Research Article

Kentaro Hirayama and Koki Arai*

Interaction between Information Law and Competition Law: Organizing Regulatory Perspectives on Platform Businesses

<https://doi.org/10.1515/ajle-2020-0074>

Published online March 10, 2021

Abstract: This study attempts to organize the regulatory perspective on the interaction between information law and competition law, especially for platform businesses. An online platform is an entity that mediates multiple groups of users, such as providers and users of products, services, and information, and has an indirect network effect as a two-sided market. The study illustrates the actions taken by online platforms, indicates attendant problems, and suggests responses to these. Four aspects of the competition policy issues related to online platforms are analyzed and discussed: data collection, data enclosure, data acquisition, and algorithmic transparency. The study considers essential online platform issues, such as promoting competition policy and fairness in information law application, to expand the discussion. Although fairness is important, there is a risk that the analysis of the effects of reducing competition is neglected and that interpreting fairness might increase the concern regarding over-execution. Having disaggregated the elements of fairness, the study suggests the need to establish specific standards.

Keywords: competition law, information law, Japan, platform businesses

1 Introduction

In Japan, the core of competition law is the “Anti-monopoly Law” (Act on Prohibition of Private Monopolization and Maintenance of Fair Trade [Act No. 54 of 1947]), which regulates acts that have an anti-competitive effect. This study examines information use, free and diverse information distribution, and information use in

***Corresponding author: Koki Arai**, Kyoritsu Women’s University, Faculty of Business Studies, Chiyoda-ku, Tokyo, Japan, E-mail: koki.arai@nifty.ne.jp

Kentaro Hirayama, Kyushu University, Faculty of Law, Fukuoka, Japan, E-mail: kentaro.hirayama@law.kyushu-u.ac.jp

competition, especially on online platforms. One purpose of this study is to review the relationship between the competition law and the laws and regulations governing the private sector considering the Japan Fair Trade Commission (JFTC) publication of the “Guidelines Concerning Abuse of a Superior Bargaining Position in Transactions between Online platform Operators and Consumers that Provide Personal Information, etc.”¹

In Japan, the “Act on the Protection of Personal Information” (Law No. 57, 2003) has been enacted to protect the rights and interests of individuals, cited as considerations for protecting personal information; the appropriate and effective use of personal information contributes to the creation of new industries, a vibrant economy and society, the realization of an affluent national life, and the usefulness of personal information². The information law under consideration in this study is not only the Personal Information Protection Law, but it is also one important achievement. Along with this, the Basic Act on the Formation of an Advanced Information and Telecommunications Network Society, for example, has the formation of an advanced information and telecommunications network society as one of its objectives³. Thus, from the viewpoint of information law, the formation of an advanced information society is aimed at protecting personal information and securing the rights of individuals. Conversely, as we saw at the beginning, Japan’s Anti-monopoly Law aims to realize fair and free competition. What they have in common is the development of society through proper business activities. One of the key ideas in fairness is the balance between safety and innovation. The former is discussed in detail in Section 3. The latter’s goal is to achieve safety by securing profits through proper resource allocation by protecting individual rights and interests and the realization of competition and to realize a vibrant economic society through the effective use of personal information and the ingenuity of businesses.

Evidently, the objectives and aims of the Personal Information Protection Law and the Anti-monopoly Law are different. In Japan, some aspects of personal information protection have not reached the level of the General Data Protection Regulation in the European Union (GDPR). For example, the treatment of personal information as property rights has not been discussed in the country. In some cases, competition law is used to compensate for this lack of protection. This

1 See the JFTC’s website: https://www.jftc.go.jp/en/pressreleases/yearly-2019/December/191217_DP.html.

2 See the Act on the Protection of Personal Information: (Purpose) Article 1; <https://elaws.e-gov.go.jp/document?lawid=415AC0000000057>. (in Japanese).

3 See the Basic Act on the Formation of an Advanced Information and Telecommunications Network Society: (Purpose) Article 1; <https://www.kantei.go.jp/jp/singi/it2/hourei/honbun.html>. (in Japanese).

includes regulating companies' treatment of consumer information. Thus, as a substantive function, competition law (Anti-monopoly law in Japan) may serve the function of personal information protection, increasing predictability and promoting proper information use. As a practical effect, it is important to note that the functions of information law and competition law overlap in some areas. As examples of these points of contact, Section 2 provides a typology of the anti-competitive behavior in question. Through this, we try to guide thinking about the competition using data outside the disciplinary field of Japanese information law in information usage.

Information and competition laws have received much attention in the nature of the platform business context, and the interaction and role of the two legal fields have been discussed spiritedly. For example, the US House of Representatives' Judiciary Committee's Antitrust Subcommittee issued a press release on October 6, 2020, "Judiciary Antitrust Subcommittee Investigation Reveals Digital Economy Highly Concentrated, Impacted by Monopoly Power: Clear and Compelling Need to Strengthen Antitrust Enforcement and Consider a Range of Forceful Options, Including Structural Separations and Prohibitions on Anti-competitive Conduct" (US House of Representatives 2020)⁴. The US Department of Justice also issued a press release on October 20, 2020, titled: "Justice Department Sues Monopolist Google For Violating Antitrust Laws: Department Files Complaint Against Google to Restore Competition in Search and Search Advertising Markets." (US Department of Justice 2020)⁵.

A platform mediates multiple groups of users, such as providers and users of products, services, and information, and is called a two-sided market (or a multi-sided market). The platform is also a business model seen in traditional industries, such as newly opened businesses. The rapid expansion of platforms in recent years has given rise to various concerns, such as those related to online shopping malls. Since many social networking services (SNSs) have a two-sided market character, interest is growing on how platforms are regulated worldwide.

When examining the interaction between information law and competition law, it is necessary to understand the actual business situation based on economic analysis, besides legal theoretical analysis. Currently, the most problematic issue in information distribution is the market dominance of online platforms, and any consideration of competition law enforcement must first be based on a proper economic understanding of the competitive situation.

⁴ See the website: <https://judiciary.house.gov/news/documentsingle.aspx?DocumentID=3429>.

⁵ See the website: <https://www.justice.gov/opa/pr/justice-department-sues-monopolist-google-violating-antitrust-laws>.

A two-sided market is characterized by an indirect network effect. When a platform expands its user base in one market, it also expands its user base in the other. This results in the indirect network effect, where a platform provides services at a discounted price in one market and expands its user base in the other market. A typical example is where an Internet search service platform provides free search summaries to consumers and sells advertising space on the search service's website to advertisers at a fee.

Concerning these two-sided markets, there are various theoretical investigations and various empirical analyses in economics, such as index creation. Conventional market dominance has been used as a price-cost margin, a measure of market dominance (Lerner's index) of how high a firm can set its prices relative to its production costs.

In other words, a firm's profit is $P(Q)Q - C(Q)$, where $P(Q)$ is the price, Q is the quantity, $P(Q)$ is the demand function in the market, and $C(Q)$ is the total cost function. Q maximizes the profit-taking First Order Condition (FOC) as follows:

$$P(Q) + P'(Q)Q - C'(Q) = 0 \quad (1)$$

If we transform this equation and let ϵ be the price elasticity of demand, we obtain

$$\frac{P(Q) - C'(Q)}{P(Q)} = \frac{1}{\epsilon} \quad (2)$$

which means that the price-cost margin (markup ratio) is inversely proportional to the price elasticity of the demand for the good.

The extended Lerner indicator in Weyl (2010), which is an extension of the indicator for multi-side platforms, is instructed:

$$\frac{P(Q)^I - (C'(Q)^I + \alpha N^I - \tilde{\beta}^I N^I)}{P(Q)} = \frac{1}{\epsilon^I} \quad (3)$$

where $P(Q)^I$ is the price in market I , $C'(Q)^I$ is the cost in market I , N^I is the number of market participants in market J , $\tilde{\beta}^I$ is the average response of marginal customers in market J (which represents Spence's distortion), and ϵ^I is the price elasticity in market I .

In the debate about multi-sided platforms, it has long been argued that below-cost pricing is not indicative of predatory behavior that abuses market dominance (Evans 2003; Wright 2004). This is because it is an internal subsidy to users on one side to reflect the interests of users on the other side, and does not result in overall below costs pricing. Similarly, pricing well above cost needs not be considered an indication of significant market power. This is because if users on one side interact with users on the other side, those on the other side may be charged a higher price.

Therefore, measuring market dominance in multi-sided platforms, including two-sided markets, is an old and unsolved problem in the economic analysis of competition law.

Weyl's framework (2010) provides a simple answer to this—a general Lerner index for multiple sides, which encompasses and integrates the previous Lerner indexes proposed for special models such as those of Armstrong (2006) and Rochet and Tirole (2006). The approach constructs them separately for each side of the market, requiring a measurement of the value of marginal user average interactions as well as costs. While this measurement may be difficult, it should not be as difficult as measuring costs. These measures, and the Lerner index, can be used as a test for market dominance. However, since prices are often close to or below zero, an index that can be normalized by something other than price is a more attractive measure.

Regarding empirical analysis, Rysman (2009) observed that “The literature on two-sided markets is developing rapidly.” Particularly, the estimation of market power in the two-sided market for newspapers (Argentesi and Filistrucchi 2007), the analysis of vertical restrictions considering entry into the magazine market (Ferrari and Verboven 2012), estimating the effects of newspaper market mergers that also consider product characteristics (Fan 2013), analyzing differentiation in a two-sided market based on the ideological nature of newspapers (Gentzkow et al. 2014), and examining the effects of local television stations on the pricing behavior of intermediaries in the two-sided market of local television stations (Boik 2016). The authors have used a variety of perspectives for the analysis. From the perspective of matching models, some observed that knowing the observable characteristics of partners may not be enough to estimate the parameters sought (Chiappori and Salante 2016).

The growing use of the economic analysis methods and the empirical analysis of the market dominance of these online platforms reinforces the need to address the interaction between information law and competition law, and particularly, the need to organize the types of violations when enforcing competition law. It is believed that the framework of an online platform, with information law providing appropriate institutional support for the production and distribution of information, and competition law preventing the formation, maintenance, and strengthening of market dominance, is a sufficient condition for securing the right incentives for growth and fulfilling expectations. Besides understanding the applicability of economic analysis in this context, the following typology of anti-competitive conduct has important implications. This study contributes in bridging a gap in previous studies.

Based on these current realities and earlier research, this study proceeds with the analysis by positing the following characteristics of online platforms. Some

observed that many online platforms are characterized by the acquisition of a large amount of data, such as personal information and purchase history from users, and the subsequent use of the data with algorithms to provide services. Online platforms have the following problems: (1) little is known externally about the design and management of the service, for example, how the collected data are utilized and what the problems are, and (2) there is no limit to the number of services that can be supplied on the Internet; therefore, it is quite easy to provide a large amount of data in a short period, and (3) It is easy to maintain a monopoly once it has been established because it is likely to be difficult for online platform users to switch from one platform to another once the data obtained from users have been accumulated by such platform operators.

The Anti-monopoly Law, which aims to promote free and fair competition, has been attracting attention as a tool for ensuring the fairness of transactions. For the acquisition and use of data by platforms, it is important to ensure the proper protection of personal information from the viewpoint of information law; therefore, a comprehensive study beyond the framework of the legal fields is required. This study bridges the gap between these issues that remain unaddressed thus far. We not only display the subjects that may be of interest but also organize them into a typology of conduct that may be problematic under competition law. This makes it easier to grasp the legal issues of the conduct in question within the framework of competition law. The aim of this study is to summarize how the social factors of business operators' conduct, especially conduct that requires special attention, should be evaluated in the competition law context.

Aiming to organize the issues based on such recognition of the current situation, this paper has been structured as follows: Section 2 of this paper illustrates the actions that occur on online platforms, indicates the associated problems, and suggests responses to them. We analyze and examine the competition policy issues of online platform behavior concerning four aspects: data collection, data enclosure, data acquisition, and algorithmic transparency. Section 3 takes a more holistic and overarching view and notes that online platforms need to return to the essential issues of promoting the competition policy and fairness issues in the application of information law to expand the discussion. Section 4 concludes the study.

2 The Use of Data by Platforms

2.1 Data “Collection”

There are concerns about the acquisition and use of personal information by platforms such as social networking services (SNSs) and Internet search services,

whose business model is to provide services to consumers free of charge in exchange for the acquisition or use of their personal information. The JFTC issued the “Guidelines on Abuse of Superior Bargaining Position in Transactions between Online Platform Operators and Consumers Who Provide Personal Information” under the Anti-monopoly Law in December 17, 2019—referred to as “Superior Position on Consumers Guidelines.” The acquisition and use of personal information by online platforms are subject to regulation by Article 2(9)(v) (prohibition of abuse of dominant position) of the law. Noteworthy, the acquisition and use of personal information are regulated by the Anti-monopoly Law and the Personal Information Protection Law, whereas the acquisition and use of information that is not personal information are regulated by the Anti-monopoly Law, as this law covers collection and handling of non-personal data and personal data, and there is no limitation. For example, the acquisition and use of so-called cookies are subject to both laws if it falls under the category of personal information; otherwise, it only falls under the Anti-monopoly Law.

In making this conduct the subject of a single consideration, it is necessary to clarify the term “abusive conduct.” Although the term may seem to imply the collection of information through the use of coercive force, in reality, it covers the acquisition and use of information other than for improper acquisition, and there are aspects of this that require an appropriate response. The key point is how to explain the mechanism of adverse effects on competition that goes beyond the mere fact that the purpose of information gathering is related to dominance, because it appears unethical. Article 2, Paragraph 9, Item 5 of the Anti-monopoly Act defines abuse of a superior bargaining position as an act of “taking advantage of the superiority of one’s bargaining position over that of the other party, considering normal commercial practice, and unfairly” causing disadvantage to “the other party with whom one continuously does business” or “the other party to the transaction.”⁶ This counterparty (the other party to the transaction) includes consumers.

For one party to have a dominant position in a transaction over another party, it is not necessary to have a dominant market position or a similar absolute dominant position, but it is sufficient to have a relatively dominant position compared to the other party in the transaction. A dominant position concerning a transaction is defined as a case where a party has no choice but to accept a significantly disadvantageous request because the difficulty in continuing the transaction would be a major obstacle to business management. The degree of dependence on the transaction, the position in the market, the possibility of a

⁶ Japan’s abuse of superior bargaining position regulations are discussed in Takizawa and Arai (2014) and Wakui and Cheng (2015).

change in the business partnership, and other specific factors that indicate the necessity of the transaction are contemplated while making this judgment.

Additionally, personal information includes all information related to the individual consumer, such as the consumer's attributes and behavior, and is used in the business activities of the online platform operator and has economic value. When a consumer uses a service provided by an online platform operator and is deemed to provide his/her personal information as compensation, the consumer will naturally fall under the category of a "counterparty (counterparty to a transaction)" of the online platform firm. One challenge for the future is to examine the transfers and conflicts between the legal principles of regulation of personal data protection and the legal principles of competition law.

From an economic perspective, it is noteworthy that data, especially personal data, can be used as a factor of production, and that those with market dominance may emerge and act to exclude others from the competition or raise the costs to others. The data market is also being considered, and it will be necessary for competition law and information law to regulate it in a way that does not destroy the market through regulation, and that considers dynamic competition, such as by improving efficiency and promoting innovation through data use.

However, since the Anti-monopoly Law seeks to promote fair and free competition, it is regulated from a different perspective than that applicable to the Personal Data Protection Law. Further, the scope of regulating of abuse of a superior position is limited by the superior position requirement—not found in the Personal Data Protection Law. The Guidelines for Consumer Superiority suggest that a superior position is recognized, for example, when an online platform can influence the quality or price of the online platform operator to consumers.

2.2 Data "Enclosure"

The data that a platform obtains from users and holds may be essential for other operators to develop and use to provide services. Data enclosure is the act of preventing online platforms from transferring data to other operators' data that is essential for them to develop and provide services. In Japan, where there are no data portability rights to guarantee that consumers' personal data can be used by other companies, the enforcement policy of competition law ensures that market participants have the necessary elements to compete.

For example, a hotel or a restaurant may post information on multiple reservation sites (platforms) about available rooms and seats, and they must manage the reservation information to avoid double booking. As the management of reservations (and cancelation) is quite burdensome for hotel or restaurant reservation

management, agency services are widely used. To provide these services, reservation management service providers need to have access to reservation and cancelation information on various reservation sites in real time.

However, reservation information is collected and held by reservation site operators through the process of accepting reservations from users, and the operators of these sites invest large amounts of money to ensure security against information leakage. From the perspective of competition law in this context, there is a debate regarding whether there are cases in which reservation site operators should be obliged to provide data to reservation management service providers; in which cases, if any, should refusal to provide data be regulated; and what kind of data release is desirable.

The issue here is who owns the reservation information data in the first place. In other words, concerning reservation sites, it appears that reservation management agencies are legitimately entrusted by hotels and restaurants to manage reservation information that is owned by hotels or restaurants, but the use of reservation and cancelation information by reservation management service providers may be deemed as undue “free-ride” on the businesses of reservation site operators. Additionally, consumers may not want other companies to use their reservation information, because it is their information, while some consumers might agree with the use of it.

From an information law perspective, the European GDPR guarantees individuals the right to transfer personal data to other operators (the so-called data portability right). The establishment of data portability rights facilitates the distribution of data and enables data transactions. From the competition law’s viewpoint, since it examines the fairness of the transactional acts as the object of consideration, the origination of transactions over data leads to the application of competition law to ensure the fairness of the transaction. Thus, establishing rules for the openness of data in the field of information law will lead to the development of a foundation and preconditions for the easier application of competition law.

Once a reservation management service is adopted by a hotel or restaurant, it should act as an agent for the customer. Possibly, defining their rights and responsibilities in handling customer data is not a difficult task. We can state that the rights and responsibilities of data management in reservation management services do not exist as a legally settled discussion in Japan, that this can be a point of contention in information law, and that the rights and responsibilities of data management, but not transactions, can be a point of contention in competition law. We also state that ensuring fairness in transactions is one perspective, that exclusion and control of competitors and restriction of competition are the main perspectives, and that abuse of a dominant position is also an important perspective, for which guidelines have just been issued.

In principle, it is an issue that concerns the overlap between competition law and contract law. In Japanese law, this is the precise area where the abuse of a dominant position surfaces. However, the JFTC guidelines overly emphasize the protection of personal information, thus obscuring the impediment to fair competition. It may also be an issue to consider where and how data handling fits into the category of abuse of dominant position (or its underlying philosophy).

Concerning economic analysis, the issue of data pricing for value arises; however, if the data are non-excludable and non-competitive by nature, then we will consider treating them as a public good. If it is only competitive, it will need incentive controls such as taxation and permits as a shared resource, while if only an exclusionary good, appropriate price controls for data may be necessary. An analysis of the supply of public goods is also necessary. It will be necessary to consider the data generation processes, for example, by providing incentives for innovation, such as first-mover advantage for those who create new markets and monopoly for a certain period.

2.3 Data “Acquisition”

Online platforms are striving to collect data, and one way to do so is to acquire the companies that own the data to immediately increase the size of their data holdings.

However, there is a concern that allowing acquisition of companies for data may lead to the acquisition or abuse of market dominance (monopoly) through artificial deviation by organizations from the normal competitive process, which is difficult to find concerning the innovation of services. Additionally, when a company unilaterally changes, to the consumers’ disadvantage, the terms of use of an online platform acquired through corporate acquisition when integrating the services provided by the two companies violates the Personal Information Protection Act; such practice is a problem from the competition law’s perspective. This could be regarded as having caused anti-competitive results in terms of lower quality of service and would cast doubt on the legitimacy of the acquisition. From the competition law perspective, unilateral effects are regulated when a merging party forms, maintains, or strengthens its market dominance by conducting a merger, thereby harming consumers by raising prices through a single act. Applying this to the context, if a digital platform’s acquisition of another company causes personal information misuse in a way that consumers do not approve of and this results in negative effects, such as deterioration of consumer services, then the acquisition needs to be regulated by competition law. In this regard, we believe that competition law can supplement enforcement of consumer protection laws.

This regulation may not be necessary if consumer protection laws are functioning fully. However, if data are viewed as an element of competition and competition is restricted, then competition law may also be needed and thus come into play.

The JFTC requires the parties to submit a notification to the JFTC to examine large-scale corporate acquisitions that exceed the prescribed criteria before the completion of the acquisition (prior notification system), and the recently revised Guidelines for Business Combinations (December 17, 2019) stipulate that the impact of business combinations on competition should be judged considering indirect network effects⁷. However, this idea only presents the general theory in the abstract, leaving specific considerations to a case-by-case analysis.

In practice, when a company submits its acquisition plan to the JFTC and other competition authorities, the services for which the data obtained through the acquisition are intended may still be in the process of development and thus may not be launched in many cases. Therefore, it may be difficult for the JFTC to assess, in detail, what impact the acquisition will have on future competition. In Japan, the online platform operator Z Holdings (Yahoo!) and LINE reached a final agreement on management integration on December 23, 2019. The integration is scheduled to be completed after receiving approval from the JFTC and other competition authorities in each country, where the data on users' purchase histories will improve the competitiveness of the two companies. The results of numerous service reviews, such as quick response (QR) code payment, expected to be used in QR code payment, have attracted attention from competition law specialists⁸.

2.4 Transparency of the Algorithm

Examinations of algorithms and cartels, particularly to their practical application in recent years, have been spearheaded by Ezrachi and Stucke (2016) and were discussed in June 2017 at the Organisation for Economic Co-operation and Development (OECD) Competition Committee (OECD 2017a, 2017b). There have been introductory articles in journals (Deng 2018a, 2018b), mentions in the popular press (The Economist 2017; Stucke and Ezrachi 2016), and several related articles in law journals (Beneke and Mackenrodt 2020; Coyle 2019; de Silva 2019; Van Cleyenbreugel 2020; Zingales 2019).

⁷ See the JFTC's website: https://www.jftc.go.jp/en/legislation_gls/imonopoly_guidelines_files/191217GL.pdf.

⁸ See the JFTC's website: <https://www.jftc.go.jp/houdou/pressrelease/2020/aug/200804.html>. (in Japanese).

Economic theory suggests that improved demand forecasting and other information gathering and processing capabilities may reduce collusion/co-action, as potential colluders increase the likelihood of deviation. Simulation studies have pointed out that large-scale trial experiments with agents using Q-learning have indicated that there is a greater potential for collusion/co-action. In economic experiments, some indicate that the probability of collusion/collision is small in competitive experiments in markets with over two or three agents. Along with these studies, empirical analyses of firms' pricing behavior in the actual market competition have examined the following: In the retail gasoline market, pricing behavior increases but does not decrease as the cost of gasoline fluctuates; moreover, market dominance and other factors are related to these behaviors. In the aviation market, multifaceted competition is less likely to result in price competition, and innovations in information technology have entrenched a conspiratorial situation. In the wholesale electricity market, the effectiveness of price caps and dynamic pricing does not lead to collusion. Regarding dynamic pricing in supermarkets, it is necessary to set prices based on various factors such as inventory and temporal variance, considering consumers' strategic behavior and horizontal/vertical product differentiation. Currently, although simulation studies have pointed out the possibility of algorithmic/artificial intelligence cartels and joint actions, based on the suggestions of theoretical and experimental studies and empirical studies on actual pricing behavior, it is necessary to consider the following factors: time constraints, stability of the competitive environment, and asymmetry of operators in simulation. It may be difficult to imagine that this will be a major problem for competition in certain trading areas (considering the limitations of the research and the meta-perspective from the results of other research methods that go beyond that) in the immediate future. However, the accumulation of evidence and a growing pool of researchers is likely to be an important challenge.

Additionally, symptomatic treatment based on ideas in economics needs to be discussed, and since the following situations are considered being those in which cartels and joint actions are causing harm, it is also necessary to discuss policy measures that would advance this situation.

A stream of profits from the continuation of the cartel exceeds profits from deviations plus a stream of profits from subsequent price competition.

Thus, policy measures include measures to reduce cartel profits, increase deviation profits, increase price competition profits, and increase the discount rate. In other words, the decrease in cartel profits (the decrease in their expected value) is due to the increase in fines and surcharges and the increase in detection. The increase in deviated profits is because of urgent investment in the market in question; the increase in price-competitive profits is because of the securing of

appropriate profits; and the increase in the discount rate is due to the closure of the market in question, rapid expansion, and an increase in the interest rate. Demand stimulus measures could be put in place in markets where the harm occurred (if the number of entrants did not decrease price competition profits) or information requests could be made in the public domain to shock cartel profit expectations.

Additionally, the study on the proper regulation of platforms was started in earnest by the Future Investment Strategy (approved by the Cabinet on June 15, 2019), and revised thereafter by study groups from the Ministry of Economy, Trade and Industry, the Ministry of Internal Affairs and Communications, JFTC, and the Digital Market Competition Headquarters (established by a Cabinet decision on September 27, 2019). Besides the enactment and revision of the above guidelines by the Ministry of Economy, Trade and Industry (METI), the Act on Enhancing Transparency and Fairness of Specified Digital Platforms was promulgated (on June 3, 2020).

The act was aimed at improving the transparency and fairness of transactions in light of concerns that online platforms may not sufficiently indicate the reasons for changing their terms and conditions or suspending transactions, and criticisms that they do not adequately respond to users' requests.

The law is intended to promote users' understanding by requiring Digital platforms (Digital PFs) to disclose the terms and conditions of their contracts and notify the authorities before any changes (Article 5). Therefore, online platform operators that should increase the transparency and fairness of transactions must be designated as "Specified Online platform Providers" (hereafter referred to as "Specified Digital PFs") and should be obliged to disclose the outline of terms and conditions of transactions that the PFs are involved. Specified Digital PFs will be designated based on past and future sector inquiries by the JFTC, especially by the Digital Market Planning and Research Office (which has recently been established) and the METI.

As an illustrative example, the order of products is important for users who quickly want to find the most suitable products through efficient search, and also for product providers who want to increase sales by placing products prominently.

Since online platforms actively compete with each other to determine the most appropriate order of products by analyzing users' registration information, order history, and various other data using algorithms, if full disclosure of the algorithms themselves were to be compelled by the Act, it would cause companies' loss of competitiveness. It might deprive the market of the source of funds and, in turn, retard competition prematurely. Therefore, the act does not require specific Digital PFs to disclose the algorithm itself but only requires them to disclose the main criteria used to determine the order of listing (Article 5[2][1][c]).

3 The Role of “Fairness” in the Application of Competition Law

The acquisition, exploitation, and other activities of data by platforms, especially online platforms, are subject to various laws, such as antitrust laws, personal data protection laws, and the Digital PF Transactions Fairness and Transparency Act.

Since antitrust laws apply to a wide variety of transactions in all industries, except where special exemptions are provided, it is possible that, for example, acts that would not be considered illegal under the Personal Information Protection Act may be regulated from the perspective of promoting fair and free competition, which is the purpose of antitrust laws. However, excessive enforcement of antitrust laws may lead to the stifling of innovation and may detract from the purpose of the Personal Information Protection Law.

In Japan, when considering the application of the Anti-monopoly Law to the conduct of online platforms, it should be noted that the anti-competitive effect is not necessarily or strictly required. Without using provisions requiring the anti-competitive effect in the market (e.g., the effect of excluding competitors from the market and transactions subject to exclusionary conditions), Section 11 of the General Designation of Unfair Trade practices can be applied to online platform operators' exclusionary conduct, another provision that prohibits undue obstruction of competitors' transactions (paragraph 14 of the General Designation of Unfair Trade Practices), which can apply to trade practices as long as the trade practices implemented by using unfair means have been somehow applied, in practice, to presumably exclusionary conduct. This tendency is even more pronounced in JFTC's sector inquiry report on online shopping malls (October 31, 2019)⁹.

However, such an enforcement practice might be fraught with the possibility of neglecting the strict analysis of the effects of reducing competition and, thus, with increasing concerns of excessive enforcement relying too much on the concept of unfairness. The fairness of competition is an important principle in the purpose of the Anti-monopoly Law (Article 1 of the Anti-monopoly Law); however, if fairness is the guiding principle of the regulation of online platform operators, it will be critically important for businesses, courts, and JFTC to reach a common understanding of the definition of fairness through thorough discussions and analysis of specific cases. In this study, compliance with the Personal Information Protection Law and other laws would be a principal factor to be considered, and

⁹ See the JFTC's website: <https://www.jftc.go.jp/en/pressreleases/yearly-2019/October/191031.html>.

economic analysis should also be used as a useful supporting tool in decomposing the elements of fairness and examining the necessary and sufficient conditions.

A new contribution of this study is that it raises the need to use economic analysis to apply the fairness factor to the behavior of data-related online platforms. Although this merely raises the issue here, it also presents the role of storing legal theories as suggesting new possibilities for economic analysis. Economic analysis has usually been used to examine the efficiency and impact of the system. However, in developing the economy and society through proper business activities—the common purpose of information law and competition law—it is pointed out that the perception of trust from consumers, as the fairness of business operators, leads to the development of the economy and society. This applies to legal theory by, for example, looking at the relationship between the analysis of consumer behavior through questionnaire surveys in behavioral economics and the fairness of business activities. It can also be seen, for example, in one recent attempt in empirical economics to measure market dominance by incorporating a variable of consumer confidence in competition, i.e., the Spence distortion in the extended Lerner index (the average response of marginal customers).

4 Conclusion

This study attempts to organize the regulatory perspective on the interaction between information law and competition law, especially for platform businesses. Information law and competition law have attracted attention in examining the nature of platform businesses context, and the interaction and division of roles between the two fields of law have become a topical subject of discussion. A platform is an entity that mediates multiple groups of users, such as providers and users of products, services, and information, and has an indirect network effect as a two-sided market. Regarding its nature as a two-sided market, there have been theoretical investigations and various empirical analyses in economics, including the creation of indices. Online platforms are often characterized by the acquisition of a large amount of data from users, such as personal information and purchase history, and the subsequent use of the data to provide services through algorithms and other means. It is important to ensure proper protection of personal information from competition law perspective to promote fair and free competition, and from information law perspective in the acquisition and use of data by platforms. The study also typifies the actions taken by online platforms, indicates associated problems, and suggests responses to them, among which are four aspects of the

competition policy issues of online platform actions that are analyzed and discussed: data collection, data enclosure, data acquisition, and algorithmic transparency. The study takes a holistic and overarching view of the essential issues in the online platform business, such as the promotion of competition policy and the issue of fairness in the application of information law, to expand the discussion. It further notes that, although fairness is important, there is a risk that the analysis of the effects of reducing competition will be neglected and that the interpretation of fairness might increase the concern with over-execution. The study disaggregates the elements of fairness and suggests that it is necessary to establish specific standards.

We first explained the overall and overarching perspective of information law and competition law and the rationale for applying information and competition laws to the four types of behavior on these grounds. We not only indicated the subjects but also organized them into a typology of conduct that could be problematic under competition law. This made it easier to grasp the legal issues of the conduct in question within the competition law framework. The aim and result of this study are to summarize how the social factors of a business operator's conduct should be evaluated in competition law context, especially concerning the conduct that requires attention.

The contribution and implications of this study in law and economics are that it categorizes and organizes the legal issues regarding the interaction between information and competition law, with particular emphasis on online platforms—a major topic of debate today—and summarizes the key points from an economic analysis perspective. It demonstrates the practical nature of law and economics and how they can serve as a pillar to support evidence-based policymaking. However, it is based on the principle of competition law, analysis of the essence of information, and a universal economic principle centered on incentives. The scope of this discussion is large. In this study, in categorizing and organizing the legal issues, we have kept enforcement in mind in each category and clarify the points to be considered in competition law when making business decisions.

As a further task, the accumulation of practical interpretations based on individual cases and impact assessments based on empirical analysis will be required as a first step. Additionally, it will be necessary to incorporate the viewpoints of various fields for a broader discussion.

Acknowledgments: In preparing this paper, the Grant-in-Aid for Scientific Research (C) 20K01334 was used. We thank the participants of the 16th AsLEA for their comments. Among them, a question from Dennis Khong provided meaningful insights.

References

- Argentesi, E., and L. Filistrucchi. 2007. "Estimating Market Power in a Two-Sided Market: The Case of Newspapers." *Journal of Applied Econometrics* 22 (7): 1247–66.
- Armstrong, M. 2006. "Competition in Two-Sided Markets." *RAND Journal of Economics* 37 (3): 668–91.
- Beneke, F., and M.-O. Mackenrodt. 2020. "Remedies for Algorithmic Tacit Collusion." *Journal of Antitrust Enforcement*: 1–25, <https://doi.org/10.1093/jaenfo/jnaa040>.
- Boik, A. 2016. "Intermediaries in Two-Sided Markets: An Empirical Analysis of the US Cable Television Industry." *American Economic Journal: Microeconomics* 8 (1): 256–82.
- Chiappori, P.-A., and B. Salanié. 2016. "The Econometrics of Matching Models." *Journal of Economic Literature* 54 (3): 832–61.
- Coyle, D. 2019. "Practical Competition Policy Implications of Digital Platforms." *Antitrust Law Journal* 82 (3): 835–60.
- de Silva, I. 2019. "Tackling the Challenges Raised by the Digitalization of the Economy: Recent Experiences of the French Competition Authority." *Antitrust Bulletin* 64 (1): 3–10.
- Deng, A. 2018a. "What Do We Know about Algorithmic Tacit Collusion?" *Antitrust* 33 (1): 88–95.
- Deng, A. 2018b. "An Antitrust Lawyer's Guide to Machine Learning." *Antitrust* 32 (2): 82–7.
- Evans, D. 2003. "The Antitrust Economics of Multi-Sided Platform Markets." *Yale Journal of Regulation* 20: 324–81.
- Ezrachi, A., and M. E. Stucke. 2016. *Virtual Competition the Promise and Perils of the Algorithm-Driven Economy*. Cambridge: Harvard University Press.
- Fan, Y. 2013. "Ownership Consolidation and Product Characteristics: A Study of the US Daily Newspaper Market." *American Economic Review* 103 (5): 1598–628.
- Ferrari, S., and F. Verboven. 2012. "Vertical Control of a Distribution Network—An Empirical Analysis of Magazines." *RAND Journal of Economics* 43 (1): 26–50.
- Gentzkow, M., J. M. Shapiro, and M. Sinkinson. 2014. "Competition and Ideological Diversity: Historical Evidence from US Newspapers." *American Economic Review* 104 (10): 3073–114.
- Organisation for Economic Co-operation and Development. 2017a. "Algorithms and Collusion – Background Note by the Secretariat." *DAF/COMP(2017)4*. <https://www.oecd.org/daf/competition/Algorithms-and-collusion-competition-policy-in-the-digital-age.pdf>.
- Organisation for Economic Co-operation and Development. 2017b. "Algorithms and Collusion -Summaries of Contributions." *DAF/COMP/WD(2017)2*. [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD\(2017\)2&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD(2017)2&docLanguage=En).
- Rochet, J.-C., and J. Tirole. 2006. "Two-Sided Markets: A Progress Report." *RAND Journal of Economics* 37 (3): 645–67.
- Rysman, M. 2009. "The Economics of Two-Sided Markets." *The Journal of Economic Perspectives* 23 (3): 125–43.
- Stucke, M. E., and A. Ezrachi. 2016. "How Pricing Bots Could Form Cartels and Make Things More Expensive." *Harvard Business Review*, <https://hbr.org/2016/10/how-pricing-bots-could-form-cartels-and-make-things-more-expensive>.
- Takizawa, S., and K. Arai. 2014. "Abuse of Superior Bargaining Position: the Japanese Experience." *Journal of European Competition Law & Practice* 5 (8): 557–62.
- The Economist. 2017. "Price-bots Can Collude against Consumers." *The Economist*. <https://www.economist.com/finance-and-economics/2017/05/06/price-bots-can-collude-against-consumers>.

- US Department of Justice. 2020. Justice Department Sues Monopolist Google for Violating Antitrust Laws: Department Files Complaint against Google to Restore Competition in Search and Search Advertising Markets. <https://www.justice.gov/opa/pr/justice-department-sues-monopolist-google-violating-antitrust-laws>.
- US House of Representatives. 2020. Judiciary Antitrust Subcommittee Investigation Reveals Digital Economy Highly Concentrated, Impacted by Monopoly Power: Clear and Compelling Need to Strengthen Antitrust Enforcement and Consider a Range of Forceful Options, Including Structural Separations and Prohibitions on Anticompetitive Conduct. <https://judiciary.house.gov/news/documentsingle.aspx?DocumentID=3429>.
- Van Cleynenbreugel, P. 2020. "Article 101 TFEU's Association of Undertakings Notion and its Surprising Potential to Help Distinguish Acceptable from Unacceptable Algorithmic Collusion." *The Antitrust Bulletin* 65 (3): 423–44.
- Wakui, M., and T. K. Cheng. 2015. "Regulating Abuse of Superior Bargaining Position under the Japanese Competition Law: an Anomaly or a Necessity?" *Journal of Antitrust Enforcement* 3 (2): 302–33.
- Weyl, E. G. 2010. "A Price Theory of Multi-Sided Platforms." *American Economic Review* 100 (4): 1642–72.
- Wright, J. 2004. "One-sided Logic in Two-Sided Markets." *Review of Network Economics* 3 (1): 44–64.
- Zingales, N. 2019. "Antitrust Intent in an Age of Algorithmic Nudging." *Journal of Antitrust Enforcement* 7 (3): 386–418.