'Tinder Charges Older People More', CHOICE, 11/08/20

SECTION 3 NATIONAL REGULATORY CONTEXT





The following section synthesises expert perspectives on how legislation and regulation can help to tackle unfair personalised pricing. It provides an outline of the current regulatory context in the six countries included in this study, as well as select examples from other regions. It also assesses the extent to which these data protection frameworks touch upon practices of personalised pricing.

Note: This is not intended to be a full statement of the law, and is intended for guidance only. Furthermore, this analysis does not consider any alternative protection frameworks that may address the legality of personalised pricing.

THE ROLE OF REGULATION

The expansion of personalised pricing in recent years has been accompanied by a growing interest in what governments and regulators can do to ensure that consumer welfare is not harmed by these practices. Very few experts recommend banning personalised pricing entirely (despite evidence that consumers might support this), with many explicitly warning that a blanket ban could harm poorer consumers who might stand to benefit from fair and responsible personalised pricing.²⁹ And yet, the results of our research, as well as other studies referred to in this report, make it clear that substantial change is needed to create a marketplace in which fairness and responsibility is the norm.

Another solution often favoured by consumers themselves, including in our survey, is greater transparency at the point of purchase. But again, this is not as straightforward as it might seem – evidence suggests that such disclosures can have limited impact on consumer decision-making, and that mandatory disclosures can even be used to mislead consumers by presenting personalised pricing solely in terms of ‘discounts’.³⁰

²⁹ Centre on Regulation in Europe, *Big Data and Competition Policy: Market power, personalised pricing and advertising*, 2017

DATA REGULATION CONTEXT

Consumers have a right to information, but this is only useful and actionable in a marketplace that they can trust; transparency is undoubtedly part of the solution, but must be accompanied by broader action.³¹

With a blanket ban seemingly off the table, and the limits of transparency acknowledged, the role of regulation becomes important, both in tackling existing cases of unfair personalised pricing, and in creating an environment that is safe and trustworthy for consumers. Many of the solutions needed to regulate personalised pricing are the same as those needed to tackle all manner of consumer harms in the online marketplace; the problem is that this process can be highly complex, drawing variously on consumer protection law, competition law, data protection law, and anti-discrimination law.³²

In many cases, the necessary legislation already appears to be in place – the real challenge is implementation, especially in the fast-changing online marketplace.³³ The demands made of regulators are varied; to audit algorithms, enforce sanctions, and set clear parameters for disclosures, among other objectives.³⁴ Several sources emphasise the value of a case-by-case approach in order to properly handle the nuances of regulating personalised pricing, as well as the need for better co-ordination between regulators to make sure all risks to consumers are addressed.³⁵ In the following section, given this study's specific focus on the use of consumer data to personalise prices, we address how data protection regulation in particular can be leveraged to ensure personalised pricing poses no threat to consumers.

There is currently no uniform and comprehensive data regulation at an international level, nor any measures or guidelines specifically addressing personalised pricing. Without comprehensive rules in place to monitor how consumer data should be used, technological innovations have been moving the online marketplace forward without sufficient regulatory guardrails.

Privacy and data protection regulation plays an increasingly important role in online marketplaces where companies might be implementing personalisation strategies (including personalised pricing) which rely on the collection and use of consumer data. As the OECD highlighted in its 2018 report, while privacy and data protection laws cannot directly regulate business pricing decisions, these laws can govern the collection, storage, and processing of personal data, which is often used to implement personalised pricing.³⁶

For instance, rules related to profiling might have an impact on the legality of personalised pricing. Under the General Data Protection Regulation (GDPR) in the European Union (EU) and the UK, considered a 'benchmark'³⁷ of regulation, the use of personal data – including internet identifiers – to tailor a price to an individual must comply with the fundamental principles of transparency, fairness, and lawfulness. Legal scholars have argued that this is not the case at present, and that many examples of personalised pricing are likely in breach of the GDPR.³⁸ China's incoming Personal Information Protection Law (PIPL) has also been hailed by some as a leading framework to address personal-

³⁰ OECD, 'The effects of online disclosure about personalised pricing on consumers: Results from a lab experiment in Ireland and Chile, 2021

Van Boom, WH et al, 'Consumers Beware: Online Personalized Pricing in Action! How the Framing of a Mandated Discriminatory Pricing Disclosure Influences Intention to Purchase' *Social Justice Research*, 33, 03/02/20

³¹ OECD, *Personalised Pricing in the Digital Era*, 2018

³² OECD, *Personalised Pricing in the Digital Era*, 2018

ised pricing.³⁹ The PIPL stipulates (Article 73) that automated decision-making must guarantee the transparency of the process and the fairness of the result, and adds that personal information processors may not engage in unreasonable differential treatment of individuals.⁴⁰ Currently, enforcement relating to personalised pricing in China is rare, but the PIPL is expected to change this.

Informing consumers at the point of purchase that their data is being used for personalised pricing is the first step - this requires clear and straightforward disclosures, rather than vague references to the provision of 'personalised services', or promises of 'discounts'. Disclosure regulations can also play an important role in addressing unfair personalised pricing practices; for example, the European Parliament's recent draft Digital Services Act would require traders to clearly inform consumers when the price offered is personalised on the basis of automated decision-making. The complementary Digital Markets Act would also mandate certain platforms to submit an annual audited report on techniques for profiling consumers.

Under the Republic of Korea's The Personal Information Act (PIPA), businesses can only use personal data – for pricing or any other purpose – where they have a legal basis, such as being necessary for the interests of the business or the performance of a contract, or based on the informed consent of the individual.⁴¹

A lack of transparency regarding personalised pricing would almost certainly render any consent claims invalid under the strict requirements of the GDPR. In other jurisdictions globally, such as Brazil's General Data Protection Law (LGDP), where online sellers rely on notice and consent for handling data, similar problems are likely to be found. Privacy policies and other terms and conditions are often unclear and overly long, making it difficult for most consumers to understand them and make informed choices.⁴² This can also limit consumers' prospects of obtaining redress in the case of harm, such as price discrimination based on legally protected characteristics.

The alternatives to consent are also problematic; the bar for necessity in the use of data in contractual delivery is quite high under the GDPR and wider EU law, and does not include increasing profit margins in a sale. A company may be able to process personal data without consent if necessary to perform the contract with the individual, or if the company can demonstrate legitimate interests – however, personalised pricing would only fall under this remit if it could be demonstrated that the company's interests were compatible with the individual's own interests (including their privacy rights).⁴³

The GDPR also contains specific regulations relating to certain profiling and automated decision-making activities. However, personalised pricing is only likely to fall within the scope of such regulations in limited cases with significant potential for consumer harm, such as medical cases where treatment may not be affordable. In these cases, consumers could be found to have additional rights to enhanced transparency and oversight.

Addressing personalised pricing through data protection regulation is a global issue, and should be a priority for governments worldwide. The

³³ Townley, C et al, 'Big Data and Personalised Price Discrimination in EU Competition Law', *Yearbook of European Law*, 36, 13/12/17

Poort, J, and Zuiderveen Borgesius, F, 'Online Price Discrimination and EU Data Privacy Law', *Journal of Consumer Policy*, 30, 15/07/17
Executive Office of the President, *Big Data and Differential Pricing*, 2015

³⁴ Centre for Data Ethics and Innovation, *Online targeting: Final report and recommendations*, 2020
Competition and Markets Authority, *Algorithms: How they can reduce competition and harm consumers*, 2021
Van Boom, WH et al, 'Consumers Beware: Online Personalized Pricing in Action! How the Framing of a Mandated Discriminatory Pricing Disclosure Influences Intention to Purchase' *Social Justice Research*, 33, 03/02/20

³⁵ Competition and Markets Authority, *Algorithms: How they can reduce competition and harm consumers*, 2021
Botta, M, and Wiedemann, K, 'To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse of dominance', *European Journal of Law and Economics*, 50, 09/12/19
OECD, *Personalised Pricing in the Digital Era*, 2018

³⁶ OECD, *Personalised Pricing in the Digital Era*, 2018;

³⁷ 'Highlights: The GDPR and CCPA as benchmarks for federal privacy legislation', *Brookings*, 19/12/19

³⁸ Poort, J, and Zuiderveen Borgesius, F, 'Personalised Pricing: The Demise of the Fixed Price?', *Data-Driven Personalisation in Markets, Politics and Law*, Kohl, U, and Eisler, J (eds.), 2021

³⁹ 'China's New Personal Information Protection Law – 10 Questions Companies Should Consider', *Clyde&Co*, 25/10/21

⁴⁰ 'China Introduces First Comprehensive Legislation on Personal Information Protection', *Latham & Watkins*, 08/09/21

⁴¹ OECD, *Personalised Pricing in the Digital Era*, 2018

⁴² OECD, *Improving online disclosures with behavioural insights*, 2018

⁴³ International Commissioner's Office website, <https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/contract/#ib4>

table below provides a high-level overview of existing data protection regulations (and their potential impact on personalised pricing) in each of the six countries included in this study, along with select examples from other regions. This is not intended to be a full statement of the law, and is intended for guidance only. Furthermore, this analysis does not consider any alternative protection frameworks that may address the legality of personalised pricing.

Country	Content of Data Protection Regulation	Strengths of Data Protection Regulation	Impact on Personalised Pricing
<p align="center">Brazil Law 13.709/2018 (General Data Protection Law — LGDP)</p>	<ul style="list-style-type: none"> ● The LGDP establishes norms and offers guidelines on how the collection of personal data may be carried out. ● Alongside these principles, there are also points on data quality, transparency, security, prevention, non-discrimination, and accountability. 	<ul style="list-style-type: none"> ● The LGDP applies to all companies and organisations, with a few exceptions. ● For consumers, the law gives them control over how organisations store and use their data, and the ability to obtain information on the use of their data. 	<ul style="list-style-type: none"> ● The general principles of the LGDP are similar to those of GDPR, and therefore it is possible that personalised pricing could be addressed under its remit.
<p align="center">New Zealand Privacy Act 2020</p>	<ul style="list-style-type: none"> ● The Privacy Act stipulates how information can be collected and used, and outlines people’s rights to gain access to that information, and to ask for it to be corrected. ● Companies are required to disclose to consumers what data is being collected about them and how it is being used. Consumers have the right to ask for their personal information that has been collected. 	<ul style="list-style-type: none"> ● The Privacy Act covers a range of actors, but notable exceptions include the news media, members of parliament, the Governor General, ombudsmen, and the courts. ● Companies are required to disclose what data is collected and how it is being used, and consumers can request information on the personal information collected. ● The act does not rely on consent, and instead focuses on companies following the law. 	<ul style="list-style-type: none"> ● The transparency requirements in New Zealand are somewhat weaker than in the GDPR, offering exemptions under certain circumstances. However, it is unlikely that these exemptions would apply to businesses practicing personalised pricing.

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Country	Content of Data Protection Regulation	Strengths of Data Protection Regulation	Impact on Personalised Pricing
<p align="center">USA</p> <p>The United States does not have comprehensive data protection regulation</p>	<ul style="list-style-type: none"> ● The USA has some targeted state and federal statutes protecting sensitive categories of data. ● There is a general-purpose consumer protection law that has been interpreted to mandate reasonable security and to restrict harmful privacy behaviours. 	<ul style="list-style-type: none"> ● Sectoral laws apply to companies that collect certain sensitive data — general purpose consumer protection law applies to all commercial entities — and state comprehensive commercial privacy laws apply to companies that meet certain metrics. ● Consumers are given varying degrees of agency over how organisations store and use their data. ● Legal enforcement for non-compliance varies between state, federal and sectoral laws, and penalties are not uniform or coordinated across different laws. 	<ul style="list-style-type: none"> ● The use of data in the USA - with some exceptions, such as the California Consumer Privacy Act – is primarily a contractual affair, conducted through terms and conditions and privacy notices. There are no statutory requirements for detailed information and consent. Overall, it would be quite difficult to use restrictions on the use of data to prevent personalised pricing.
<p align="center">Republic of Korea</p> <p>The Personal Information Act (PIPA)</p>	<ul style="list-style-type: none"> ● Data protection laws consist of a general law, and several special laws pertaining to certain specific industry sectors. ● The Korean legislative system for data protection is composed of PIPA, (a general, comprehensive statute), and the Credit Information Use and Protection Act, which regulates personal credit information. 	<ul style="list-style-type: none"> ● PIPA is applicable to the handling of all personal data, and can be applied to all companies and organisations. ● In terms of consent policy, PIPA stipulates that individuals must give expressed, informed, and individualised consent to the collection, use, and dissemination of their data 	<ul style="list-style-type: none"> ● Transparency requirements are fairly strong, and coupled with the need for consent, it is possible that regulation could be used to address personalised pricing in the Republic of Korea.

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Country	Content of Data Protection Regulation	Strengths of Data Protection Regulation	Impact on Personalised Pricing
<p>Netherlands General Data Protection Regulation (GDPR)</p>	<ul style="list-style-type: none"> ● There are seven key principles that govern how people’s data can be handled under the GDPR. ● They act as an overarching framework that outlines the broad purposes of the GDPR. ● They act as an overarching framework that outlines the broad purposes of the GDPR. 	<ul style="list-style-type: none"> ● The GDPR incorporates clear consent and data breach policies. ● While it does give consumers control over how organisations store and use their data, companies do not always comply with the GDPR, and yet penalties are relatively rare, especially in relation to personalised pricing.⁴⁴ 	<ul style="list-style-type: none"> ● It is possible that the GDPR could be used to address personalised pricing, but at present it is rarely — if ever — enforced in this way.
<p>India India has not yet enacted specific legislation on data protection</p>	<ul style="list-style-type: none"> ● The Indian legislature did amend the Information Technology Act (2000) (IT Act) to include Section 43A and Section 72A, which give a right to compensation for improper disclosure of personal information. ● The lower house of the legislature introduced the Personal Data Protection Bill, in 2019. It proposes a legal framework that outlines a number of measures to protect the personal data of individuals. 	<ul style="list-style-type: none"> ● The IT Act applies to all individuals and organisations that process personal data within and outside of India. ● There is no regulation that gives consumers agency over how organisations store and use their data. 	<ul style="list-style-type: none"> ● India is undertaking major reforms of digital and data regulation, but at present it is unlikely to present an obstacle to personalised pricing
<p>China Personal Information Protection Law (Draft, taking effect 1 November 2021)</p>	<ul style="list-style-type: none"> ● The Personal Information Protection Law (PIPL), which took effect in November 2021, forms a comprehensive set of rules on data collection, processing, and protection. 	<ul style="list-style-type: none"> ● PIPL creates binding compliance obligations. Services that break this law and illegally process personal data will be suspended or terminated. ● Consent must be obtained again if there is a change in the purpose of utilising the personal data, the manner of the processing, or the type of data collected. 	<ul style="list-style-type: none"> ● In principle, the requirements on information, purpose limitation, and consent would appear to be incompatible with personalised pricing.

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Country	Content of Data Protection Regulation	Strengths of Data Protection Regulation	Impact on Personalised Pricing
Nigeria Nigeria Data Protection Regulation	<ul style="list-style-type: none"> ● Nigeria does not have a comprehensive data protection law, but there are provisions in a variety of instruments. ● The Nigeria Data Protection Regulation provides a safeguard for the rights of Nigerian citizens. 	<ul style="list-style-type: none"> ● Individuals have the right to withhold consent from organisations utilising their personal data. ● Consumers are given agency to access their personal data, obtain information about how their data is being used, and have their data deleted. 	<ul style="list-style-type: none"> ● In principle the requirements on consent, information and purpose limitation would appear to be incompatible with personalised pricing.

CONCLUSIONS

Data protection regulations are not the only legal grounds that could be used to tackle personalised pricing; competition law and consumer protection law could also provide a basis for action, and would be worthy of further investigation. Some experts also argue that anti-discrimination and equality laws could be deployed against unfair personalised pricing, suggesting that companies should be required to ensure that protected or vulnerable groups are not charged higher prices.⁴⁵ However, as consumers are rarely aware that they have been targeted in this way, it is often difficult to file anti-discrimination cases against companies.

It is outside the scope of this research to assess whether Tinder's practices have breached any laws, either relating to data protection, consumer consent, transparency requirements or the other legal grounds discussed above in the jurisdictions examined.



⁴⁴ Brave, *Europe's governments are failing the GDPR*, 2020

⁴⁵ OECD, *Personalised Pricing in the Digital Era*, 2018

SECTION 4

CONSUMER RIGHTS

RECOMMENDATIONS





This section provides a set of preliminary recommendations for businesses, governments, regulators and other key stakeholders, to ensure that personalised pricing never undermines consumer welfare, and to take the first steps towards building a fairer and safer online marketplace, that consumers can trust. It concludes by outlining further opportunities for research into personalised pricing.

OUR RECOMMEN- DATIONS

Even as consumer participation in the digital economy continues to surge, trust in online marketplaces remains low. As demonstrated by this investigation, a lack of transparency from many of the companies engaged in these marketplaces has undoubtedly contributed to this situation, but remedying it will require concerted action from a range of stakeholders, to not just fix what has gone wrong, but to proactively build a marketplace that consumers can trust.

The following high-level recommendations could be taken as a starting point for this process, intended as a set of actions that companies practicing personalised pricing can take immediately, and an approach to regulation and enforcement that governments can follow to ensure that consumer rights and needs are being met as a matter of course. These recommendations draw on our survey findings regarding solutions favoured by consumers, as well as on expert insights into where change is needed; they include both specific interventions for tackling personalised pricing, and broader marketplace changes needed to create a safe and trustworthy environment for consumers.

1. Transparency and the right to information

Transparency was a solution identified by participants in our survey (Figure 9), a sizeable majority of whom noted that they would have a better perception of personalised pricing if they received clear informa-

tion on what personal data was being collected (76%), and on how it what was being used (76%). 77% also expressed support for the availability of straightforward price comparisons (both within and across sites), reflecting concern about being misled into paying higher prices.

Businesses

- Respect consumers' right to information by making it clear when personalised pricing is being used, and what data is being used to set these prices.
- Such disclosures must not be hidden deep within terms and conditions, nor should they be phrased misleadingly as 'discounts' or 'promotions'.

Governments/Regulators

- Ensure that consumer protection laws require businesses to make information on personalised pricing clearly available to consumers at the point of purchase.
- Empower regulators to enforce such transparency requirements when they are in place.

2. Consumer protection and empowerment

The most popular solutions identified by survey participants were those that not just improved transparency, but also strengthened consumer agency to act on this information. The single most popular choice was to be able to 'opt out' of personalised pricing (83%) - in practice, this could be difficult to implement without the imposition of a standard price, which would likely result in consumers paying more. However, it reflects clear support for greater agency, both over price-setting and the handling of personal data, and these priorities have been integrated into our recommendations.

Businesses

- Allow consumers to easily understand what personal data has been collected and disseminated, and enable them to withdraw consent for, or opt out of, storage and use of this data at any time.
- Follow established standards on data protection and privacy, to ensure that consumers' rights are met regardless of whether they are able to act on these.

Governments/Regulators

- Implement and enforce privacy and data protection laws requiring businesses to disclose information to consumers on personal data collection and usage.
- Investigate whether businesses are compliant with these laws, and take action against those who are in violation.

3. Equality and anti-discrimination

The need for action to prevent unfair discrimination was not addressed in our survey of preferred solutions, but remains a crucial priority to ensure that no consumers fall through the gaps. Our findings on personalised pricing demonstrated that consumers are certainly paying different prices based on age, and seemingly based on other factors too; improved regulation and transparency is essential to ensure that this is not in violation of legal protections for marginalised groups, whether intentionally or unintentionally.

Businesses

- Work proactively to ensure that price-setting mechanisms do not unfairly discriminate against individuals or groups of consumers on the basis of age, gender, sexuality, race, religion, sexual orientation, or any other legally protected characteristics.
- Allow independent research and audits into price-setting mechanisms, to ensure that these do not breach discrimination law or exacerbate social inequality, even unintentionally.

Governments/Regulators

- Review whether personalised pricing practices could breach existing anti-discrimination laws, and provide clarity to businesses on the possible implication of those laws in the context of personalised pricing.
- Strengthen and enforce anti-discrimination and competition legislation to ensure that personalised pricing does not harm consumer welfare.

To achieve systems change for a fairer and safer digital marketplace that consumers can trust, collaboration is crucial. For example, governments should establish reform committees that systematically involve consumer organisations and businesses to ensure that regulations are being enforced. Businesses and governments should also allocate funds to independent organisations to engage in market conduct surveillance of personalised pricing. Governments, consumer advocates, and other civil society actors should work together with businesses to improve practices, ensure accountability and responsibility, and build a stronger digital economy.

FURTHER OPPORTUNITIES FOR RESEARCH

This investigation has also produced learnings on how to improve the quality of future studies on the practice of personalised pricing, and highlighted the need for further research from a consumer advocacy perspective. Notable opportunities include:

Exploring personalised pricing by other companies – consumer advocates can conduct market monitoring investigations on a larger scale. Personalised pricing is a systemic problem, worth investigating in a range of sectors, especially essential services, where the risk to

consumers is greatest. These include – but are not limited to – insurance companies, telecommunications companies, and energy companies.

Deepening investigation to increase statistical impact – to strengthen evidence on the use of personalised pricing, future studies can take a deeper look into the drivers of personalisation: for example, through larger-scale studies; more detailed investigations into the impact of data provided by consumers at the point of purchase; or by assessing how additional factors or characteristics might affect pricing, such as the use of third-party data or consumer profiles.

Developing innovative market monitoring tools – there is potential for more sophisticated use of market monitoring technologies, to enable consumer advocates to conduct such investigations in-house and at scale. Artificial intelligence tools, for example, could help to expand and improve oversight activities.

Understanding the critical role of regulation – a closer analysis of existing regulatory frameworks is needed to understand how consumer protection law, competition law, data protection law, and anti-discrimination law can be harnessed to effectively regulate personalised pricing, and to properly tackle any breaches that lead to consumer harms. Further research is needed to understand how current regulations can be improved to address unfair practices.

Setting guidelines on personalised pricing – building on the high-level recommendations in this report, there is an opportunity to convene stakeholders from business, civil society, academia, government, and consumer advocacy, to create guidelines for responsible business practices. This could eventually lead to a uniform and comprehensive data regulation at an international level.



SECTION 5

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SECTION 6 ANNEXES



Country	Average price quoted	Cost of living (relative to US benchmark)*	Average price quoted vs USA average
New Zealand	\$15.35	+17%	+2.8%
USA	\$14.92	Benchmark	Benchmark
Netherlands	\$16.46	+5%	+10.3%
Republic of Korea	\$15.33	-9%	+2.7%
India	\$8.09	-65%	-45.8%
Brazil	\$3.49	-52%	-76.7%

Annex 1: National average prices for Tinder Plus relative to cost of living

*As estimated at <https://www.expatis.com/cost-of-living/country/comparison>, September 2021

Note: given the sample size of these sub-cohorts, the Annex 2 correlations are not claimed to be statistically significant; this data is merely intended to demonstrate the full extent of price variation observed.

+26.95%	in a regional area	30-49	Men	Heterosexual
+24.18%	in a regional area	50+	Women	Homosexual
+23.84%	in a metropolitan area	30-49	Men	Homosexual
+19.32%	in a metropolitan area	50+	Women	Heterosexual
+18.37%	in a metropolitan area	50+	Women	Homosexual
+17.4%	in a regional area	50+	Men	Homosexual
+17.31%	in a metropolitan area	30-49	Women	Heterosexual
+16.98%	in a metropolitan area	30-49	Men	Heterosexual
+16.08%	in a regional area	30-49	Women	Heterosexual
+13.56%	in a metropolitan area	50+	Men	Heterosexual
+13.33%	in a regional area	50+	Men	Heterosexual
+9.54%	in a regional area	30-49	Men	Homosexual
+8.86%	in a regional area	50+	Women	Heterosexual
+7.38%	in a metropolitan area	30-49	Women	Homosexual
+5.35%	in a metropolitan area	50+	Men	Homosexual

+0.47%	in a regional area	30-49	Women	Homosexual
-17.89%	in a regional area	18-29	Women	Homosexual
-27.09%	in a metropolitan area	18-29	Women	Heterosexual
-27.78%	in a metropolitan area	18-29	Men	Homosexual
-28.00%	in a regional area	18-29	Men	Homosexual
-32.78%	in a metropolitan area	18-29	Men	Heterosexual
-33.77%	in a regional area	18-29	Women	Heterosexual
-41.59%	in a regional area	18-29	Men	Heterosexual
-43.61%	in a metropolitan area	18-29	Women	Homosexual

Annex 2: Average price paid by each cohort, relative to national averages



