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BLOG

Algorithms and AI Under Scrutiny by the Japan Fair Trade Commission

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Japan's Study Group on Competition Policy in Digital Markets (Study Group) recently published a Report on Algorithms/AI and Competition Policy (Report) to assist the Japan Fair Trade Commission (JFTC) with competition issues in the digital sector.[1] The Study Group was formed by the JFTC and included academic experts in engineering and information law as well as economics and competition law. The Report, which summarizes discussions from a series of eight Study Group meetings held between July 2020 and March 2021, identifies the following four concerns: (i) concerted activity, such as price fixing; (ii) unilateral conduct, such as ranking manipulation and personalized pricing; (iii) competitive power of data collection; and (iv) issues regarding digital platforms.

Concerted Activity

Companies increasingly use algorithms/AI to survey the market and set prices automatically. The Report confirms that algorithms/AI develop active price competition by empowering enterprises to respond to their competitors' pricing instantly. However, algorithms/AI may facilitate the formation of cartels or contribute to new forms of concerted practices that escape current antitrust enforcement efforts. In addition, they can be used to help companies monitor competitors and reinforce collusive price-fixing.

The Report identifies four concerted practices enabled by algorithms:

1. The ability for cartel members to monitor and punish deviators and enforce a cartel.
2. The use of identical algorithms that operate as a "hub" in a hub-and-spoke cartel.
3. Signaling to facilitate coordinated price adjustments.
4. Coordination by self-learning algorithms.

According to the Report, the JFTC could apply the Antimonopoly Act to properly regulate most concerted practices carried out through algorithms. However, with respect to self-learning algorithms, the Report recognizes that the process by which these types of algorithms coordinate prices is still unclear, and thus the JFTC should pay close attention to this developing technology and how it is used going forward.

Unilateral Conduct

E-commerce platforms provide customers with a wide array of products and services. To help guide customers' choices, platforms increasingly use ranking systems that steer buyers toward certain products. The Report discusses situations in which a service provider with significant influence utilizes ranking systems that might be rigged or abusive. It provides various hypothetical situations that are deemed anticompetitive:

1. Self-preferencing in ranking (i.e., prioritizing the ranking service provider's own products, or those of its affiliated companies or of third-party companies that use additional services, such as payment or fulfillment services, over others' products).
2. Determining ranking order based in part on acceptance of most-favored-nation conditions or exclusive conditions.
3. Taking advantage of a superior bargaining position by threatening to manipulate the ranking order unless third-party companies obey requests or agree on terms beneficial to the service provider.

Another issue concerning unilateral conduct in the digital market is the collection and analysis of consumer data to match each consumer's personalized preferences, including unique pricing. The Report acknowledges that companies commonly vary prices according to differences in volume, payment terms, and shipping conditions, and it recognizes that price discrimination can potentially increase output. But the Report cautions that price discrimination by a firm with market power can lead to exclusion of competitors. Accumulated consumer data that a firm with market power has collected could enable it to price below its competitors and to target consumers that competitors want to reach in an effort to drive those competitors out of the market.

Competitive Power of Data Collection

The Report analyzes how data collection and analysis by algorithms/AI create competitive advantages. It describes the virtuous "data-driven network effect" cycle, wherein an enterprise with a user base can improve the quality of its service by leveraging user data that, in turn, allows it to attract more users with enhanced services and thus obtain more data. In addition, monetizing the service bolsters the cycle by raising funds for investments to grow a company's user base. Once the enterprise reaches a critical-mass tipping point, data continue growing substantially and continuously. The Report cautions that this self-reinforcing cycle could work as a barrier against competitors' entry or business expansion, reinforce monopoly power, and finally create an incentive for an enterprise with market power to behave anticompetitively to maintain its dominant position.

Digital Platform Issues

The Report addresses how the issues identified above may impact digital platforms utilizing algorithms and AI.

1. **Ranking manipulation** - Digital platform providers that have achieved critical mass and gained a dominant position in the market act as important gateways for third-party sellers to reach consumers, and their ranking systems can significantly impact competition. Dominant platforms could engage in anticompetitive self-preferencing by manipulating rankings.
2. **Personalized pricing** - Digital platform providers can easily collect substantial transaction and user data that could be used to drive competitors out of the market through personalized pricing.
3. **Concerted practices** - Digital platform providers could organize hub-and-spoke cartels among third-party sellers by allowing or requiring them to use the same algorithms provided by the platform operator to set and adjust their respective prices.
4. **Competitive advantage associated with the accumulation of data** - Digital platform providers could engage in conduct that unfairly prevents competitors from achieving a sufficient number of users.

Practice Tips

The Report illustrates how the JFTC may approach antitrust enforcement where the conduct involves algorithms or AI. Accordingly, enterprises doing business in Japan that use algorithms/AI—including digital platform operators—should carefully examine their own business practices in the following respects:

Concerted Activity

- Using algorithms that could harmonize competitors' pricing could be considered an unlawful cartel agreement. Avoid exchanging information with competitors about the performance or operation of algorithms.
- Using algorithms to follow competitors' price changes could be viewed as evidence of an underlying price-fixing agreement. Carefully document the reasons for using algorithms to gather or respond to competitive intelligence, and ensure that algorithms that are collecting, analyzing, or using competitive data are not acting in collusion with competitors.
- Antitrust authorities are focused on self-learning algorithms. Strengthen compliance policies and implement safeguards to prevent unexpected or unintended violations of competition law.

Unilateral Conduct

- The Report encourages the JFTC to conduct investigations into potential biases in training data, study the logic behind algorithms based on companies' internal documents or source code, and verify a combination of input data with corresponding output data. Because of the focus on these developing areas of investigation, companies should take caution to ensure that the process of developing algorithms is free from bias or manipulation that could lead to anticompetitive behaviors.
- Keep a record showing that personalized pricing is based on consumers' preferences or demands to demonstrate that the pricing decisions are not designed to interfere with competitors' businesses.

The Perspective of US and Other International Jurisdictions

Japan's focus on potential competitive harms from the use of algorithms and AI is not unique. The Report includes annexes referencing reports on competition issues involving algorithms/AI by international organizations and regulators around the world. It also discusses enforcement actions involving algorithms/AI by antitrust agencies in Europe, the US, UK, and Korea, including the following:

- Collusion among competing airlines through a computer-reservation system that allowed them to share price information, notify one another of planned price changes, and coordinate price increases.
- Use of a pricing algorithm by third-party sellers in an online marketplace to coordinate price changes in order to implement a price-fixing agreement among the competitors.
- A hub-and-spoke agreement among travel agents arranged by a third-party administrator of an online travel-booking system that capped discounts at a certain level.
- A market-allocation scheme among competing suppliers of gas and electricity and a software provider that developed software to facilitate the scheme.
- Consideration by an online travel agency's ranking algorithm of whether hotels had agreed to a certain term in their contracts with the agency.
- Self-preferencing of its own shopping-comparison service by a dominant search engine.
- Self-preferencing of its own products by a shopping-comparison service.

As these examples make clear, competition agencies around the world are focused on similar conduct. Digital platform operators and other companies using algorithms and AI face increasing scrutiny from regulators on the

lookout for potential anticompetitive conduct.

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[1] A brief summary of the Report is available in English at https://www.jftc.go.jp/en/pressreleases/yearly-2021/March/210331.html. A full version of the Report is available only in Japanese at https://www.jftc.go.jp/houdou/pressrelease/2021/mar/210331_digital.html.

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