

ALGORITHMIC PRICING AND COMPETITION IN G7 JURISDICTIONS

EMERGING TRENDS AND RESPONSES



**IN
COLLABORATION
WITH**



Algorithmic pricing and competition in G7 jurisdictions

Emerging trends and responses

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Table of contents

1 Introduction	4
2 Competitive risks of algorithmic pricing	6
Collusion	6
Unilateral conduct	11
3 Policy and enforcement responses to algorithmic pricing	14
Studies and consultations	14
Reform proposals and ex post enforcement	16
Other activities and initiatives	17
4 Concluding remarks	19
References	20
Notes	23

1 Introduction

Over the past decade, an increasing number of firms across sectors such as travel, entertainment, retail, and platform-based services, have transitioned to algorithmic pricing mechanisms. These mechanisms involve the deployment of software that automates price setting and are mainly used by firms aiming to optimise pricing decisions in response to evolving market conditions. Pricing algorithms may combine data and assumptions on factors such as prices, volumes, inventory, and customer responsiveness to forecast market demand and elasticity; they may assess the potential impact of different pricing options on business goals like revenue, profit, and market share, factoring in expected competitor responses, and then apply the optimal price in real or near real time. Thus, their use may require vast amounts of granular data.

While the introduction of pricing algorithms can bring efficiency-enhancing and procompetitive effects (see (OECD, 2023^[1])), this paper focuses on their potential risks. Their widespread use has changed market dynamics, and may also raise issues in areas such as competition, consumer protection and data privacy policies, particularly with respect to its potential implications for market competition and the legality of price discrimination and collusion practices.

Canada, in its role as 2025 G7 President, asked the OECD to prepare this note to provide general background on ‘algorithmic pricing,’ which is the topic of the G7 Joint Competition Policy Makers and Enforcers Summit. The note, prepared by the OECD Secretariat, does not necessarily represent the views or positions of individual jurisdictions. With this note, the OECD aims to provide a broad picture of the current use of algorithmic pricing and the potential risks commonly associated with it, as well as an overview of the different possible strategies that could be used to tackle them. Other G7 Presidents had also asked the OECD to prepare papers on the previous summit topics. These include work started in 2022 under Germany’s presidency and continued under Japan’s presidency in 2023 and Italy’s presidency in 2024, when the OECD’s contributions focused first, on identifying convergences and divergences between ex-ante regulations in digital markets (OECD, 2023^[2]), and secondly on the key competition concerns at the heart of multi-jurisdictional efforts in digital markets, highlighting patterns that can be identified in terms of both platforms’ conduct and enforcement activities in G7 countries (OECD, 2024^[3]).

The note is structured as follows. After this introduction, the second chapter synthesises the main findings from surveys, market studies, and enforcement actions on algorithmic pricing carried out in G7 jurisdictions, drawing attention to recurring concerns identified across these jurisdictions. While some of these issues lie at the intersection of consumer protection, data protection, and competition laws, this note focuses exclusively on competition-related concerns. The third chapter presents the range of measures proposed or implemented by G7 jurisdictions in response to the identified risks. It is based on publicly available information as of July 2025 and covers recommendations following market studies, public consultations on discussion papers, reform proposals and enactment of new regulations, as well as other advocacy initiatives.

The note concludes that:

- Despite variations in legal frameworks across G7 jurisdictions, there are some commonalities in how competition authorities have sought to understand pricing algorithms, and the extent to which they raise potential competition concerns.

- Many authorities have adopted similar strategies, prioritising market studies, consultations, awareness raising initiatives, and reports to better understand the competitive dynamics, risks and benefits associated with algorithmic pricing. These efforts have been followed by the publication of guidance or statements that clarify their position and reaffirm that existing competition rules apply to algorithm-driven conduct.
- It remains too early to draw definitive conclusions about the future likelihood of significant enforcement in this fast-evolving area. While authorities have identified similar potential concerns, these have not yet translated into significant enforcement activity in every jurisdiction. Only a limited number of cases — primarily under traditional theories of harm such as price-fixing, information exchange and hub-and-spoke arrangements — have emerged.

2 Competitive risks of algorithmic pricing

In recent years, competition authorities from G7 jurisdictions have engaged in various initiatives to better understand the functioning of pricing algorithms, how companies use them to compete, and their broader impact on markets and consumers. This section summarises the key findings from the most relevant surveys, market studies, as well as enforcement cases, highlighting common concerns identified across the jurisdictions.

As highlighted below, while G7 authorities recognise many efficiency-enhancing effects of using algorithms to set prices, they have identified potential risks pertaining to both unilateral and coordinated anticompetitive behaviour arising from algorithmic pricing.¹ These findings go in line with the main findings documented in recent OECD work on the topic, including the 2017 paper on Algorithms and Collusion (OECD, 2017^[4]) and the 2023 note on Algorithmic Competition (OECD, 2023^[1]).

Collusion

The predominant focus of competition authorities' activities related to pricing algorithms has been the relationship between algorithmic competition and collusion. While most of the concerns presented below can also be raised by the use of other types of algorithms, this section will focus on how algorithms that set or recommend prices may increase risks of collusion. As discussed below, one broader concern relates to accountability of firms for autonomous algorithmic behaviour, an issue that remains largely unresolved in some jurisdictions due to the absence of precedent.

In its 2021 study on the use of algorithms, the Japan Fair Trade Commission (JFTC) recognises that the different types of price-setting algorithms, which contain automatic updating tools, machine learning strategies to predict demand and reinforcement learning to maximise profits, may change the competitive environment. The study highlighted that the use of the algorithms increases market transparency between competitors, as well as the frequency of their interactions. Both characteristics are well-known for increasing the possibilities of reaching and sustaining a collusive outcome. Canada's latest discussion paper on algorithmic pricing and competition also notes that algorithmic coordination is also more likely "*in markets with high transparency due to better availability of data, and in markets with frequent interactions, as algorithms may enable firms to punish deviations more effectively. Coordination is also more easily sustained in markets with fewer firms and higher barriers to entry*" (Competition Bureau Canada, 2025^[5]).

Reports, market studies, and inquiries conducted by authorities in Canada, France, Germany, Italy and Japan, as well as Guidelines and notes issued by the European Commission and statements, and enforcement cases – addressed in detail in the following chapter – reveal some commonalities amongst G7 countries on the issues identified related to algorithmic competition and collusion.

While there are some differences in how competition authorities have classified the types of algorithm-driven collusion, concerns generally fall into four main categories: (i) algorithms as facilitators of traditional

price-fixing agreements, (ii) hub-and-spoke schemes, (iii) vertical agreements, and (iv) tacit collusion through autonomous learning.

Algorithms as facilitators of traditional anticompetitive price-fixing agreements

Most G7 Competition authorities have identified concerns related to the use of pricing algorithms as a tool to implement, facilitate, better conceal and/or monitor traditional price-fixing agreements, usually including prior contact between the cartelists.

- *Implement/Facilitate*: once companies have explicitly colluded, pricing algorithms can serve as a tool to implement the agreements by embedding explicit assumptions or rules within the algorithm, such as not to undercut competitors' prices or block poaching each other's customers, among others (Autorité de la Concurrence and Bundeskartellamt, 2019^[6]). Similarly, the increased availability of pricing data from competitors and the use of automated pricing systems may facilitate explicit coordination. They reduce the chance of errors or accidental deviation, making explicit collusion between firms more stable. Moreover, the algorithm could automatically adjust prices according to market changes, eliminating the need for cartel members to renegotiate the terms of their agreement (JFTC, 2021^[7]). Another feature of algorithms that facilitates price-fixing agreements is that they can increase the stability of such agreements by reducing "agency slack". With their use, there can be less scope for individuals within a company to deviate from the price-fixing agreement e.g. by undercutting the collusive price (CMA, 2018^[8]).
- *Conceal*: algorithms could serve as a tool to hide the anticompetitive behaviour. In their joint study, the French and German competition authorities found that algorithms could be used to artificially generate occasional price heterogeneity or instability (e.g. when there is low or no demand), while maintaining a collusive behaviour in general. This makes it more difficult for authorities to detect the cartel. They could also be used to conceal communication between competitors, by allowing encrypted messaging among other strategies (Autorité de la Concurrence and Bundeskartellamt, 2019^[6]).
- *Monitor*: pricing algorithms may also monitor competitors' price, even by accessing real-time data. This makes it easier and faster to detect and respond to deviations, reducing incentives for firms to deviate in the first place (CMA, 2021^[9]).

In the UK, there have been two relevant cases illustrating these concerns. The first one is the 2016 decision on the Trod/GBE cartel on the online sales of posters and frames.² The Competition and Markets Authority (CMA) discovered that the companies had agreed that they would not undercut each other on prices for certain posters and frames sold on the Amazon UK Marketplace, and that they used a pricing software to implement this agreement. The second case was an agreement to allocate customers investigated by the energy regulator Ofgem. The regulator found that two energy suppliers had an agreement preventing them from actively targeting each other's customers and used a common algorithm to block such behaviour.³

In a similar case to the CMA's decision on Trod/GBE, in the United States, sellers of posters on the Amazon Marketplace were found to have entered into a price-fixing agreement, that they implemented through pricing algorithms. Specifically, the cartelists "*wrote computer code that instructed algorithm-based software to set prices in conformity with this agreement*" (US DoJ, 2015^[10]).

In these scenarios, algorithms act simply as the tool to implement a traditional anti-competitive agreement. For competition authorities, the use of pricing algorithms (shared algorithms or individual ones) to agree on prices, should be treated as any other price-fixing agreement, which usually is considered a by object / per se restriction of competition. While this type of collusion would normally not require adjustments in the analytical framework compared to any other price-fixing agreement, the use of the algorithm may require authorities to consider their evidence-gathering tools and practices (for example, if as a result of the use of the pricing algorithm there are fewer direct exchanges between the involved competitors that can be

detected through traditional evidence-gathering practices). On the other hand, the ability to analyse the functioning and role of an algorithm (e.g. by auditing) can provide new type of evidence. The European Commission has highlighted this relevance stating their view that, *“although in this scenario it is also possible to rely directly on more traditional concepts in the legal assessment, the use of algorithms could certainly have a relevant impact on the authorities’ ability to prove the infringement through the usual investigative tools”* (OECD, 2023^[11]).⁴

Hub-and-spoke schemes

Third-party involvement in collusive practices have generally generated two further concerns to most G7 competition authorities. One of them results from pricing recommendations or price setting by common intermediaries and the second from the use of the intermediary to exchange confidential information relevant to reach the anticompetitive agreement.

If multiple competitors use the same pricing algorithm, certain aspects of its use may generate competitors to react in a similar way to external events, better predict their competitors’ responses to price changes and even introduce a common pricing strategy. In cases in which the third party optimise prices and recommendations for each user independently, the use of the algorithm is not necessarily restrictive of competition.

In their joint study from 2019, France and Germany identified two types of alignment of algorithmic decision-making when companies rely on the same algorithm to make their strategic decisions (Autorité de la Concurrence and Bundeskartellamt, 2019^[6]). For the authorities, both types of alignment may coincide.

1. Alignment at code level: when the third party provides algorithms with a shared purpose and a similar or related methodology. This can go from completely identical algorithms to including commonalities while keeping some degree of individualisation for the respective customer. This includes the software merely suggesting prices but not providing automated price setting. Alignment at code level may also involve full delegation of the strategic decision to the common third party.
2. Alignment at data level: this refers to the extent to which the algorithm facilitates information exchange among competitors. This can go from the algorithm facilitating active information sharing to the algorithm using a shared pool of data to pursue a common goal (i.e. maximising joint profits). Even when prices are calculated individually, the use of competitors’ data to train the algorithm may be of concern.

In addition to the degree of algorithmic alignment, other relevant factors identified in the report include the market shares of the competitors sharing the algorithm and the way in which the data is used, stored and shared, which would determine whether their conduct can be understood as a hub-and-spoke scheme.

Furthermore, the report underscores a distinction between two different scenarios. One that involves competitors knowingly delegating certain strategic decisions—such as pricing—to a third party, which then makes those decisions using a single algorithm. Another, when the third party provides a coordinated algorithmic solution without explicitly informing the users of the existence of the common strategy. The key difference according to the joint study is that awareness of the conduct may differentiate between said conduct been lawful or unlawful.

Following European case law and practice, the report establishes that hub-and-spoke conspiracies where information exchange takes place through a common third party may be anti-competitive. if competitors are aware – or could reasonably have foreseen – that they are relying on the same provider and using the same or coordinated algorithm. Moreover, collusion via a third party and the role of a facilitator in a cartel have been explicitly recognised by case law of the European Court of Justice and hub-and-spoke schemes

have been investigated and sanctioned, although in cases not involving the use of an algorithm (OECD, 2023^[11]).

The EC's Guidelines on the applicability of Article 101 TFEU to horizontal cooperation agreements state that when competitors subscribe to the same third-party pricing tool, and the tool uses commercially sensitive information from competitors, this may result in an unlawful information exchange (European Commission, 2023^[12]). Indirect contact amongst competitors was key in the E-Turas case. The Supreme Administrative Court of Lithuania requested a preliminary ruling of the EU General Court concerning an interpretation of Article 101 TFEU to conclude whether using a common information system that recommends certain pricing practices can be considered to infringe Article 101 TFEU.⁵ The Court concluded that if competitors were aware of the practice, they could be presumed to have participated in the concerted practice, *"unless they publicly distanced themselves from that practice, reported it to the administrative authorities or adduce other evidence to rebut that presumption, such as evidence of the systematic application of a discount exceeding the cap in question"*.⁶

The JFTC identified similar distinctions and enforcement implications under the Japanese Antimonopoly Act. If firms using the same algorithm share a common understanding that it will coordinate prices—despite no direct communication between the competitors—this may constitute a violation of Japan's Antimonopoly Act. In contrast, if an algorithm provider sets their prices, without the firms' knowledge, it may be considered private monopolisation by the provider, if it provides a great majority of the price-setting algorithms used in a specific market. Similar concerns have been identified in the United Kingdom. The CMA noted in its 2018 paper that hub-and-spoke scenarios are likely to present the most immediate risk for competition when algorithms are involved, noting however that the mere use of a shared algorithm does not, by itself, constitute a violation of competition law. For the conduct to be deemed anticompetitive, there must still be some intention among the companies to suppress competition (CMA, 2018^[8]).

The CMA's Guidance on the application of the Chapter I prohibition in the Competition Act 1998 to horizontal agreements highlight hub-and-spoke agreements as a type of indirect information exchanges between companies. The Guidelines describe how shared algorithms can be used to agree on price levels or margins and specifies that while *"using publicly available data to feed algorithmic software is legal, the aggregation of competitively sensitive information into a pricing tool offered by a single IT company to which various competitors have access could amount to horizontal collusion."* (CMA, 2023^[13])

In the United States, courts have started to review cases related to price recommendations by algorithms and the use of common algorithms to make strategic decisions. The US Department of Justice (DoJ) Antitrust Division has filed statements of interest in some of these cases to address relevant legal issues.

Canada's consultation on Artificial Intelligence and Competition revealed hub-and-spoke agreements as a recurrent concern, where a single algorithm acts as a hub and multiple competitors use it to set prices (Competition Bureau Canada, 2025^[14]). One of the main concerns on the common use of algorithms to set prices also appears to be linked to the sharing of competitively sensitive information from different competitors, to train the software and set or recommend prices. In 2024, the Bureau opened an investigation to determine whether the pricing guidance offered by a data service provider to retail energy companies has an adverse effect on competition between gas stations. As part of its investigation, the Bureau obtained a court order to gather information on the company's pricing services) and the way it operates to provide pricing guidance to gas station operations. In 2025 the Bureau also confirmed an ongoing investigation on possible uses of algorithms in real estate markets to set rents.

In summary, most G7 competition authorities appear to be broadly aligned in raising concerns about the potential for companies to engage in hub-and-spoke agreements, where the algorithm provider acts as the hub and competing firms as the spokes, collectively coordinating pricing. Key elements of this theory of harm include: the algorithm's use of commercially sensitive data from multiple competitors to set prices and the competitors' awareness or intent to reduce competition, even in the absence of direct communication or full alignment with the pricing strategy.

Vertical agreements

Although less extensive, some G7 competition authorities have also undertaken efforts to understand potential vertical concerns related to the use of algorithms.

The EC's contribution to the OECD roundtable on Algorithms and Collusion describes three different ways in which algorithms could be used in the context of vertical agreements.

1. Algorithms could be used to recommend prices and/or detect deviations from a fixed or recommended price. This makes fixed or minimum resale prices more effective.
2. Similarly, the algorithm could allow for easier and faster retaliation by manufacturers against retailers for not complying with the recommendation.
3. Finally, an agreement on minimum resale prices could spread these high prices to other retailers not engaged in the agreement, if those others use algorithms that match prices of their competitors (OECD, 2017^[15]).

While there have not been cases in Europe directly related to vertical agreements involving price-setting algorithms, some investigations have already dealt with monitoring algorithms that end up impacting pricing. The joint study between the French and German competition authorities identified four decisions by the EC concerning consumer electronics where the EC determined that manufacturers used algorithms to track online resale prices and quickly intervene in the market to guarantee higher prices (Autorité de la Concurrence and Bundeskartellamt, 2019^[6]).⁷

The CMA also identified how it is increasingly common for platforms such as marketplaces to offer algorithmic tools to their supply-side users in order to help them to set and manage their prices. In some cases, these tools include price recommendations or the possibility for companies to delegate pricing to the third party (CMA, 2021^[9]). As with hub-and-spoke conspiracies, these scenarios where there is a vertical relationship between the platform recommending prices and the retailers may be deemed anticompetitive under certain circumstances, as explained above.

Potential risks related to autonomous learning

One final scenario commonly studied by some G7 jurisdictions is the hypothetical risk of tacit collusion as a result of a mere interaction of algorithms. This theory centres around the possibility that complex pricing algorithms (e.g. those employing deep learning techniques) may independently learn to tacitly collude, absent communication between competitors or any intent by individuals to suppress competition. The functioning is the following: competitors unilaterally design or contract an algorithm to reach a target, such as the maximisation of profit. Then, the algorithm learns by itself and experiment until it finds an optimal pricing strategy. The optimal pricing strategy could be to enhance market transparency and tacitly collude (CMA, 2018^[8]).

While this is commonly identified as a possible concern, many jurisdictions also agree in the fact that the lack of case practice makes it hard to confirm how relevant or risky this scenario is. Most G7 authorities recognise that some key features of markets may contribute to algorithms reaching a collusive outcome, such as market transparency and multimarket contact. However, they also point out to factors that reduce the likeliness of tacit collusion materialising, such as the need for sufficient time to learn and explore, which could require companies to tolerate long-term losses. Another relevant factor is that competitive environments undergo constant changes, which might destabilize the interaction of algorithms. Finally, the asymmetry between companies and even algorithms design and functioning may generate incentive incompatibilities thus, increasing the difficulty in achieving high degrees of cooperation (Autorité de la Concurrence and Bundeskartellamt, 2019^[6]).

A JFTC report regarding generative AI, launched in June 2025, presents some insights from stakeholders on how concerning parallel behaviour of pricing algorithms could be. According to the comments received on the concerns raised in its 2021 study on Algorithms, AI and Competition (see (JFTC, 2021^[7])), parallel conduct resulting from algorithmic pricing is seen as “*somewhat unrealistic*”. Key stakeholders raised that differences in the criteria for analysing data, the culture of each company and the learning process of an algorithm based on the individual company may reduce the probability of parallel conduct among algorithms. On the contrary, in their views, these could lead companies to act more strategically competitive, even if they use the same model.

Moreover, some G7 jurisdictions recognise that mere parallel behaviour without any kind of agreement or contact between competing companies may not constitute an infringement of antitrust laws. In the EU, for instance, the Court has established that an agreement prohibited under Article 101 TFEU requires some form of communication and sense of mutual commitment (“a meeting of minds” or a “concurrence of wills”)⁸. Companies have the right to adapt themselves to the existing or anticipated conduct of their competitors, as long as they determine their policies independently.

One related issue that seems to be under scrutiny in several G7 jurisdictions is the use of algorithms for signalling, particularly as algorithms may interact in real-time and with high frequency. In this context, one concern could be that algorithms may facilitate firms to raise prices by means of signalling without taking the risk of losing customers as a consequence of these customers’ realisation of such practice (JFTC, 2021^[7]). Furthermore, certain authorities have identified the theoretical possibility that self-learning algorithms could develop signalling capabilities as a form of “communicative” skills. In both cases, authorities recognise the need to evaluate the specifics of the case, similar as they have done so in signalling cases in offline markets (Autorité de la Concurrence and Bundeskartellamt, 2019^[6]) and (OECD, 2017^[15]).

Finally, there is an open debate on the accountability of firms for the algorithms’ parallel behaviour, as well as on the ability of existing laws to prove collusion in these cases in some jurisdictions (Competition Bureau Canada, 2025^[14]). Suggestions on different standards for assessing the firm’s responsibility for collusive algorithmic behaviour go from assuming a reasonable standard of care and foreseeability, to analysing the degree of authorisation required for the use of the algorithm.⁹

Unilateral conduct

One common concern from the use of algorithms to compete, especially when combined with extensive data use, is that they may enable pricing strategies that could harm consumers either through exploitative strategies or through behaviour with exclusionary effects.

In particular, algorithms that enable price discrimination and personalisation could facilitate the implementation of strategies aiming at limiting entry or expansion of competitors, making them more effective and less costly to succeed (CMA, 2021^[9]). In the case of predatory practices, pricing algorithms trained on detailed customer data can enhance the ability of a company to predate, by better identifying profitable opportunities. For example, the algorithm could allow the company to target customers that are more likely to switch and offer lower prices only to them rather than to all other customers (Competition Bureau Canada, 2024^[16]). Simultaneously, the algorithm could help identify consumers with higher willingness to pay or less sensitive to price changes and raise prices for them. This means that the company could simultaneously predate and recoup without needing to wait until the competitor exits the market to obtain profit from the strategy, increasing its incentives to engage in the predatory strategy in the first place (Competition Bureau Canada, 2025^[5]).

In addition to predatory pricing concerns, some G7 jurisdictions are paying growing attention to how algorithms might support tying and bundling practices. In its 2025 discussion paper, Canada’s Competition

Bureau underlines how pricing algorithms may also make it easier for firms to leverage market power in one product to gain a competitive edge in another by tying the two products together—targeting discounts to consumers who place lower value on the secondary product. For instance, the algorithm may facilitate the identification of such consumers that in addition to placing a low value to the bundled product, are more elastic to price changes. In its self-preferencing case against Amazon’s marketplace, the Italian Competition Authority (AGCM) examined the algorithm used to select the so-called ‘Buy Box’ offer and found that it favoured sellers using Amazon’s logistics services. This raised competition concerns, as the algorithm’s criteria incentivized sellers to choose Amazon over rival logistics providers. However, without access to the algorithm’s internal systems and data, the AGCM analysis was confined to observing its responses to controlled ‘laboratory’ inputs: such an approach has clear limitations, as it may not capture the algorithm’s overall functioning or its future behaviour, given its capacity to learn and adapt¹⁰.

More broadly, while price discrimination can increase consumer access to goods and services, certain G7 competition authorities recognise that algorithms can serve as enablers of certain abusive practices by dominant firms, particularly where discriminatory pricing strategies are employed. Risks include lack of transparency, increased costs for certain customers, and the potential exclusion of competitors.

According to the specific legal framework, engaging in discriminatory practices with exploitative effects may not necessarily infringe competition law. It may infringe consumer protection laws – this being the most common case –or, in cases involving data misuse, data privacy laws. However, when exploitative conduct is prohibited by competition laws, it is linked to abuse of dominance.¹¹

A first relevant example of algorithmic pricing strategies that raise concerns to some G7 agencies is personalised pricing, where each customer or group of customers is offered a price equal to their maximum willingness to pay. In this context, the use of algorithms can significantly enhance retailers’ ability to engage in price discrimination, making the process more efficient and less resource intensive (CMA, 2018^[8]).¹²

A 2021 study conducted in Japan by the Japan Fair Trade Commission (JFTC) evaluated how the use of algorithms, and more generally the digitalisation of markets, allows companies to easily meet the three main conditions that facilitate the implementation of personalised pricing. First, it concluded that algorithms allow companies to better collect a wide variety of data from various sources and estimate consumer’s willingness to pay with relative accuracy. Second, it observed that the use of algorithms in digital markets allows companies to more easily link the provision of products or services to online personal IDs, making it harder for consumers to resale the product. Third, the report highlights that companies using algorithms, mainly platforms, often concentrate a significant number of customers and enjoy a certain degree of market power, given market’s characteristics such as network effects and economies of scale. These conditions allow them to carry out personalised pricing strategies with a low risk of losing consumers (JFTC, 2021^[7]).

In 2024, a preliminary report published by the AGCM, on the use of pricing algorithms for air passengers on connecting routes between mainland Italy and the islands of Sicily and Sardinia, found that artificial intelligence is not yet widely used in airline pricing systems in Italy¹³. Most pricing tools are still based on rules and human control. Moreover, it was found that personalization - based on browser history, location, or device type - is still rare, as most price differences are linked to time of booking and demand conditions, not who the customer is. However, some airlines are testing passengers’ price sensitivity, suggesting that personalisation may become more frequent in the future.

While competition authorities have acknowledged the positive effects of price discrimination, such as the fact that offering different prices to different consumers may allow for more consumers to access the goods or services, there is also a concern on whether these pricing strategies can lead to consumer harm. This includes situations where there is no sufficient transparency to consumers on how the algorithm reaches the price or what the final price is, where the strategy increases their search and transaction costs, or when it causes consumers to lose trust in the market (CMA, 2021^[9]). Moreover, concerns are also raised on the distributional outcomes of price discrimination, where vulnerable customers¹⁴ may be impacted with higher prices, particularly if constant oversight on the functioning of the algorithm is not guaranteed.

So far, no antitrust enforcement cases focusing solely on exploitative abuses caused by the use of pricing algorithms have been identified in G7 jurisdictions. However, some authorities have recognised that general principles on the application of abuse of dominance provisions appear to be potentially applicable also to such cases¹⁵ (e.g. the European Commission on applicability of Article 102 TFEU (OECD, 2023^[11])).¹⁶ The section below on solutions and approaches presents more details on the applicability of abuse of dominance provisions in this context.

Key concerns identified across G7 jurisdictions

G7 authorities have explored potential risks of coordinated and unilateral anticompetitive behaviour arising from some uses of pricing algorithms.

Collusion

- Three main concerns related to pricing algorithms and collusive conduct: (i) algorithms as facilitators of traditional anticompetitive agreements, (ii) hub-and-spoke schemes and vertical agreements, and (iii) potential tacit collusion through autonomous learning.
- Pricing algorithms may facilitate explicit collusion. They can be used as a tool to implement prior agreements, monitor and punish deviations, reduce chance of errors, automatically adjust prices, and reduce the need for members to renegotiate the terms of their agreement. They could also serve as a tool to hide the anticompetitive behaviour.
- Common use of pricing algorithms, even if only for pricing recommendations, may generate hub-and-spoke, as well as other types of, collusive behaviour. This is particularly relevant when non-public information is used for determining the prices and companies are aware of the common use of the algorithm.
- The use of a common third-party algorithm may also complement or facilitate the exchange of sensitive information among competitors.
- Pricing algorithms could be used to recommend resale prices and monitor compliance with the recommendations. This could result in an anticompetitive vertical agreement.
- Some G7 authorities are also concerned about pricing algorithms independently learning to tacitly collude. Key features of certain markets may facilitate algorithms reaching a collusive outcome and a mere parallel behaviour without any kind of agreement or contact between competing companies generally does not constitute an infringement of antitrust laws.

Unilateral conduct

- The use of pricing algorithms, especially when combined with extensive data use, may enable pricing strategies that could harm consumers either through exploitative strategies or through behaviour with exclusionary effects.
- Algorithms facilitate price discrimination or personalisation. While these practices may benefit consumers, they can also lead to harm.
- Algorithms that enable price discrimination and personalisation could facilitate the implementation of strategies aiming at limiting entry or expansion of competitors, such as predatory pricing or tying and bundling.
- Engaging in discriminatory practices with exploitative effects may also infringe competition laws in some jurisdictions, particularly linked to the abuse of a dominant position.

3 Policy and enforcement responses to algorithmic pricing

The relative novelty of these practices and the concerns identified in the previous chapter have led to a need for a deeper understanding of the risks for competition, as well as for appropriate solutions to address them. Reflecting this, at present, most competition authorities' main response has been focused on producing studies and gathering information through public consultations. While these initiatives have allowed agencies to identify behaviour and practices potentially harmful for competition, described in the previous chapter, these also constitute an important steppingstone for further intervention, and as such a key first response.

After a thorough illustration of how these studies and consultations have been carried out in recent years, the remainder of this chapter will address other types of solutions proposed by G7 enforcers and policy makers, albeit still to a limited extent, namely *ex post* enforcement, regulations and reform proposals, and additional advocacy initiatives.

Studies and consultations

Firstly, a number of competition authorities in G7 jurisdictions have started to engage more extensively in information gathering initiatives, including by preparing in-depth reports and through public consultations. The objective of these activities is to obtain a comprehensive understanding of the potential issues, their magnitude and their different dimensions, in order to appraise the effects and risks for competition. Given the novelty and the complexity of these practices, most authorities have considered that a comprehensive scrutiny of the matter, including through the collection of stakeholders' feedback, would be a useful first step to support enforcement or the proposal of effective solutions.

For instance, in July 2020 the JFTC set up the Study Group on Competition Policy in Digital Markets, which hosted a series of meetings and published, in March 2021, the Report on Algorithms/AI and Competition Policy (JFTC, 2021^[7]). The report aimed at informing the JFTC about changes in the competitive environment brought about by algorithms and AI, thus enabling it to appropriately address the related risks for competition. In particular, it recommended active cooperation with other competition authorities and external experts.

In the UK, the CMA published its first economic working paper on the use of algorithms to facilitate collusion and personalised pricing in 2018, recommending further research (CMA, 2018^[8]). As a result, in 2021, the CMA published a comprehensive study (CMA, 2021^[17]) on the effects of algorithms on competition, focusing on a broader spectrum of issues than pricing algorithms. In terms of solutions, this report proposes a number of techniques that could be used to analyse algorithmic systems, with or without direct access to firms' data and algorithms. In the first case these techniques include direct testing with dynamic analysis¹⁷, static analysis¹⁸, or a more challenging manual code review, input and output data analysis, or the audit of algorithms. Without direct access to firms' data and algorithms, the report notes how it is possible to assess potential harms purely by analysing the output of a given algorithmic system, with

techniques such as scraping audit, use of APIs for reverse engineering, or enlisting consumers to act as digital “mystery shoppers” (for more details see (CMA, 2021^[9]). For the CMA, these techniques provide the authority with different alternatives to understand algorithms, for instance, in the framework of investigations against anti-competitive conduct.

Further, the report recommends actions that the CMA and other regulators can take to address harm from the use of algorithms. These include providing guidance to businesses and set or clarify standards; enhancing intelligence and data gathering activities, including engaging in ongoing algorithmic monitoring; building and using digital capabilities; and, finally, strengthening collaboration with other regulators. The publication of this report was followed by a public consultation to gather stakeholders’ views and evidence on the harms and proposed solutions outlined in the study, to further inform the work of the CMA’s Analysing Algorithms programme. The results of the consultations were compiled and published by the CMA (CMA, 2021^[17]).

Similarly, in Canada, the Competition Bureau published a discussion paper on Artificial Intelligence and Competition (Competition Bureau Canada, 2024^[16]) in March 2024 for public consultation. This paper, aimed at offering a comprehensive overview of the key considerations for AI and competition being monitored by the Bureau. The results of the consultation were published in January 2025 (Competition Bureau Canada, 2025^[14]). Through the initial paper and the conclusions of the consultation process, the Bureau was able to gain key insights on the AI market, thus deepening the authority’s understanding of its functioning and potential competition concerns and informing future enforcement. Further, the Bureau published a second paper for public consultation in June 2025 (Competition Bureau Canada, 2025^[5]), focusing specifically on algorithmic pricing and competition, aiming at strengthening the agency’s understanding of this topic. The results from the public consultation were not yet available at the time this note was drafted.

While the two discussion papers did not put forward specific recommendations, the results of the 2024 consultation highlighted a number of forward-looking points of action to promote competition in AI markets. In particular, it was noted how the Bureau could enhance collaboration with other jurisdictions to create consistent AI regulations, as well as considering using its market study powers to explore AI issues. The latter recommendation is in line with ongoing G7 practice. Indeed, in order to build a body of evidence on the use of pricing algorithms, and develop solutions to address the related competition concerns, other authorities have relied on market studies and market monitoring initiatives.

This is the case for example of the 2019 joint study on algorithms and competition conducted by the French Autorité de la Concurrence and the German Bundeskartellamt, mentioned in the previous chapter (Autorité de la Concurrence and Bundeskartellamt, 2019^[6]). The study concluded that, at that time, “the legal framework, in particular Art. 101 TFEU and its accompanying jurisprudence, allows competition authorities to address possible competitive concerns”.

In Italy, a first sector inquiry on Big Data, published in 2017 (Autorità Garante della Concorrenza e del Mercato, 2017^[18]), highlighted the risks of an increasing use of pricing algorithms. The Autorità Garante della Concorrenza e del Mercato (AGCM) launched a second sector inquiry in November 2023, focusing on the use of pricing algorithms in passenger air transport on national routes to and from Sicily and Sardinia. This study aimed at gathering evidence and verifying, amongst other matters, the use of pricing algorithms in the revenue management systems of airlines operating the routes in scope, their main characteristics, any resulting negative effects on competition, as well as the extent to which airlines use personalised fares, including by means of pricing algorithms (for more details see also (Autorità Garante della Concorrenza e del Mercato, 2023^[19]).

The study, which also resulted in a new legislative initiative regulating prices on these routes, employed analysis techniques in line with those proposed by the CMA 2021 study, namely algorithmic auditing techniques¹⁹ such as “scraping audit techniques - acquisition of flight prices and ancillary services directly

from airline websites, and sock-puppet auditing - implementation of computer programmes that simulate the profile of different users.” (Autorità Garante della Concorrenza e del Mercato, 2023^[19]).

Finally, in the US, the FTC, using its authority to study markets and industries under section 6(b) of the FTC Act, issued orders to multiple companies in July 2024 (Federal Trade Commission, 2024^[20]), seeking documents and information on whether and how consumers’ private data may be used to engage in personalised pricing. The FTC’s study is ongoing.

These recent examples show how G7 jurisdictions are seeking to better understand the use and functioning of pricing algorithms, recognising the complexity of the matter and the need to gather evidence and increase internal knowledge, including in order to support future interventions in some jurisdictions. In parallel, discussions are emerging around how digital markets regulations implemented in certain jurisdictions might be able to address some of the risks related to the use of algorithmic pricing. This will be addressed in the following section.

Reform proposals and ex post enforcement

While there is a general consensus on the potential competitive risk deriving from the use of pricing algorithms, G7 jurisdictions are looking into different avenues to improve their understanding and, where needed, address such risk. As shown in the section above, currently studies and consultations constitute the most common approach, reflecting how most authorities are still focusing on exploratory and information-gathering efforts at this stage.

However, it is relevant to note how regulations implemented in the EU and in the UK in recent years, aimed at addressing a variety of matters in digital markets, including competition issues, may also impact firms’ use of pricing algorithms. For instance, in the European Union, the Digital Markets Act (DMA)²⁰ article 6(2)’s restrictions on gatekeepers’ use of business users’ data,²¹ including non-public data originating from the commercial activities of business users or their customers, can hinder the ability of such companies to engage in algorithmic pricing.

Additionally, while not specifically addressing competition issues or algorithmic pricing, it is also important to note how the Digital Services Act (DSA),²² with rules on algorithmic transparency and accountability, and the Artificial Intelligence Act (AI Act),²³ restricting the use of AI systems for algorithmic targeting²⁴, could also be relevant in this context.

Similarly, in the UK, while the Digital Markets, Competition and Consumers Act (DMCCA) does not explicitly address the use of algorithmic pricing, it can support the CMA in understanding what effects the designated firms’ use of algorithms can have on competition and consumers (CMA, 2024^[21]).

It is worth noting how the regulations mentioned above aim at complementing traditional ex post enforcement of competition law, which remains a valid solution to address the algorithmic pricing’s risks described in the previous chapter. The current experience with these cases is still at an early stage to understand how traditional ex post enforcement can address such concerns, in that not many of such investigations have been opened in G7 jurisdictions thus far, and those that have are often still ongoing. However, the commitments entered into by one of the defendants in the context of the DoJ lawsuit against RealPage can provide initial insights.

In August 2024²⁵ the DoJ filed a civil antitrust lawsuit against RealPage Inc., together with a number of State Attorneys General. The lawsuit was filed “for its unlawful scheme to decrease competition among landlords in apartment pricing and to monopolize the market for commercial revenue management software that landlords use to price apartments” (US DOJ, 2024^[22]). The complaint was amended in January 2025²⁶ to add property management companies as defendants, including Cortland Management LLC (Cortland). The complaint includes claims of both horizontal and vertical agreements to exchange

competitively sensitive information and vertical agreements to align pricing, in addition to monopolisation claims against RealPage. Along with the amended complaint, the DoJ Antitrust Division also asked the court to approve a stipulated consent decree entered into with one of the named landlord defendants, Cortland. The stipulated proposed judgment prohibits Cortland from using competitors' competitively sensitive data to train or run any pricing model; using third party software or algorithms to price apartments without the supervision of a court appointed monitor; and soliciting, disclosing or using any competitively sensitive information with any other property manager as part of setting rental prices or generating rental pricing recommendations.²⁷

The debate around anticompetitive conduct stemming from pricing algorithms is widespread and has been a focus of competition authorities for years (a first roundtable on algorithms and collusion was held at the OECD Competition Committee in 2017 (OECD, 2017^[4])). Further, as shown in the previous chapter, in most G7 jurisdictions there is general agreement on what the key risks are as well as on the need to closely monitor the use of pricing algorithms, to avoid any harm to competition. However, it is too early to assess the level of convergence (or lack thereof) in terms of enforcement action, with only rare cases being opened so far. Given the level of concern for these conducts and the substantial efforts being undertaken in order to understand these issues in depth, it is possible that, collectively, G7 responses will align more significantly towards ex post enforcement in coming years.

Other activities and initiatives

In addition to the main categories of solutions explored above, namely internal studies and monitoring, legislative action, and ex post enforcement, competition authorities and policy makers in G7 jurisdictions have also been implementing a variety of other initiatives pertaining to pricing algorithms, mainly aimed at supporting enforcement and providing guidance to stakeholders.

First, by providing relevant skills and increasing the accumulation of knowledge, data units and working groups set up by a number of competition authorities can complement and support their efforts in this area. Working groups have been organised by the JFTC, as mentioned above, and in Germany, where in June 2025 the Bundeskartellamt initiated a technical dialogue with experts from companies and associations to discuss AI issues relating to competition (Bundeskartellamt, 2025^[23]).

Other agencies have also started to increase internal expertise to progress their work on AI, hiring specialised staff and dedicated experts to research and monitor AI related risks, as well as supporting enforcement. This is the case of the UK, where the CMA set up a specialist DaTA (Data, Technology and Analytics) unit in 2019 (Hunt, 2019^[24]), France, with a digital economy technical unit launched in 2020 (Autorité de la Concurrence, 2020^[25]), Canada, which established the Digital Enforcement and Intelligence Branch (DEIB) in 2021 bringing together expertise in areas like behavioural science, data science and intelligence²⁸, and the EU, where a Data Analysis and Technology Unit was established within DG Competition in 2023. In the same year, in the US, the FTC opened an Office of Technology, to continue enhancing its internal technological expertise and better tackle digital markets' potential challenges (Federal Trade Commission, 2023^[26]).

While not all G7 authorities have dedicated data units, hiring data scientists and technologists is becoming common practice. Overall, this indicates a move towards an increased focus and prioritisation of these issues, including algorithmic pricing, by investing in resources, internally or with the external support of expert groups.

In line with this, a number of authorities have started to signal their increased interest, and concern, in this area with advocacy initiatives aimed at businesses, by means of open statements and guidance. For instance, in the Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union (TFEU) to Horizontal Co-Operation Agreements (European Commission, 2023^[12]), the

EC clarified its treatment of pricing algorithms, as well as of companies' use of algorithms more broadly in the context of Article 101 TFEU assessments. In November 2024 the CMA published on its website a guide for businesses on pricing algorithms and competition law, presenting benefits but also highlighting legal risks from the use of pricing algorithms (CMA, 2024^[27])²⁹. Finally, as mentioned in the previous chapter, in the context of a private class action that alleges antitrust violations relating to algorithmic pricing software³⁰, in March 2025 the DoJ submitted a Statement of Interest clarifying certain legal issues relating to the use of pricing algorithms. While this type of court filing is not the same as formal guidance, it offers valuable information to companies and the public regarding how the agency would evaluate algorithmic pricing issues.

To conclude, it is also relevant to note how all G7 jurisdictions have been participating and contributing to the work of the OECD Competition Committee, sharing knowledge and expertise on competition and AI, and in particular on Algorithms and Collusion, in 2017 (OECD, 2017^[4]), and more broadly on Algorithmic Competition, in the context of the June 2023 roundtable on this topic (OECD, 2023^[1]). Undoubtedly, the OECD has a key role to play supporting its members in enhancing cooperation and identifying the most effective ways forward when it comes to novel and complex matters, such as pricing algorithms, with a potential significant impact on markets and competition.

Key approaches to address potential harm from algorithmic pricing

Enforcers and policy makers in G7 jurisdictions have put forward a variety of responses and solutions to address the uncertainties and potential risks stemming from the use of pricing algorithms. Specifically:

- Most G7 competition authorities have carried out internal studies or market inquiries in recent years, in some cases aimed at gathering information also through public consultations. These efforts highlight a convergence in terms of the need for a deeper knowledge of these practices and the related risks.
- While there is agreement that traditional ex post enforcement is a relevant instrument to address anticompetitive conduct enabled or facilitated by pricing algorithms, only a few cases have been opened so far. As a consequence, it is too early to assess how different authorities will approach such cases and whether these initiatives will be aligned at the international level.
- Similarly, ex ante regulations to address pre-emptively these concerns are not common practice across G7 jurisdictions, with regulations implemented in the UK and the EU to tackle broader matters in digital markets potentially also having an impact on firms' use of pricing algorithms.
- Finally, the widespread increase in data scientists and technologists' hirings, as well as recent advocacy initiatives from a number of authorities, further indicate how in G7 jurisdictions algorithmic pricing remains a priority, with agencies signalling to businesses and consumers their intention to closely monitor these practices.

4 Concluding remarks

With the growing employment of algorithmic tools supporting companies' strategies and operations, competition policy and enforcement has been confronted with new challenges to tackle, both in terms of identifying and understanding the related risks for competition and consumers, as well as addressing any resulting harm, through traditional ex post enforcement or alternative frameworks.

In a context of considerable uncertainty in relation to both the technologies used and the related risks, this note highlights how potential concerns stemming from algorithmic pricing are similar across G7 jurisdictions. While some competition authorities have started to examine how the use of pricing algorithms may enable exploitative or exclusionary conduct, including through price discrimination and personalisation, the most significant concerns pertain to collusion risks.

First, pricing algorithms may be used to facilitate, implement, and monitor, traditional anticompetitive agreements. Secondly, they could generate hub-and-spoke collusive behaviour as well as the exchange of sensitive information amongst competitors. Third, they may impact vertical relationships by facilitating anticompetitive agreements. Finally, tacit collusion through pricing algorithms' autonomous learning remains a potential concern for some G7 agencies. The different studies, issues notes, statements and other initiatives have shown a degree of alignment on the competition concerns linked to pricing algorithms.

Although competition authorities have signalled that traditional enforcement of competition laws may be sufficient, it appears that, overall, the number of investigations focusing on algorithmic pricing remains limited across G7 jurisdictions at this stage, which can be linked to multiple reasons. While traditional ex post enforcement is not yet widely used in this area, most competition authorities are investing resources towards internal studies and market monitoring, as well as advocacy initiatives, aimed at deepening their understanding of these tools.

Current market conditions in G7 jurisdictions are characterised by complex innovations brought about by algorithms and new AI tools, leading to continuous developments in companies' conduct. Thus, the need for a deeper understanding of the market dynamics and potential harms linked to the use of pricing algorithms (and other AI pricing tools³¹) can be expected to continue. International fora such as the G7 and the OECD can provide a platform for exchange and the identification of effective solutions to tackle common challenges in a coordinated manner. This also underscores the value of international engagement between authorities, in particular in the context of investigations where technical expertise is pivotal.

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Notes

¹ This section focuses on competition issues related to the use of algorithms to set prices and excludes the concerns identified with respect to other uses of algorithms such as ranking, filtering and recommendations that have also been subject to examination by the jurisdictions.

² CMA Decision on the case No. 50223 12/08/2016.

³ Ofgem Decision: Infringement by Economy Energy, E (Gas and Electricity) and Dyball Associates of Chapter I of the Competition Act 1998 with respect to an anti-competitive agreement 26/07/2019.

⁴ See also the EC's Guidelines on the applicability of Article 101 TFEU to horizontal cooperation agreements (European Commission, 2023^[12]).

⁵ Particularly, the platform had sent multiple companies a message informing them that the discounts on products sold through that system will henceforth be capped and that the system would undergo technical modifications necessary to implement that measure.

⁶ Case C-74/14, Judgement of the Court (Fifth Chamber), 21/01/2016.

⁷ EC Cases AT. 40181, AT. 40465, AT 40469 and AT 40182.

⁸ As established in Case T-41/96 Bayer, ECLI:EU:T:2000:242.

⁹ For example, EU Commissioner Vestager has emphasised that companies will be held responsible for what the automated systems they decide to use do, in what she calls ensuring antitrust compliance “by design”. See (European Commission, 2017^[29]).

¹⁰ See section 3 of the written contribution from Italy submitted for Item 5 of the 140th OECD Competition Committee meeting on 14-16 June 2023, which is available here: [https://one.oecd.org/document/DAF/COMP/WD\(2023\)10/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2023)10/en/pdf)

¹¹ In 2018, the OECD held a discussion on personalised pricing in the context of digital markets. See (OECD, 2018^[28]).

¹² Dynamic pricing is a common mechanism used by platforms to discriminate by adjusting prices according to supply and demand. This causes similar products being priced differently depending on the timing of the consumer's purchase and may be combined with price discrimination based on other characteristics revealed by the customer's data.

¹³ An English version of the executive summary of the preliminary report is publicly available here: https://en.agcm.it/dotcmsdoc/news/IC56%20_EXECUTIVE%20SUMMARY%20en.pdf

¹⁴ This includes consumers with certain characteristics but also personalisation generating and exploiting other susceptibilities such as insecurities, weaknesses and biases (CMA, 2021^[17]).

¹⁵ In Japan, for instance, using algorithms to set low prices only to competitors' customers for the purposes of excluding them from competing effectively could fall under private monopolization, which is prohibited under the Antimonopoly Act, as well as under unfair trade practices provisions.

¹⁶ While not directly linked to pricing algorithms, there have been investigations against companies for abusing their dominant position by using clients' data within a prediction algorithm to discriminate offers.

For example: Autorité de la Concurrence Décision No. 22-D-06 (relating to practices implemented by EDF in the electricity sector).

¹⁷ E.g. automated testing through execution of the code.

¹⁸ E.g. identifying format errors, where the code can only be analysed in isolation from its environment.

¹⁹ I.e. techniques that have as objective inferring algorithms' functioning by examining their outcomes in terms of prices actually offered.

²⁰ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act)

²¹ Article 6(2) - The gatekeeper shall not use, in competition with business users, any data that is not publicly available that is generated or provided by those business users in the context of their use of the relevant core platform services or of the services provided together with, or in support of, the relevant core platform services, including data generated or provided by the customers of those business users.

²² Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act)

²³ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act)

²⁴ Article 5(1)(c) - The following AI practices shall be prohibited: the placing on the market, the putting into service or the use of AI systems for the evaluation or classification of natural persons or groups of persons over a certain period of time based on their social behaviour or known, inferred or predicted personal or personality characteristics, with the social score leading to either or both of the following: (i) detrimental or unfavourable treatment of certain natural persons or groups of persons in social contexts that are unrelated to the contexts in which the data was originally generated or collected; (ii) detrimental or unfavourable treatment of certain natural persons or groups of persons that is unjustified or disproportionate to their social behaviour or its gravity

²⁵ Case No. 1:24-cv-00710.

²⁶ <https://www.justice.gov/archives/opa/media/1383316/dl?inline>

²⁷ United States of America et al. v. RealPage, Inc. et al.; Proposed Final Judgment and Competitive Impact Statement.

²⁸ Building a More Competitive Canada - Canada.ca, <https://www.canada.ca/en/competition-bureau/news/2022/05/building-a-more-competitive-canada.html>.

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³⁰ Multiplan Health Insurance Provider Litigation; <https://www.justice.gov/atr/media/1394631/dl?inline>. See also (Cotoia, 2025^[30]).

³¹ E.g. Generative AI pricing tools.



IN
COLLABORATION
WITH

