AI Alliance Comment in response to Japan Fair Trade Commission Discussion Paper on Generative AI and Competition

Submitted by the AI Alliance
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The AI Alliance is a diverse community of organizations, large and small companies, academic and non-profit institutions, representing developers, researchers, and business leaders who are focused on accelerating and disseminating open innovation across the AI technology landscape. They aim to improve foundational capabilities, safety, security, and trust in AI, and to responsibly maximize benefits to people and society everywhere. The AI Alliance brings together a critical mass of compute, data, tools, and talent to accelerate open innovation in AI.

Executive Summary

The Japan Fair Trade Commission (JFTC) has released a discussion paper on *Generative AI and Competition*, focused on ensuring fair and free competition in Japan's Generative AI sector. This builds on the AI Guidelines for Business issued in April 2024 by the Ministry of Economy, Trade and Industry (METI) and the Ministry of Internal Affairs and Communications (MIC), which also emphasized the need for fair competition, as well as other competition regulators' work in the generative AI space including those in the European Union, UK, and France. The JFTC discussion paper provides an overview of the market structure for generative AI and potential competition issues and seeks information to help guide the Japanese Government's competition policy related to Generative AI.

In order to ensure fair and free competition within Japan's Generative AI sector, the JFTC should encourage an open approach to AI, including support for open source Generative AI models. Open source models drive competition and innovation in the Generative AI sector by democratizing access to Generative AI technologies. Open source models are a critical part of a diverse AI ecosystem, providing an alternative to proprietary or closed models. They promote competition and choice, while offering significant benefits to entrepreneurs and small and medium businesses. Firms can build upon source models without having to develop their own underlying models, resulting in significant savings. Further, open source approaches allow firms to fine-tune models as they see fit, and also offer firms greater control over their own data. Open source AI ensures that even smaller firms can build competitive AI-powered products and services, thereby avoiding undue market concentration.

I. Introduction

The AI Alliance is a diverse community of organizations, large and small companies, academic and non-profit institutions, representing developers, researchers, and business leaders who are focused on accelerating and disseminating open innovation across the AI technology landscape. They aim to improve foundational capabilities, safety, security, and trust in AI, and to responsibly maximize benefits to people and society everywhere. The AI Alliance brings together a critical mass of compute, data, tools, and talent to accelerate open innovation in AI.

The content in this response is provided by the AI Alliance and is not intended to reflect the views of any particular member organization. We value the opportunity to provide feedback to the Japan Fair Trade Commission discussion paper on *Generative AI and Competition*.

At the outset, we want to recognize the discussion and the various questions posed in the JFTC Discussion paper under the section “Structure of Generative AI Markets” as extremely relevant for establishing a free and fair trade AI economy. Since the main focus of the AI Alliance is to create and promote open technology in AI, we limit our responses in this document just to those topics that demonstrate the use and benefits of open AI technology.

Our comment begins in Section 2 by showing how open source models play a critical role in advancing fair and free competition. The economic benefits of foundation models will likely accrue most where open foundation model weights are most widely adopted, especially as regards how open foundation models benefit entrepreneurs and small and medium businesses. Section 3 then explores additional benefits of open source AI, including how open source approaches contribute to customizability, privacy and security. Both of these sections are most responsive to the following question from Section 4 of the JFTC discussion paper: “How should the use of open-source vs. closed-source models be considered in terms of maintaining and fostering fair and free competition in the Generative AI model and product markets?”

Since the discussions in the technical community about defining “open-source AI” is ongoing, we believe it is premature to adopt a formal definition of “open-source AI” here. In lieu of a formal definition, we use the words “open” and “openness” to refer to conditions in which foundation model weights are publicly available under a permissive license that allows for research and commercial use. This definition encompasses the AI models most relevant to JFTC as it further develops its views on competition policy as it relates to the Generative AI sector.

2. How Open Foundation Models Advances Fair and Free Competition

A. Open Foundation Models Promote Competition and Choice

Openness creates increased competition in the foundation model marketplace by enabling downstream developers to build innovative, custom products.[1] Growing the number of foundation model-based products reduces overall market concentration and increases options for enterprise customers and end users.[2] The availability of open foundation models is also likely applying market pressure on closed developers to lower prices and “compete against free.”[3] This has wide benefits; in general, as the US Government has noted, “when firms have to compete for customers, it leads to lower prices, higher quality goods and services, greater

[1] See Will Douglas Heaven, The open-source AI boom is built on Big Tech’s handouts. How long will it last?, MIT Technology Review, May 12, 2023, https://www.technologyreview.com/2023/05/12/1072950/open-source-ai-google-openai-eleuther-meta/ (“if the trend toward closing down access continues, then not only will the open-source crowd be cut adrift—but the next generation of AI breakthroughs will be entirely back in the hands of the biggest, richest AI labs in the world.”).

[2] See https://arxiv.org/abs/2403.07918 (access to model weights promotes innovation in downstream markets by “helping to reduce market concentration at the foundation model level from vertical cascading”).

[3] See Tyler Cowen, Open-Source Software Is Worth a Lot More Than You Pay for It, Bloomberg, Feb. 26, 2024 https://www.bloomberg.com/opinion/articles/2024-02-26/open-source-software-is-worth-a-lot-more-than-you-pay-for-it

variety, and more innovation."[4] For instance, inference costs have come down dramatically, which some link to availability of less expensive open models. A recent paper published by Stanford asserts that open access to model weights promotes innovation in downstream markets, "helping to reduce market concentration at the foundation model level from vertical cascading."

As the discussion paper notes, open foundation models are already having a significant positive impact in the Japanese Generative AI sector: "Open-source models help create a competitive environment by lowering entry barriers for developing and using generative AI products, particularly benefiting new entrants and startups that typically struggle with high costs…By leveraging open-source foundational models and pre-training with high- quality Japanese language data, [domestic companies] are developing generative AI models that excel in Japanese language performance and cater to unique Japanese business needs."[5]

B. Open Foundation Models Benefit Entrepreneurs and Small and Medium-Businesses

Open source AI promotes innovation, collaboration, competition and economic growth offering cost-effective solutions that boost productivity and elevate performance standards. Open foundation models are often the most affordable, cost-effective option for entrepreneurs and small- and medium-businesses. Building a new, enterprise-specific foundation model often requires prohibitively expensive investments in model training.[6] Access to open foundation models, which are typically free to procure and more affordable to customize than starting from scratch, substantially lowers the barrier to entry. These models also enable a thriving ecosystem of foundation model development support and cloud service providers serving open foundation models to enterprise customers. This makes it possible for more businesses to build foundation models at lower cost, ensuring that corporate resources are not the sole determinant of whether a company can realize the benefits of a bespoke foundation model.[7] This spreads the productivity benefits of foundation models to more sectors of the economy.

3. How Open Foundation Models Contribute to Greater Customizability, Privacy and Security

A. Open Foundation Models Provide Companies Greater Customizability, Control and Privacy

Open models can be downloaded onto local hardware and developed in-house, providing organizations with ultimate control over how they customize the model for their own specific use cases. Further, more control over data access leads to greater privacy. For example, open models can be downloaded onto local hardware resulting in no need for developers to share any data with external providers. Organizations with concerns over data access - for instance, those in the financial or healthcare sectors - can experiment and innovate with open models with greater peace of mind in this regard.

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[4] See Heather Boushey and Helen Knudsen, The Importance of Competition for the American Economy, U.S White House Blog, Jul. 9, 2021, https://www.whitehouse.gov/cea/written-materials/2021/07/09/the-importance-of-competition-for-the-americaneconomy/.

[5] JFTC Discussion Paper on Generative AI and Competition, page 8.

[6] See https://arxiv.org/abs/2403.07918

[7] See Oguz A. Acar and Andrés Gvirtz, GenAI Can Help Small Companies Level the Playing Field, Harvard Business Review, Feb. 1, 2024, https://hbr.org/2024/02/genai-can-help-small-companies-level-the-playing-field.

B. Open Foundation Models Lead to Increased Safety and Security

The transparency or the availability of information about open models enables researchers and authorities to examine open models to verify their performance, identify risks or vulnerabilities, and develop new mitigations, which can create safer, more effective and efficient models to better support real-world applications. By comparison, providers of closed models may not disclose the inner workings of these models, meaning they are comparatively opaque and require greater trust in the provider to identify and mitigate security vulnerabilities.

Further, the history of cybersecurity shows that an open approach to software development typically improves security. Today, the industry adopts an overwhelmingly open approach, because the general conclusion is that we are better off in a world where everyone has access to offensive capabilities than one in which only attackers do. According to the US Cybersecurity and Infrastructure Security Agency (CISA): “At CISA, we see significant value in open foundation models to help strengthen cybersecurity, increase competition, and promote innovation…[T]he global AI community should (1) learn from existing software security work and (2) continue to promote the responsible development and release of open foundation models while mitigating their potential harms.”

4. Conclusion

The AI Alliance values this opportunity to highlight the benefits of open foundation models. We look forward to additional opportunities to show how open foundation models contribute to a fair and free competitive Generative AI sector.