

CCIA Comments on the Canadian Competition Bureau’s Discussion Paper on Artificial Intelligence and Competition

The Computer & Communications Industry Association (CCIA)¹ welcomes the opportunity to submit comments on the Canadian Competition Bureau’s (the Bureau) discussion paper on artificial intelligence (AI) and competition,² which was released for public consultation on March 20, 2024.³ CCIA’s comments consist of this cover letter, which provides some general considerations on generative AI and pricing algorithms, as well as the attached report prepared by Copenhagen Economics, and commissioned by CCIA, on Artificial Intelligence and Competition.⁴

I. Generative AI

Generative artificial intelligence (Generative AI) is at the forefront of technological innovation. Diverging from conventional AI focused on data analysis or task performance, Generative AI showcases a remarkable capacity for autonomous content creation. Generative AI has the potential to transform existing businesses and industries and already pioneers solutions across various sectors, contributing to more diverse choices for consumers, and more innovation.

The Generative AI market is nascent and developing rapidly. With the increasing availability of high-quality data, computing power, and the growth of machine learning, competition within the Generative AI landscape is highly dynamic at all levels of the AI value chain. The diversity of business models and strategies is striking, with a wide range of open-source and proprietary models being developed by large and small companies alike, whether for

¹ CCIA is an international, not-for-profit trade association representing a broad cross-section of technology and communications firms. For over fifty years, CCIA has promoted open markets, open systems, and open networks. The Association advocates for sound competition policy and antitrust enforcement. CCIA members employ more than 1.6 million workers, invest more than \$100 billion in research and development, and contribute trillions of dollars in productivity to the global economy. For more, visit www.ccianet.org.

² Competition Bureau, Government of Canada, Artificial Intelligence and Competition Discussion Paper (Mar. 20, 2024), <https://competition-bureau.canada.ca/how-we-foster-competition/education-and-outreach/artificial-intelligence-and-competition>.

³ Competition Bureau, Government of Canada, “Competition Bureau seeks feedback on artificial intelligence and competition” (Mar. 20, 2024), <https://www.canada.ca/en/competition-bureau/news/2024/03/competition-bureau-seeks-feedback-on-artificial-intelligence-and-competition.html>.

⁴ Paulo Rocha Abecasis, Federico De Michiel, Bruno Basalisco, Tuomas Haanperä, and Julie Iskandar, Copenhagen Economics, “Generative Artificial Intelligence: The Competitive Landscape” (Feb. 2024), <https://copenhageneconomics.com/publication/generative-artificial-intelligence-competition/>.

general or more specific use. This dynamic competition further demonstrates that there is space and growth potential for new entrants.

Generative AI is raising new questions about competition, market concentration, and innovation. These changes can seem complicated, but emerging AI innovations are contributing to a notably competitive ecosystem in AI.⁵ Moreover, as competition heats up in online search, consumer marketplaces, and cloud computing, AI continues to upend markets, with new features being launched seemingly every day.⁶ As an example, new AI chatbots are making the AI marketplace competitive through the utilization and deployment of unique Language Learning Models (LLMs).⁷

The rapid succession of new technological developments is constantly changing the dynamic and market conditions in Generative AI tend to evolve as rapidly as the underlying technology itself. Innovations in graphic processing units (GPUs) are likely to decrease the cost of computing resources. The model size, number of parameters, and amount of data required to reach state-of-the-art capabilities are constantly changing. Due to their distinct characteristics and unlimited potential, foundation models will continue to evolve further in the future, catering to specific business or personal needs of users.

The Copenhagen Economics' report⁸ also shows the dynamic competition present in the computing power offered by cloud providers. Generative AI's disruptive nature brings forth the potential for competition in this market to flourish even more in the future. Progress in technology is driving down the cost and time required for building, training, and launching

⁵ Sequoia, "Generative AI's Act Two" (2024), <https://www.sequoiacap.com/article/generative-ai-act-two/>; Duke Fuqua School of Business, "Explaining the T in Chat GPT" (Aug. 2023), <https://www.fuqua.duke.edu/duke-fuqua-insights/explaining-%E2%80%98t%E2%80%99-chatgpt>; Benedict Evans, "AI and Everything Else" (Dec. 2023), <https://www.ben-evans.com/presentations/>.

⁶ NewsWire, "iAsk AI Search Engine Reaches 1 Million Searches Daily Just Months After Launch" (Dec. 2023), <https://www.newswire.com/news/iask-ai-search-engine-reaches-1-million-searches-daily-just-months-22194925>; SearchEngine, "Microsoft Bing adds new Deep Search generative AI feature" (Dec. 2023), <https://searchengineland.com/microsoft-bing-deep-search-435446>; The Verge, "Forbes now has its own AI search engine" (Oct. 2023), <https://www.theverge.com/2023/10/26/23933799/forbes-generative-ai-search-adelaide>.

⁷ Anissa Gardizy, The Information, "AI Laggard Intel Expands Effort to Help Companies Build ChatGPT-like Apps" (Oct. 2023), https://www.theinformation.com/articles/ai-laggard-intel-expands-effort-to-help-companies-build-chatgpt-like-apps?offer=rtsu-engagement-sept-23&utm_campaign=RTSU+-+Intel+ChatGPT&utm_content=2071&utm_medium=email&utm_source=cio&utm_term=1500; CNBC, "Claude AI can summarize text from PDFs for free. Here's how to use it" (Oct. 20, 2023), <https://www.cnbc.com/2023/10/20/claude-ai-can-summarize-text-from-pdfs-for-free-heres-how-to-use-it.html>; TechCrunch, "Samsung unveils ChatGPT alternative Samsung Gauss that can generate text, code and images" (Nov. 2023), <https://techcrunch.com/2023/11/08/samsung-unveils-chatgpt-alternative-samsung-gauss-that-can-generate-text-code-and-images/>.

⁸ *Supra* n. 4

extensive LLMs.⁹ For example, the capacity to conveniently adapt a pre-existing model via fine-tuning is hastening the arrival of competitive models. AI vendors, including startups, are also gaining greater access to third-party models and tools, tailored strategies for market entry, optimization of machine learning frameworks, and other resources.

Competition in Generative AI is dynamic and rapidly evolving. It is generally working well to deliver value, service, and choice to all types of customers. With that in mind, CCIA emphasizes that any legislative or regulatory intervention to address any future competition concerns in the Generative AI market would be premature and could potentially stifle innovation in the Generative AI sector and limit consumer choice. Moreover, overly burdensome regulation may make it difficult for competition and innovation to flourish.

II. Pricing Algorithms

Pricing algorithms are designed to automate the pricing process and leverage data for better decision-making. Such algorithms are widely used across a variety of businesses in various industries, allowing for the optimization of prices by analyzing factors such as cost, demand, and competitor pricing. These algorithms adjust pricing in real time in response to market conditions. This automation results in businesses being able to save money, as manually managing pricing and inventory can be extremely costly and time-consuming.

In many cases, this dynamic pricing also results in consumers receiving lower and more competitive prices for various goods and services. For example, price comparison tools and dynamic pricing can help consumers find the best deals at any given time, saving them time and effort in searching for bargains. In addition, personalized pricing can lead to targeted discounts for consumers, allowing them to access better deals.¹⁰

While there may be potential concerns associated with pricing algorithms,¹¹ these are already addressed under existing antitrust law – collusion is illegal under section 45 of the Canadian Competition Act.¹² It is also worth noting that this activity is considered illegal under

⁹ ARK Investment Management LLC, “Big Ideas 2023” (Jan. 31, 2023), at 20, https://research.ark-invest.com/hubfs/1_Download_Files_ARK-Invest/Big_Ideas/ARK%20Invest_013123_Presentation_Big%20Ideas%202023_Final.pdf.

¹⁰ See, e.g., OECD, Directorate for Financial and Enterprise Affairs, Competition Committee, Background Note by the Secretariat, “Personalised Pricing in the Digital Era” (Nov. 28, 2018), [https://one.oecd.org/document/DAF/COMP\(2018\)13/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)13/en/pdf); Consumers Council of Canada, “Dynamic Pricing – Can consumers achieve the benefits they expect” (2017), https://www.consumerscouncil.com/wp-content/uploads/sites/19/2020/03/809323_ccc_dynamic_pricing_final_report_web.pdf.

¹¹ *Supra* n. 2 at 20, the discussion paper notes the concern of algorithms to form cartel agreements or tacit collusion.

¹² Government of Canada, Competition Act (R.S.C., 1985, last amended on Dec. 2023), Section 45, <https://laws.justice.gc.ca/eng/acts/C-34/section-45.html>.

existing law regardless of whether firms use an algorithm. Based on this, there are existing competition tools to detect and stop illicit collusion.

In the U.S., some legislative attempts¹³ have been made to regulate algorithms in an attempt to outlaw algorithmic collusion. However, there are several concerns with these proposals as they would impact a wide range of businesses and industries. As previously stated, pricing algorithms carry many potential benefits for consumers and also allow businesses to more economically set prices in response to changes in supply and demand by avoiding manual pricing mechanisms. Although there may be some theoretical risks of algorithms being used by competitors to collude, as the discussion paper notes,¹⁴ there are no specific examples of this conduct occurring. Hence, an *ex-ante* approach, similar to the one attempted in the U.S., could potentially harm Canada's AI market and strip Canadian consumers of the real-world benefits that AI brings in different markets.

III. Conclusion

The Generative AI market is diverse and vibrant, with no immediate signs of a lack of access to inputs. There are several new entrants present with diversified business models and products. Therefore, there are no evident signs of competitive problems. In case any potential competition concern emerges in the future, like the risk identified by the Bureau with algorithmic collusion, they can be addressed under the existing competition rules in Canada.

CCIA is pleased to provide these comments and the attached report, and looks forward to continuing to engage on these important issues with the Bureau.

¹³ See, e.g., Congress, S.3686 “Preventing Algorithmic Collusion Act of 2024”, 118th Congress (2023-2024), <https://www.congress.gov/bill/118th-congress/senate-bill/3686/all-actions>; California Senate, SB 1154: “California Preventing Algorithmic Collusion Act of 2024” (2023-2024), https://digitaldemocracy.calmatters.org/bills/ca_202320240sb1154; CCIA, CCIA Comments on CA SB 1154 (Oppose) (2024), <https://ccianet.org/library/ccia-comments-on-ca-sb-1154-oppose/>.

¹⁴ *Supra* n. 2 at 20-21 (“This phenomenon has not yet been observed or proven explicitly in real world markets.”).