Digital Competition's Submission to the Canadian Public Consultation on Algorithmic Pricing and Competition

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Algorithmic pricing raises pro- and anticompetitive concerns. The Competition Bureau should assess its legal framework, the potential of conducting market studies, and monitor developments in AI.

1. Introduction

Algorithmic pricing refers to the use of algorithms to set prices, both online and offline. As algorithmic decision-making has advanced, the competition community has spent several years examining its implications for competition and consumers[1]. Studies have shown that firms can use algorithmic pricing to engage in anticompetitive practices, such as collusion and abuse of dominance, potentially leading to the exclusion of competitors or the exploitation of consumers. At the same time, research has found procompetitive effects, particularly in the context of dynamic pricing, where prices adjust in real time to demand. In such cases, consumers may benefit from better deals[2].

In recent years, competition authorities worldwide have increased their scrutiny of algorithmic pricing, including in sectors such as real estate and aviation[3].

[1] OECD, Algorithmic Competition, OECD Roundtables on Competition Policy Papers, 2023 (accessed 14 July 2024). Available at: https://www.oecd.org/en/publications/algorithmic-competition_cb3b2075-en.html

[2] Competition and Markets Authority (CMA), Dynamic Pricing: Project Update, 20 June 2025 (accessed 14 July 2025). Available at: https://www.gov.uk/government/publications/dynamic-pricing-project-update

[3] Autorità Garante della Concorrenza e del Mercato, IC56 - Italian Competition Authority: Sky-High Airfares Demand Greater Transparency. Talks Now Underway with the European Commission, 3 July 2025 (accessed 14 July 2025). Available at: https://en.agcm.it/en/media/press-releases/2025/7/IC56-

See also, US Department of Justice, Justice Department Sues RealPage for Algorithmic Pricing Scheme that Harms Millions of American Renters, 23 August 2024 (accessed 14 July 2025). Available at: https://www.justice.gov/archives/opa/pr/justice-department-sues-realpage-algorithmic-pricing-scheme-harms-millions-american-renters

This brief submission to the Canadian Competition Bureau's public consultation on algorithmic pricing[4] offers insights into the key components and competition concerns surrounding algorithmic pricing and concludes with targeted research recommendations.

2. Key Elements of Algorithmic Pricing

Algorithmic pricing relies on two core elements: data and algorithms. Data provides the foundation for pricing decisions, drawing from demand-side indicators (e.g., consumer behaviour), supply-side factors (e.g., availability of input), and both public (e.g., online listings) and non-public sources (e.g., proprietary firm data).

Algorithms are automated processes that generate outputs based on the input data. Firms can deploy these algorithms to explicitly or implicitly achieve a desired output or even autonomously without human intervention, directly or through intermediaries such as hubs. For example, algorithms can be designed to optimise profits or to adjust prices in real time by monitoring competitors' prices online. These configurations could raise competition concerns when the firm uses algorithms for anticompetitive means.

3. Competition Issues

Firms may adopt algorithmic pricing strategies that raise competition concerns, without necessarily violating competition law.

Over the past decade, both scholars and competition authorities have explored how algorithms can facilitate illegal agreements, particularly price-fixing, but practical evidence remains scarce[5]. Authorities have uncovered cases where firms explicitly programmed algorithms—either individually or through a central hub—to coordinate prices[6]. However, no authority has

[4] Competition Bureau Canada, Algorithmic Pricing and Competition: Discussion Paper, 10 June 2025 (accessed 14 July 2025). Available at: https://competition-bureau.canada.ca/en/how-we-foster-competition/education-and-outreach/publications/algorithmic-pricing-and-competition-discussion-paper

[5] Emilio Calvano et al., Artificial Intelligence, Algorithmic Pricing, and Collusion, *American Economic Review vol. 110, no. 10*, October 2020. Available at: https://www.aeaweb.org/articles?id=10.1257/aer.20190623

See also, Autorité de la concurrence and Bundeskartellamt, Algorithms and Competition, 2019. Available at: https://www.autoritedelaconcurrence.fr/sites/default/files/algorithms-and-competition.pdf

[6] CMA, Online Sales of Posters and Frames, 4 December 2015 (accessed 14 July 2025). Available at: https://www.gov.uk/cma-cases/online-sales-of-discretionary-consumer-products

yet found conclusive evidence of collusion through tacit or autonomous algorithmic pricing. Such cases are difficult to establish legally, as they typically lack the key elements—such as intent or communication—required to prove a cartel. Nonetheless, these practices can undermine price competition and harm consumers.

The competition community has also studied dynamic and personalised pricing strategies, where firms adjust prices based on a consumer's willingness to pay (WTP)[7]. While such practices may enhance price competition and allow firms to target demand more precisely, they may also raise concerns. In particular, personalised pricing based on first-degree price discrimination can erode consumer surplus by charging individuals the maximum they are willing to pay.

Some scholars have warned that advancements in AI could make algorithms more exploitative for consumers, as AI could leverage behavioural biases[8]. Moreover, the advancement of AI agents, which automate tasks on the user's behalf, could enable users to benefit from better deals when they instruct the agent to track prices of a given product and to buy it when it is at a desired price[9]. However, research in this area remains at an early stage.

4. Research Recommendations

The Canadian Competition Bureau has already developed a strong foundation, through its discussion paper accompanying the consultation, which provides an overview of the relevant literature. Going forward, the Bureau may wish to focus on the following areas:

First, it should assess whether Canada's current competition law framework adequately captures problematic forms of algorithmic pricing, including tacit or autonomous collusion. If gaps exist, the Bureau could consider updating its framework, including through soft law instruments such as guidance. For instance, guidelines on data use could clarify which types of data firms may lawfully use when deploying algorithmic pricing systems for online price

[7] OECD, Personalised Pricing in the Digital Era, OECD Roundtables on Competition Policy Papers, 2018 (accessed 14 July 2025). Available at: https://www.oecd.org/en/publications/personalised-pricing-in-the-digital-era_db4d9c9c-en.html

[8] Michal Gal and Amit Zac, Is Generative Ai the Algorithmic Consumer We are Waiting for?, *Network Law Review*, March 2024. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4755455

[9] Lilian Rincon, Shop with AI Mode, use AI to buy and try clothes on yourself virtually, *Google Blog*, 20 May 2025 (accessed 15 July 2025). Available at: https://blog.google/products/shopping/google-shopping-ai-mode-virtual-try-on-update/

monitoring. The European Commission has taken a similar approach by issuing guidance on acceptable data practices[10].

Second, the Bureau should evaluate the potential of conducting market studies to identify and address problematic algorithmic pricing in specific sectors. As an advocacy tool, market studies can uncover structural issues and recommend targeted reforms, as seen by the Italian competition authority's study on pricing in the airline industry.

Third, the Bureau should continue to monitor developments in AI to understand how emerging technologies may facilitate new algorithmic pricing behaviours, as well as amplify or lower existing risks.

[10] Communication From the Commission Guidelines on the Applicability of Article 101 of the Treaty on The Functioning of The European Union to Horizontal Co-Operation Agreements (2023/C 259/01), 21 July 2023.

About

Digital Competition

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