CPRC Discussion Paper Series

Competition Policy Research Center

Japan Fair Trade Commission

The Deepening Interaction of Economics and Competition Policy: Overview and the Japanese Examples

> Hiroyuki Odagiri Emeritus Professor, Hitotsubashi University Research Advisor, Competition Policy Research Center

> > CPDP-68-E May 2018

1-1-1, Kasumigaseki, Chiyoda-ku, TOKYO 100-8987 JAPAN

Phone:+81-3-3581-1848 Fax:+81-3-3581-1945

URL:http://www.jftc.go.jp/cprc/index.html

E-mail:cprcsec@jftc.go.jp

The Deepening Interaction of Economics and Competition Policy: Overview and the Japanese Examples

Hiroyuki Odagiri

Emeritus Professor, Hitotsubashi University Research Advisor, Competition Policy Research Center

May 2018

Abstract

New economic thinking has been influencing and helping competition policy in Japan and in many other countries. In turn, the development in competition cases has been giving materials on which economists endeavor to enrich the theory. This interaction between economics and competition policy has been particularly deepening in the last few decades. In this paper, I will take six theories and problems as examples: the contestable market theory, the cartel theory, the oligopoly models, the free-rider problem, the hold-up problem, and the theory of two-sided markets. I will explain these theories and discuss how they have been utilized in competition policy, referring to the Japanese examples. In some cases, new economic thinking has been applied in investigations and decisions of Japan Fair Trade Commission (JFTC). Also, for some subjects, JFTC has revised its Guidelines to incorporate new economic thinking.

Acknowledgement and Reservations:

This paper is an adapted version of a chapter with the same title in a book entitled *Frédéric Jenny Liber Amicorum* to be published by Concurrences, August 2018. I wish to thank Concurrences for letting me publish in this manner in the CPRC Discussion Paper Series. The author was a Commissioner of Japan Fair Trade Commission during 2012-2016 and is currently its Special Advisor; however, any opinion expressed here is the author's alone and does not represent that of the Commission or CPRC.

深化する経済学と競争政策の相互作用

一概論と日本における実例―

小田切宏之

競争政策研究センター研究顧問,一橋大学名誉教授 2018 年 5 月

<u>要約</u>

経済学における新しい考え方は、日本においてもその他多くの国において も、競争政策に大きな影響を与え、またその助けとなっている。逆に、競争 政策におけるさまざまな実例の進展は、経済学者が経済学を発展させていく 上での重要な素材を与えている。こうした経済学と競争政策の相互作用は、 ここ数十年において特に深化が著しい。

本稿では、そうした例として6つの理論に焦点を当てる。すなわち、コン テスタブル市場理論、カルテル理論、寡占モデル、フリーライダー問題理論、 ホールドアップ問題理論、そして双方向市場(二面市場)理論である。

以下では、これらの理論を概説したうえで、それらがどのように競争政策 に生かされてきたかを日本での実例に触れながら述べる。いくつかの事例で は、経済学の新しい考え方が公正取引委員会の審査や決定に生かされ、また、 いくつかのテーマについては、公正取引委員会はガイドラインの改定にあた って新しい考え方を導入している。

<u>謝辞等</u>

本稿は、論文集 Frédéric Jenny Liber Amicorum (Concurrences 社より 2018 年夏出版予定)に筆者が寄稿した論文の一部改訂版であり、CPRC ディス カッションペーパーとしての再録を承諾した Concurrences 社に感謝する。 また、本稿における意見は筆者のみが責任を持つものであり、公正取引委 員会あるいは競争政策研究センターの意見ではない。

3

1. Introduction

The competition community (I use this word to include all those involved in competition policy from competition authorities, judges, and lawyers to academics) has become more aware of the importance of economics and more receptive to economists' arguments. Such a change was helped by the evolution of economic theory and analytical methodology.

In this paper, I will discuss how the evolution of economics has influenced competition policy, referring to six economic theories. In addition, competition authorities in many countries now commonly use quantitative analyses based on economics, most often in relation to merger reviews. The progress in statistical and econometric methodology, together with an ever-increasing computational power and data availability, has been making such analyses more and more useful. However, due to space limits, I will focus here on theoretical contributions, referring to six economic theories and ideas that were newly developed and/or came to attract more attention recently; namely,

- (1) the contestable market theory,
- (2) the cartel theory,
- (3) the oligopoly models,
- (4) the free-rider problem,
- (5) the hold-up problem, and
- (6) the theory of two-sided markets.

I will also discuss how they have influenced competition policy, taking the examples of Japan when applicable.

2. The Contestable Market Theory

The contestable market theory was pioneered by Baumol, Panzar and Willig in 1982, showing that, were entry barrier absent, even a monopolist cannot charge a price higher than the average cost, similarly to a firm in a competitive market.¹ It changed policies in important manners.

¹ William J. Baumol, John C. Panzar, and Robert D. Willig, *Contestable Markets and the Theory of Industry Structure*. Harcourt Brace Jovanovich, 1982.

First, it changed the policy on public utilities such as airline, telecommunication, and electric power. While the old wisdom used to be that monopoly is unavoidable and therefore the price has to be regulated by the government, deregulation is now considered desirable provided the system is redesigned so that competitors (including the potential entrants) have an equal access to the essential facilities.

Second, it changed merger regulations to the effect that competition authorities now place more weight on the examination of entry barriers. If the barriers are sufficiently low, a merger leading to a market share hitherto considered to have an anti-competitive effect may now be judged not to have such an effect.

Third, in a market with rapidly changing technologies and social needs, a dominant firm today is not guaranteed to be dominant tomorrow as new entrants with new technologies or new business models may emerge at any time. Therefore, even such a firm has to make every effort to maintain its lead through investment and innovation.

3. The Theory of Cartel and Tacit Collusion (or Coordinated Conduct)

In merger regulation, another important change is the increased concern for coordinated conduct that the merger may promote. This change cannot be separated from the development of economic theory on cartels.² Thanks to the more sophisticated use of repeated game theory, it is now common knowledge that collusion may take place without explicit agreements (i.e., cartels) among the competitors. Such tacit collusion (or, equivalently, coordinated conduct) is more likely as the number of competitors is reduced. Thus, competition authority everywhere is now watchful whether the proposed merger may facilitate coordinated conduct.

In Japan, JFTC published the "Guidelines to Application of the Antimonopoly Act Concerning Review of Business Combination" (hereafter Business Combination

² On the economics of cartel in general, see Margaret C. Levenstein and Valerie Y. Suslow, "What Determines Cartel Success?" *Journal of Economic Literature*, 44, 2006, 43-95. For the application to mergers, see Kai-Uwe Kühn, "The Coordinated Effects of Mergers," in Paolo Buccirossi [ed.] *Handbook of Antitrust Economics*, The MIT Press, 2008, 105-144.

GL).³ It was first published in the 1970s (under a slightly different title), in which there was no mentioning of the coordinated conduct. However, in the 1998 revision, the following sentence was added:

Consequently, if the market structure is altered in a non-competitive way by the business combination, and if conditions are likely to emerge that would allow the company a certain latitude to manipulate price, quality, volume, and other conditions by acting unilaterally or coordinately with other companies, then the effect of the business combination may be substantially to restrain competition in a particular field of trade, and it is prohibited. (JFTC, Business Combination GL, 1998, Part III, 1(2))

Furthermore, in the 2004 revision, it added a new sub-section titled "Determining Factors in Deeming Substantial Restraint of Competition through Coordinated Conduct" that examined these factors from several aspects, including the number of competitors and the conditions of trade that would determine the ease of forecasting the behavior of competitors.

For example, in the 2016 review of the two combinations taking place simultaneously in the petroleum industry, Idemitsu and Showa Shell, and JX and TonenGeneral, JFTC concluded that, in the gasoline sales market for instance, competition would not be restrained through unilateral conduct but likely restrained through coordinated conduct because of the significant decrease in the number of firms, homogeneity of the products, the similarity of cost structure, and the ease of learning competitors' prices. JFTC approved the combinations only with remedies proposed by the respective firms that are expected to have a significant effect of lowering the barriers for importers.⁴

Thus, even though the theory of tacit collusion may not yet have developed enough to

³ All the JFTC guidelines and other documents cited in this paper are available at its English website (http://www.jftc.go.jp/en/index.html). JFTC warns that the English translation is tentative and the Japanese original version should be followed.

⁴ See "Case 3: Acquisition of Shares of Showa Shell Sekiyu K.K. by Idemitsu Kosan Co., Ltd., and the Acquisition of Shares of TonenGeneral Sekiyu K.K. by JX Holdings, Inc." in JFTC's "Major Business Combination Cases in Fiscal Year 2016."

give clear-cut criteria for forecasting the exact probability of tacit collusion to take place after the merger, it has alerted the competition authorities to the possible anti-competitive consequences and helped them by teaching them the factors to be reviewed.

4. The Oligopoly Models

In the study of oligopoly, most economists now accept the concept of Nash equilibrium. Still there are a variety of models depending, most importantly, whether the products are homogeneous or differentiated and whether the decision variable is price (the Bertrand model) or quantity (the Cournot model).

The Cournot model for a homogeneous market was the first to become popular as it yields nice propositions. Most conveniently, in the Cournot equilibrium, Herfindahl-Hirschman Index (HHI) can be shown to be positively associated with price-cost margins and also to a measure of the harm to social welfare.⁵ Thus, ceteris paribus, a merger that increases HHI significantly is expected to result in a higher price and lower welfare. It is for this reason, as I understand it, that safe harbor criteria for merger reviews in most countries including Japan are set based on the level of HHI and its increment.

Once you assume product differentiation, however, justification for the procedure of, first, defining a market and, second, applying a safe harbor criterion becomes unclear. In a merger of two firms selling differentiated products A and B respectively, an increase in the price of A need not be accompanied by an increase in the price of B. Therefore, some of the lost demand for A caused by the price increase may be recovered by the combined firm through the shift of demand to B. This is the concept of diversion ratio. The higher the diversion ratio and the larger the profit margin of B, the more the combined firm can recover the profit loss of A by the profit gain of B and consequently there is a stronger upward pricing pressure (UPP) for product A of the combined firm.⁶

⁵ Robert E. Dansby and Robert D. Willig, "Industry Performance Gradient Index," *American Economic Review*, 69, 1979, 249-260.

⁶ Joseph Farrell and Carl Shapiro, "Antitrust Evaluation of Horizontal Mergers: An

The first competition agencies that indicated a possible use of UPP in merger review are the US Department of Justice (DOJ) and the Federal Trade Commission (FTC). In their 2010 "Horizontal Merger Guidelines", they stated:

Diagnosing unilateral price effects based on the value of diverted sales need not rely on market definition or the calculation of market shares and concentration. The Agencies rely much more on the value of diverted sales than on the level of the HHI for diagnosing unilateral price effects in markets with differentiated products. If the value of diverted sales is proportionately small, significant unilateral price effects are unlikely. (US DOJ and FTC, Horizontal Merger Guidelines, 6.1)

JFTC's Business Combination GL has not yet incorporated the concepts of diversion ratio and UPP. Still, there is a case in which JFTC estimated a measure of UPP called GUPPI (gross upward pricing pressure index). It is a case of integration of two convenience store chains and JFTC used the estimated GUPPI to select stores for which further scrutiny is required.⁷

In addition, with the progress of estimation and simulation techniques, it has become more common that competition agencies (and sometimes the firms seeking merger approval) utilize merger simulations, by estimating the demand functions and cost functions using the available pre-merger data and then applying the estimates to predict the post-merger prices or quantities. Many of these analyses assume differentiated markets to estimate cross-elasticities across products of separate firms including the firms to be combined.⁸

Economic Alternative to Market Definition," *The B.E. Journal of Theoretical Economics*, 10(1), 2010, Article 9. Available at:

http://www.bepress.com/bejte/col10/iss1/art9

⁷ See "Case 9: M&A of Operations between FamilyMart Co., Ltd. and UNY Group Holdings Co., Ltd." in JFTC's "Major Business Combination Cases in Fiscal Year 2015."

⁸ For a typical such analysis, see Aviv Nevo, "Mergers with Differentiated Products: The Case of the Ready-to-Eat Cereal Industry," *RAND Journal of Economics*, 31, 2000, 395-421.

The use of merger simulation has occurred less frequently in Japan than in the US; still, in the recent petroleum merger case mentioned in Section 3 above, a simulation model assuming product differentiation was used to predict the effect of common ownership, as the merger (to be more precise, two combinations taking place simultaneously) was expected to create a complex and overlapping ownership structure in a number of subsidiaries in the LPG (liquefied petroleum gas) industry.⁹

5. The Free-Rider Problem

Another development in economic theory took place in relation to vertical restraints. Vertical restraints, most typically the restriction placed by an upstream firm (say, a manufacturer) to a downstream firm (say, a retail store), has been traditionally considered to suppress competition in the downstream, thereby causing anti-competitive harm to consumers. Today, however, with the progress of relevant economic models, it is accepted that vertical restraints may have pro-competitive effects by, most importantly, eliminating or discouraging free riding.

The free-rider problem was first discussed in relation to public goods. Public goods, say, defense and police and, to a lesser extent, roads and parks, possess the peculiar characteristics of non-excludability. That is, one cannot exclude non-payers from using them. In consequence, everyone chooses to free-ride and no supply occurs in the market, which is why the supply of public goods has to be financed through taxation.

The free-rider problem also explains the need for an intellectual property rights (IPR) system to sustain creative activities and innovation because, without IPR protection, knowledge, like public goods, has the characteristics of non-excludability.

Services offered by retailers may also have the public-goods characteristics because a consumer may free-ride on the services provided by a retailer and then purchase the merchandize at another no-service low-price retailer. Vertical restraints such as resale price maintenance (RPM) may prevent such free riding and benefit consumers by ensuring competition on services. That is, vertical restraints can be pro-competitive

⁹ *Supra*, note 4.

even if it may have anti-competitive effects in other aspects.

In this connection, probably the best known is the *Leegin* case, in which the US Supreme Court adopted the rule-of-reason approach in place of per-se illegality to evaluate the consequence of RPM.¹⁰

In Japan, JFTC first published the "Guidelines Concerning Distribution Systems and Business Practices under the Antimonopoly Act" (hereafter Distribution GL) in 1991. It said that "restrictions by a manufacture of sales price of distributors (resale price) are in principle illegal as unfair trade practices" (Part II, Chapter 1, 2, (1)) and there was no consideration of the free-rider problem. After several revisions, the current version (published in June 2017) now explains the free-rider problem in detail:

Distributors may sell any enterprises' product without their own promotional activities if other distributors have already implemented promotional activities for the product as pre-sales efforts, which thus have actually boosted demand for the product. In such a case, distributors may refrain from actively implementing voluntary promotional activities on their own expenses, resulting in a situation where consumers who would otherwise have purchased the product do not purchase it. This type of situation is called the "free-rider" problem. (JFTC, Distribution GL, 2017, Part 1, Sub-Section 3(3)a)

And then it states that

For example, when an enterprise engages in RPM with respect to a product, such RPM is deemed to have "justifiable grounds" if the RPM actually has pro-competitive effects through avoiding the "free-rider" problem mentioned in Sub-Section 3(3)a of Part 1 above, promotes inter-brand competition, and increases demand of the product, thus benefiting consumers, and pro-competitive effects would not have resulted from less restrictive alternatives other than the RPM. (JFTC, Distribution GL, Part 1, Chapter 1, Sub-Section 2(2))

¹⁰ Leegin Creative Leather Products, Inc. v. PSKS, Inc., 551 U.S. 877 (2007).

This important change clearly reflects the adoption by the competition community of the new thinking in economics. I also want to emphasize that this new thinking is indispensable in examining the performance of not only the traditional commercial sector (e.g., bricks-and-mortar stores) but also e-commerce as we will discuss in Section 7 below.

6. The Hold-Up Problem

The hold-up problem arises when one has to make a relation-specific investment, that is, the sort of investment that yields its full value only when a relationship is maintained with particular partners, such as particular suppliers of goods and services, particular suppliers of intangible assets (e.g., patented technology), and particular customers. The cost of investment is sunk, that is, it cannot be fully recovered even when the invested asset becomes no longer needed.¹¹

Because of these characteristics, a critical asymmetry arises between *ex-ante* and *ex-post*, namely, pre-investment and post-investment. *Ex-ante*, you can freely choose who to trade with, which product to make, and which production method to use. However, once you have made the investment, you are locked in with the specific partner, specific product, and specific production method because, to adopt another partner etc., you have to discard that invested asset and make another investment.

Because of this changing bargaining power between you and your partner *ex post*, your partner may hold you up by making a demand that you would have certainly refused if *ex ante* but now cannot do so. If you *ex ante* expect this to happen *ex post*, you would refrain from making the relation-specific investment. The result is an insufficient level of investment from the social viewpoint. This phenomenon is called the hold-up problem.

Take the case of a supplier of a certain component. The component is sold to a certain assembler and is manufactured to the assembler's specification. Therefore, it cannot

¹¹ That the presence of sunk cost creates the most important source of entry barriers was emphasized by Baumol, Panzar and Willig (*supra*, note 1).

be sold to other assemblers and the supplier's production equipment, say, mould, can be useful only when this assembler keeps buying from this supplier. Then, by the reasoning above, the assembler would be in a "superior bargaining position" *ex post* and may abuse this position by demanding, say, a low price that is not sufficient to cover the investment cost. If the supplier expects this to happen, it will not invest, resulting in the collapse of a supplier-assembler relationship.

Japan's Antimonopoly Act (AMA) prohibits the abuse of superior bargaining position, which is defined as "Engaging in any act specified in one of the following by making use of one's superior bargaining position over the counterparty unjustly, in light of normal business practices" (AMA, Article 2, (9), (v)), where "the following" refers, for instance, to "delaying payment to said counterparty or reducing the amount of payment, or otherwise establishing or changing trade terms or executing transactions in a way disadvantageous to said counterparty."

JFTC published the "Guidelines Concerning the Abuse of Superior Bargaining Position under the Antimonopoly Act" (hereafter Abuse of Superior Bargaining Position GL) in 2010. It says

In order for one party to a transaction (Party A) to have superior bargaining position over the other party (Party B), it is construed that Party A does not need to have a market-dominant position nor an absolutely dominant bargaining position equivalent thereto, but only needs to have a relatively superior bargaining position as compared to the other transacting party. When Party A has superior bargaining position over Party B, who is a transaction counterpart, it means such a case where if Party A makes a request, etc., that is substantially disadvantageous for Party B, Party B would be unable to avoid accepting such a request, etc., on the grounds that Party B has difficulty in continuing the transaction with Party A and thereby Party B's business management would be substantially impeded. (Abuse of Superior Bargaining Position GL, II, 1)

That is, "superior bargaining position" need be clearly separated from market dominance or monopolization and for this reason economists in Japan have been debating whether the regulation on its abuse is really needed from the competition viewpoint, aside from the fairness viewpoint (as the regulation was commonly applied to big firms in their transactions with much smaller subcontractors). Once one thinks of it as a regulation to deal with the hold-up problem, however, a new understanding can be made. That is, the party in a position to be able to hold up is considered to be in a superior bargaining position and the regulation purports to eliminate any hold-up behavior by this party. In consequence, the regulation will have the supplier (i.e., Party B) less worried about *ex-post* hold-up and will thus encourage them to make relation-specific investment *ex ante*.

Another area in which the hold-up problem can take place is IPR licensing, particularly in relation to standard essential patents (SEP). Once you decide to adopt a certain standard, you will have to make a substantial amount of investment to develop the product in accordance with this standard, to construct a production line, to distribute the product, and to make promotion efforts. Most of this investment is specific to the standard and will be sunk. Thus, *ex post*, any of the SEP holders is in a position to be able to hold up. To avoid such a behavior, a standard setting organization (SSO), before finalizing the standard, usually requests any SEP holder to declare to license the patents on a Fair, Reasonable, and Non-Discriminatory (FRAND) term. Still, what is fair and what is reasonable has never been determined in advance and legal disputes between SEP holders and prospective implementers of the standard have been frequent.

JFTC published the "Guidelines for the Use of Intellectual Property under the Antimonopoly Act" (hereafter IP GL) first in 2007 but revised it in 2016 to add the following paragraph:

Refusal to license or bringing an action for injunction against a party who is willing to take a license by a FRAND-encumbered Standard Essential Patent holder, or refusal to license or bringing an action for injunction against a party who is willing to take a license by a FRAND-encumbered Standard Essential Patent holder after the withdrawal of the FRAND Declaration for that Standard Essential Patent may fall under the exclusion of business activities of other entrepreneurs (which AMA prohibits as a case of private monopolization) by making it difficult to research & develop, produce or sell the products adopting the standards. (IP GL, Part 3, (1)(i)(e), parenthesis added).

Again, we can understand this regulation as an effort to minimize the danger of the hold-up problem that would lead to suboptimal diffusion of the standards and suboptimal R&D efforts to develop technologies, thereby lessening competition in the long run.¹²

7. The Theory of Two-Sided Markets

"Two-sided (or more generally, multi-sided) markets are markets in which platforms offer interaction services to two (or several) categories of end-users."¹³ Economic theories of two-sided (or multi-sided) markets have been advanced in the 2000s by, among others, Tirole who, with Rochet, gave this definition and, for this and other contributions in industrial organization and competition policy, was awarded the Nobel Prize (formally the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel) in 2014.

What characterizes the two-sided markets is the presence of externalities through indirect network effects, which refer to usually positive, but possibly negative, effects of the volume of participation or usage in one category of the users to the utility of each user of the other category. Two-sided markets with indirect network effects have

¹² It should be noted that, particularly when implementers are much larger than patent-holders (say, Apple implementing a wireless standard with a technology invented by a startup), the balance of bargaining power may be actually reverse, possibly creating the reverse hold-up problem or the hold-out problem. The US Assistant Attorney General Makan Delrahim recently said "The hold-out problem arises when implementers threaten to under-invest in the implementation of a standard, or threaten not to take a license at all, until their royalty demands are met." He then said "I view the collective hold-out problem as a more serious impediment to innovation." (Speech at the USC Gould School of Law's Center for Transnational Law and Business Conference, November 10, 2017, available at https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-deliv ers-remarks-usc-gould-school-laws-center)

¹³Jean-Charles Rochet and Jean Tirole, "Competition Policy in Two-Sided Markets, with a Special Emphasis on Payment Cards," in Paolo Buccirossi [ed.] *Handbook of Antitrust Economics*, The MIT Press, 2008, 543.

been present from the old age. Brick-and-mortar stores faced two categories of users -- suppliers and consumers. The larger the number and variety of suppliers, the more attractive the store will be for each consumer while, the more the store attracts consumers, the more the suppliers will be tempted to sell at the store.

Yet, the arrival of internet and the spread of e-commerce made the two-sidedness an acute competition issue. Whereas transportation costs prevented even the most attractive brick-and-mortar store from attracting all the consumers in the market (whatever geographic market one defines), consumers can now order from any net store worldwide by simply clicking. This, on the one hand, made competition fiercer by increasing the choice for consumers. On the other, it tended to make a strong seller even stronger with the cyclic working of indirect network effects, that is, more customers attracting more suppliers, which in turn attract even more customers. The resulting concentration to a single or a limited number of e-commerce sites, or platformers in general, has been making competition authorities worried.

In principle, if monopolization is the result of a better service and consumers' choice, competition authorities should not intervene whereas, if the dominant firm undertakes any conduct aiming solely at excluding the rivals including potential entrants, such a conduct should be prohibited. In practice, however, it can be extremely difficult to distinguish between these two. One needs to make a careful economic study of the incentive for and the consequences of such conduct to analyze and evaluate the probable pro-competitive and anti-competitive effects.

Across platform parity agreements (APPA), a form of most-favored nations (MFN) clause applied to two-sided markets, is one example, in which the dominant platformer requires that the suppliers (e.g., hotels in the hotel booking site case and the publishers in the e-book case) set their retail prices listed at its site not higher than those listed in other sites including the suppliers' own sites. ¹⁴ On the one hand, APPA suppresses competition among the platformers and deter the rival platformers from offering lower commissions to the suppliers to entice them to set lower retail prices. On the other, the

¹⁴ See the 2015 OECD discussion:

http://www.oecd.org/daf/competition/competition-cross-platform-parity.htm

free-rider problem mentioned in Section 5 above may occur without APPA, resulting in the disappearance of comparison sites to the ultimate inconvenience of consumers.

A number of European competition authorities regarded APPA by hotel booking sites, such as Booking.com and Expedia, anti-competitive and ended the investigation with these platformers' commitments not to impose APPA. However, some authorities allowed the so-called narrow APPA, in which the platformers make it a condition that the hotels do not set their retail prices at the platformers' sites higher than the prices at the hotels' own sites (but not necessarily than the prices at rival platformers' sites), presumably because the authorities considered the narrow APPA unavoidable for the purpose of discouraging free riding.¹⁵

In Japan, Amazon Japan used to require the sellers at their Marketplace to accept an APPA clause (called price parity clause in the JFTC document). JFTC suspected that this restricted the business activities of the sellers and caused anti-competitive consequences. While JFTC was still investigating the case, Amazon Japan proposed to delete the price parity clauses from all seller contracts, which JFTC evaluated as satisfactory and thus dropped the case.¹⁶

Two-sidedness is also making merger reviews more complicated. As discussed in Section 4 above, the conventional procedure for merger review has been first to define the relevant market and then to evaluate the effect of the proposed merger in this market. However, a merger between two platformers affects the two sides, say the supply market and the consumer market, with indirect network effects between them. Therefore, applying the conventional procedure to each of the two sides can be the first step but is insufficient to assess the full impact of the merger.

¹⁵ See for instance, Morten Hviid "Vertical Agreements between Suppliers and Retailers That Specify a Relative Price Relationship between Competing Products or Competing Retailers," paper presented at the OECD Competition Committee meeting, 2015:

 $[\]label{eq:http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP(2015)6\&doclanguage=en$

¹⁶ "Closing the Investigation on the Suspected Violation of the Antimonopoly Act by Amazon Japan G.K." JFTC, press release, June 1, 2017.

In Japan, there was a case of acquisition by Yahoo Japan of Ikyu, an online travel agency (OTA). Yahoo Japan is also an OTA but, in addition, provides a meta-search service for OTAs and other platforms. Thus, the acquisition was both horizontal (an OTA being combined with another) and vertical because the information on OTAs is listed in Yahoo Japan's meta-search service. JFTC looked at the market for online travel reservation service in Japan and found that neither Ikyu nor Yahoo Japan had more than five percent market share in terms of transaction volume. Thus the combined share is less than ten percent, whereas three rivals each had a share of ten percent or more. In view of this fact, JFTC considered the acquisition unlikely to cause anticompetitive effects. For the vertical aspect of the merger too, the small combined market share in the online travel reservation service suggested that Yahoo Japan will not have an incentive to foreclose the other OTAs from its meta-search service. In consequence, the acquisition was approved.¹⁷

This has been one of a very few merger cases in Japan involving platformers. If a merger between more prominent platformers is to be proposed in the future, JFTC will have to make a more detailed analysis of the two-sidedness of the market.

8. Conclusion

In this paper I have discussed how new economic thinking has influenced and helped competition policy in Japan and in many other countries, taking six theories and problems as examples: the contestable market theory, the cartel theory, the oligopoly models, the free-rider problem, the hold-up problem, and the theory of two-sided markets. The discussion here, I hope, gives a clear message that understanding economics is essential in the implementation of competition policy.

Furthermore, economics is evolving: new thinking will appear and old thinking will be revised and updated reflecting the changing reality and the availability of more sophisticated analyses. Such new thinking has to be incorporated into competition policy and, in turn, the development in competition cases will give more materials on which economists endeavor to enrich the theory. That is, competition policy and

¹⁷ See "Case 8: Acquisition of Ikyu Corporation Shares by Yahoo Japan Corporation," in JFTC's "Major Business Combination Cases in Fiscal Year 2015."

economic theory can co-evolve and must keep doing so.