

CPRC Discussion Paper Series
Competition Policy Research Center
Japan Fair Trade Commission

**Competition Policy in Japan:
An Economic and Legal Introduction with
Illustrative Cases**

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CPDP-53-E September 2011

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September 2011

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Acknowledgement:

The author wishes to thank K. Arai, N. Doi, N. Okubo, and other members of Competition Policy Research Center (CPRC) of Japan Fair Trade Commission (JFTC) as well as Y. Okada for comments. However, the views expressed in this paper are the author's alone and does not represent that of CPRC or JFTC.

Abstract

This paper purports, first, to give a simple economic theory to show why competition policy is important; second, to give an introductory account of competition policy in Japan, both from legal and economic perspectives, and illustrating them with several actual cases; and, third, to show the difficult balance between competition policy, that prohibits monopoly, and intellectual property, that give monopoly rights to inventors to stimulate innovation. Its aim is not to present original research: rather, it aims to give a general introduction to the Japanese competition policy and its law, Anti-Monopoly Act, without going into the legal detail but with an economist's perspective.

Keywords: competition policy, competition law, monopoly, intellectual property, Japan

JEL Codes: D4, K21, L4, O34

1. Introduction

The purpose of this paper is simple – to give an introductory account of the Japanese competition policy. Also, it is to give an economist's, not lawyer's, account. Of course, one cannot discuss competition policy without discussing the underlying law, Anti-Monopoly Act (AMA) in the Japanese case. Also, I intend to discuss a number of legal cases to give the readers a sense of what is actually going on in Japan. Still, I have no intention of going into the legal details of these cases and, in fact, being an economist myself, I have little capacity for that. Rather, my intention is to give, albeit briefly and sporadically, an economic reasoning to AMA's provisions and to the cases (including the discussion of whether there is such a reasoning at all). I have had a number of occasions to speak about Japanese competition policy to foreign audience and realized that, except within a circle of policy and legal specialists of competition policy, little is known about it in abroad. And, unfortunately, little has been published about it in English¹. It is the intention of this introductory paper to fill this void.

The paper is composed of three sections. In Section 1, I will discuss why competition policy is necessary, using an elementary economic theory. That is, I will compare equilibria between a perfectly competitive market and a monopoly market, and discuss why monopoly causes the loss (the 'deadweight loss') of social welfare. Those readers who have studied intermediate microeconomics must be familiar with these concepts, and can skip this section.

In Section 2, I will discuss the four major rules stipulated in AMA; that is, prohibition of unreasonable restraint of trade (e.g., cartels and bid riggings), prohibition of private monopolization, prohibition of unfair trade practices, and the restriction of business combination. Details of these rules will be discussed only briefly. Instead, I will present a few real cases for each so that the readers can know how the rules are actually applied. In a few cases, I also intend to give my own view on how they can be interpreted or evaluated from an economic perspective.

In Section 3, I intend to discuss how competition policy is related to innovation, including the issues related to intellectual property (IP), mainly patents. This issue, I

¹ Exception is Wakui (2008). JFTC's official English booklet "For Fair and Free Market Competition" gives a succinct account of AMA and JFTC and is available at the following site (accessed September 2011):
http://www.jftc.go.jp/en/about_jftc/role/index.html

believe, is getting more and more important, as the promotion of innovation has become both a key policy target in every country and a key strategic issue to every firm. Besides, the very function of IP is to give a monopoly power to the inventor, which is in direct conflict with the spirit of competition policy. Even though I have no space to discuss this fascinating but very difficult issue at length, I intend to give an introductory account of this issue and discuss a couple of cases that occurred in Japan.

Section 4 concludes the paper.

2. Why Competition Is Important

Consider a market for a certain product or service. Its characteristics are depicted by, on the one hand, the preferences and income of the buyers that determine the demand relation and, on the other, the technology and management conditions of the suppliers that determine the supply cost. The conditions that determine its market structure are also important, such as the number of sellers and the height of entry barriers.

The demand relation is summarized by a demand curve that shows the quantity demanded of the product at each price level. It is usually downward sloping because, firstly, when the price goes up, the buyer will switch from this product to now comparatively cheaper substitutable products (called the substitution effect). Secondly, when the price of a product increases but the income of the consumer remains the same, she will find that she is no longer able to buy the same quantity, that is, she now faces a lower 'real income' and thus is forced to reduce the quantity demanded of this product as well as that of other products (called the income effect). Just for the sake of simplicity, let us assume that the demand curve is linear (i.e., a straight line) as shown in Figure 1. It shows that at the price of 100 dollars (or yen or whatever), no one is willing to buy. At \$99, one buyer is willing to buy; at \$98, one more buyer is willing to buy, making the total quantity demanded two; and so forth. The readers not allergic to mathematical equations will easily notice that the demand curve in this case can be written as:

$$(1) \quad p = 100 - Q$$

where p is the price and Q is the quantity demanded.

Now let us turn to the supplier side and, again for simplicity, assume that the unit cost (average cost) of production (including distribution) is \$40, irrespective of the amount

produced. That is, the average cost (AC) is assumed constant. When AC is constant, cost increase due to one-unit increase in production, called the marginal cost (MC), is also constant and equals AC because the additional unit can be produced with the cost that equals this AC, without changing the costs for the products that have been hitherto produced.

When there is sufficient competition, the market price at the equilibrium has to be \$40 because, if the price is, say, \$41, you (as a producer and supplier) can attract all the buyers by offering \$40.90 and make per-unit profit of \$0.90 ($= \$40.90 - \40). Then, some other supplier(s) will undercut your price to steal customers from you; you will then undercut him/her; and so on, until the price reaches \$40². This is the competitive equilibrium, in which the price equals the marginal cost. As shown in all the microeconomic textbooks, this condition, $p = MC$, holds in any competitive equilibrium under general conditions (e.g., a non-linear demand curve and a variable AC). In Figure 1, point E shows this equilibrium: the price is \$40 and 60 units are produced and purchased.

In monopoly, that is, when there is only one producer, the firm can set the price at \$70 without worrying the presence of a rival undercutting your price. Point M in the figure depicts this monopoly equilibrium. The price is \$70, the quantity demanded is 30 units, and the firm earns a monopoly profit of \$900 ($= (\$70 - \$40) \times 30 \text{ units}$)³. Even if there are more than two producers, they can attain the same equilibrium (and thus sharing the \$900 profits among them) if they collude, that is, if they form a cartel and agree with each other to set the price at \$70. Therefore, point M gives the cartel equilibrium as well as the monopoly equilibrium.

The comparison of competitive equilibrium and monopoly equilibrium (and cartel equilibrium) is straightforward from Figure 1. Under monopoly, the price is higher ($\$70 > \40) and the quantity produced and consumed is smaller (30 units < 60 units).

Next, consider the effect to the consumers. I defined the demand curve as the curve showing the quantity demanded at each price. If, for an expositional easiness, we can

² This result is attained even if there is only one competitor besides you, as long as both you and the competitor use price as the strategic variable and take the other's price as given. This is called the Bertrand equilibrium in an oligopoly (duopoly if there are only two suppliers) market with non-differentiated goods.

³ It can be easily shown that \$70 is in fact the price that maximizes the monopoly profit.

assume that each consumer buys one unit, it actually shows how many consumers are willing to buy at each price. Consider the first consumer to buy. This consumer will buy the product if the price is \$99 or lower but not if the price is \$100 or higher. In other words, its value to her is \$99 and if the price is equal to it or lower, she is willing to buy. Such a price is called her 'reservation price'. Then, if she could buy the product at the price of \$70, as in the monopoly equilibrium, the value she gets is \$99 and the price she has to pay is \$70, giving her the *surplus* of \$29.

When the price is \$98, the demand curve implies that two consumers are willing to buy. The first consumer, that is, the consumer with her reservation price being \$99, is of course one of them. The second consumer is the one who has the reservation price of \$98. Again, if the market price is \$70, this consumer gains the surplus of \$28.

With similar reasoning, it is easy to know that the third consumer gains the surplus of \$27, the fourth \$26, and so forth. In total, at the monopoly price of \$70, the surplus is $\$29 + \$28 + \$27 + \dots + \1 . This total is called the *consumers' surplus* (CS) and the reader will notice that the area of the triangle marked with C in Figure 1 shows this CS⁴.

Under a competitive price of \$30, CS is the sum of the areas C and A because, for the first consumer, for instance, the surplus now becomes the difference between her reservation price, \$99, and the market price, \$30. You will therefore notice that, comparing the monopoly equilibrium to the competitive equilibrium, the consumers gain a smaller CS and the difference equals the area A.

This area A actually equals the profit gained by the monopolist, which is the per-unit profit ($\$70 - \$40 = \$30$) times the quantity sold (30 units). That is, under monopoly, the reallocation of surplus took place from the consumers to the monopolist by the amount shown by the area A. This is one effect of monopoly.

Next, consider the 31st to the 60th consumers. These are the consumers who were happy to buy the product under the competitive price of \$40 but not under the monopoly price of \$70. If the price was \$40, they could buy and enjoy a CS that is equal to the area shown by B (the shaded triangle) in the diagram. Under monopoly, they will not buy the

⁴ To be precise, the algebraic sum ($\$29 + \$28 + \dots + \$1$) equals \$435, whereas the diagrammatic area equals \$450 ($= (\$30 \times 30)/2$). This difference occurs because, for expositional purpose, I have used the example of a number of buyers (30 in this example) which is an integer, while the calculation of the area assumes a continuous number. In reality, the number of consumers is usually large and can be approximated by a continuous variable.

product and, as a consequence, lose the opportunity to earn the CS. This loss is called the ‘welfare loss due to monopoly’ or ‘deadweight loss’. Unlike A, which is a transfer of surplus from consumers to the monopolist, C is lost from the society at large and is a real welfare loss to the society. In other words, whereas, if so desired, the government can adopt a redistribution policy of taxation and subsidy to give the area A back to consumers, there is no way to recover the welfare loss of C back to consumers. It is for this reason, that the economists regard the welfare loss to be the single most evil effect of monopoly.

To summarize, a monopoly causes the following. First, the price is higher and the quantity produced and consumed is smaller. Second, the transfer of surplus takes place from the consumers to the producer (monopolist) by the amount shown in the area A. And, third, welfare is lost as shown by the area B. Economists usually take social welfare (the sum of CS and producers’ surplus, that is, profits) as the criteria and therefore consider the third effect most important. However, there are also policy makers who stress the impact on consumers and hence consider the second effect equally important. For them, the loss from monopoly is not only B but also A⁵.

I have so far discussed the effect of monopoly on the price and quantity (and thus surplus). Another important effect, and the one that has become more stressed in these days, is the effect on innovation, such as research and development (R&D) efforts. Here too, the lack of competition is likely to result in weaker innovation efforts. For one thing, a monopolist can indulge in a quiet and safe life neglecting such risky activity as innovation (often called ‘a quiet life hypothesis’) as it does not face the threat of its competitors coming up with newer and better products or processes. For the other, a monopolist is more likely to find that its new product attracts customers only by having them switch from its own existing products. Because of this so-called ‘replacement effect’, a monopolist will have a smaller incentive to engage in R&D.

⁵ The effect is more complex in an oligopoly market where the number of producers is not one (i.e., not monopoly) but not very large (i.e., not perfect competition). In such a small-number situation, inter-firm interactions have to be taken into account, resulting in a game-theoretic situation and the equilibrium depends on the behavioral principle of the firms, the extent of entry barriers, and whether the products are differentiated across firms. In many situations, the equilibrium becomes closer to that of monopoly the smaller the number of firms; however, there are also situations in which the equilibrium is independent of the number of firms. For more discussion, see any advanced textbook of microeconomics or industrial organization.

A counter-argument is that a bigger and more monopolistic firm can be more R&D-intensive because it has a larger fund with which it can expend on R&D, can exploit economies of scale in R&D, and can utilize its brands and distribution channels to sell new products. Such a hypothesis is often called ‘the Schumpeterian hypothesis’, following Schumpeter (1942)⁶. A number of empirical studies that have been made to test this hypothesis, however, came up with mixed results, often disagreeing the hypothesis⁷.

In conclusion, monopoly (or, more generally, the lack of competition) hurts the society by raising the price and resulting in a welfare loss. Also it likely generates a weaker incentive for innovation, causing a slower rate of technological progress and a less frequent introduction of new, improved, or cheaper products. It is for this reason that a policy is needed to maintain and promote a competitive market environment. This is exactly the aim of competition policy (or antitrust policy as Americans usually call it).

3. Competition Policy in Japan

Japan’s Anti-Monopoly Act (AMA) states the aim of the Act in its Article 1 as follows:

“The purpose of this Act is, …, to promote fair and free competition, to stimulate the creative initiative of entrepreneurs, to encourage business activities, to heighten the level of employment and actual national income, and thereby to promote the democratic and wholesome development of the national economy as well as to assure the interests of general consumers.”

AMA was enacted in 1947 soon after Japan’s defeat in World War II. The Allied Power that occupied Japan intended to ‘democratize’ Japan’s economy by, first, forcing a number of *zaibatsu* (big business groups) to dissolve; second, by splitting 11 dominant firms and forcing a number of other firms to divest businesses and subsidiaries; and, third, by enacting AMA. It is the first country in Asia to have a competition law. Korea

⁶ In my opinion, even though it is true that Schumpeter (1942) argued that innovation is incompatible with perfect competition as envisaged by economists, he never assumed a simple relationship between innovation and the degree of monopoly as discussed in the so-called Schumpeterian hypothesis.

⁷ See the survey articles by Cohen and Levin (1989) and Cohen (1995). Also see Aghion and Griffith (2005) for both their survey of previous studies and their own research results.

followed 33 years later in 1980 and Taiwan in 1991. AMA was amended a number of times since then.

The office that implements AMA is Fair Trade Commission (FTC, usually abbreviated as JFTC to separate it from US Federal Trade Commission). The Commission is composed of a Chairman and four commissioners, with the administrative office that has about 800 staff. Competition Policy Research Center (CPRC) is a center within JFTC that makes independent research on issues related to competition policy, but not individual current JFTC cases, jointly with academics, namely, university professors in economics and law who collaborate on a part-time basis.

The four pillars of AMA are

1. Prohibition of unreasonable restraint of trade
2. Prohibition of private monopolization
3. Prohibition of unfair trade practices
4. Restriction of business combination

which will be discussed in turn in the following subsections.

When JFTC finds violation of these prohibitions and restrictions, it issues 'cease and desist order'. In the case of unreasonable restraint of trade (cartels and bid-riggings) and (since 2009) private monopolization and certain types of unfair trade practices, it also orders the payment of 'surcharges.' The rate of surcharge varies according to the type of conduct, the industry, and the size of the firm. In a cartel case of a large-scale manufacturing firm, it is ten percent of the sales amount of products or services in question during the period of violation but can be increased to fifteen percent in case of repeated offenders. Furthermore, when the JFTC regards the violation serious and deserving criminal sanction, it files an accusation with the Prosecutor General, in which case the court can impose criminal penalty to the violating individuals (imprisonment of up to 5 years or fine of up to 5 million yen, in the cases of 1 and 2 above) and the firms (fine of up to 500 million yen).

There is also a leniency program so that when firms involved in cartels and bid riggings voluntarily report them to JFTC and help its investigation, their surcharges are immunized or reduced. Since the introduction of this program in 2006, it proved very effective and investigation of many of the cartel or bid-rigging cases since then has been

greatly facilitated by it.⁸

3.1. Prohibition of Unreasonable Restraint of Trade

“Unreasonable restraint of trade” means the following:

“such business activities, by which any entrepreneur, by contract, agreement or any other means irrespective of its name, in concert with other entrepreneurs, mutually restrict or conduct their business activities in such a manner as to fix, maintain or increase prices, or to limit production, technology, products, facilities or counterparties, thereby causing, contrary to the public interest, a substantial restraint of competition in any particular field of trade” (AMA, Article 2(6)).

Essentially, it prohibits cartel and bid rigging. The following example gives a typical bid-rigging case:

Case 1: Bid Rigging in Steel Bridge Construction (Tokyo High Court, 2006)

In a series of public biddings during April 2002 to March 2005 for construction of steel bridges in motorways, 50 firms formed “Group K” and 32 formed “Group A”. These two groups decided which firm to win at each bid, and urged other firms to cooperate. This violates the prohibition of unreasonable restraint of trade and JFTC ordered 23 firms to pay 12.9 billion yen in total as surcharges⁹. JFTC also indicted the firms to the court, which ordered these firms to pay 6.4 billion yen as criminal fines, with imprisonment (with probation) of several company directors. The Ministry in charge of the public works also prohibited these firms to participate in biddings for several months, which caused the loss of substantial amount of works for the firms.

And the following cartel case became a landmark case for the reason to be stated presently.

Case 2: Toshiba Chemical Case (Tokyo High Court, 1995)

Eight manufacturers of paper phenol copper-clad laminates met regularly during

⁸ For more details on the procedures and sanctions, the readily available source in English is the JFTC booklet cited in footnote 1.

⁹ The surcharge was 6% of sales at the time. Under the present AMA, 10% or 15% will be charged as stated above.

the first six months of 1987 and exchanged information and opinion on how to prevent the decline of their selling prices and to raise them. At their meeting on 10 June 1987, the top three announced their intention to raise their prices by 300 yen per square meter or by 15 percent, and asked the others to do the same. In consequence, they all raised their prices.

In Case 2, a big question is whether their information exchange and announcement has, "in concert with other entrepreneurs, mutually restrict[ed] or conduct[ed] their business activities" as the above-cited AMA, Article 2(6) stipulates (my brackets). JFTC decided it did. One of the defendants opposed and went to the court, seeking to negate JFTC's decision. The Tokyo High Court supported JFTC's decision, stating that "if an entrepreneur exchanges information of price-raising among other entrepreneurs and accordingly, takes the same or similar act with others, it is unavoidable for us to presume that the parties had a relationship to expect the concerted act each other and therefore, the said 'liaison of intention' exists unless there is a special occasion to show that the price-raising was implemented individually by a company's own decision that the price-raising is capable of meeting price competition in the relevant market and there is no relationship between that company's price-raising with other companies."

This case has been influential because, while the presence of 'liaison of intention' is necessary to satisfy the condition in AMA Article 2(6), the court stated clearly that "explicit agreement to bind upon the related parties is not necessary to prove 'liaison of intention.' In other words, 'liaison of intention' can be proved by showing mutual recognition of other entrepreneurs' price-raising and tacit acceptance of such a price-raising of another. (It is called 'liaison of intention' by a tacit agreement.)"¹⁰ (the parenthesis in the original).

3.2. Prohibition of Private Monopolization

“Private monopolization” is defined as follows:

“such business activities, by which any entrepreneur, individually or by

¹⁰ The English translation was taken from "Cartel Case Studies: Case Submitted by Japan", OECD Competition Committee, Global Forum on Competition, DAF/COMP/GF/WD(2006)21, 11-Jan-2006 (<http://www.oecd.org/dataoecd/59/48/35935909.pdf>)

combination or conspiracy with other entrepreneurs, or by any other manner, excludes or controls the business activities of other entrepreneurs, thereby causing, contrary to the public interest, a substantial restraint of competition in any particular field of trade” (AMA, Article 2(5)).

That is, restraint of competition with exclusion or control constitutes private monopolization. A typical example is the deterrence of entry, as the following case illustrates:

Case 3: Hokkaido Shimbun Press Case (2000)

Hokkaido Shimbun is a newspaper publishing company with a dominant position in the Hokkaido island of Japan (*shimbun* is a Japanese word for newspaper). Around 1994, Hokkaido Shimbun learned of a planned entry of a new newspaper company that would be named Hakodate Shimbun, in the area around Hakodate, a major city in the southwest end of Hokkaido. To prevent Hakodate’s entry, Hokkaido took several measures; for example, (i) it applied to Japan Patent Office “Hakodate Shimbun” and other likely names as trademarks¹¹, (ii) to reduce Hakodate’s advertising revenues, Hokkaido offered lower advertising space charges to Hakodate’s probable advertisers, namely, middle and small firms in the Hakodate area, (iii) Hokkaido asked TV Hokkaido, a TV station and Hokkaido’s affiliate, not to accept Hakodate’s TV commercials.

JFTC regarded these had the intention of “excluding” the activity of Hakodate, thereby causing a substantial restraint of competition, and concluded it violated AMA.

In this case the tactics taken by Hokkaido very clearly appears to have been taken just for the sake of entry prevention and no theory will be able to explain them as rational and economic behavior. By contrast, the next case appears ambiguous:

Case 4: Japan Intel Case (2005)

Japan Intel imports central processing units (CPU) from Intel in USA, and sell to

¹¹ Following JFTC’s ruling, Hokkaido withdrew its application of 'Hakodate Shimbun' and thus the new company could name itself Hakodate Shimbun.

personal computer makers in Japan. Japan Intel offered discounts (rebates) to PC makers on condition that (i) the proportion of Intel CPU among all the CPUs that the PC maker uses, called MSS, is 100%, or (ii) MSS is more than 90% with the rivals' being less than 10%; or (iii) for the major PC models, they only use Intel CPUs.

JFTC regarded this had the intention of "excluding" the activity of rival CPU manufacturers, thereby causing a substantial restraint of competition, and hence violated AMA.

A bulk discount, that is, a discount offered to buyers of large quantities, is usually considered a common and rational commercial practice. However, in the Intel case, the firm offered discount not on the basis of quantity but share, clearly implying the intention of excluding the rivals (mainly AMD in this case). Besides, Intel is undoubtedly a dominant world leader. These considerations probably led JFTC to judge Intel's behavior as violation of AMA.

3.3. Prohibition of Unfair Trade Practices

Such practices as shown below are regarded as unfair trade practices under AMA.

- Refusal to deal (boycott)
- Discriminatory pricing and other discriminatory treatment
- Unjust low price sales
- Tie-in (bundling)
- Resale price maintenance (RPM)
- Dealing on exclusive terms
- Dealing on restrictive terms
- Abuse of dominant bargaining position
- Deceptive customer inducement

Let me here discuss only RPM. In a vertical relationship, say, from a manufacturer to a retailer and then from a retailer to a consumer, the manufacturer can determine the wholesale price, i.e., the price it charges to the retailer. If it also determines the retail price (i.e., the price retailer charges to the consumer, which is the 'resale price' from the manufacturer's standpoint) and forces the retailers to maintain it, it is called resale price maintenance (RPM). AMA prohibits RPM because it restrains the competition among retailers.

The following gives an RPM case condemned by JFTC:

Case 5: Nike Japan Case (1998)

Nike Japan, a Japanese subsidiary of the US shoemaker, separated two types of retailers, key-account stores and general stores. Only key-account stores could sell 'top models' that are most popular among consumers. Since 1995, Nike Japan requested the retailers to sell at Nike's recommended prices, not to sell Nike products imported through other channels, and to refrain from advertising lower prices. It announced that only those retailers keeping these requests can be the key-store stores.

Moreover, Nike Japan had the sales people monitor retailers. When it found the key-account retailers not obeying the requests, it deprived them of the preferential treatment as key-account retailers. And when it found general retailers (discount retailers) selling at prices lower than the recommended prices or importing through other channels, it refused to supply to them.

These practices, JFTC judged, are unlawful RPM and violated AMA.

Manufacturers often claim that RPM is necessary for them to maintain product reputation and product quality. In fact, there is an economic theory suggesting that RPM may benefit consumers by encouraging the retailers compete by offering better services instead of lowering prices¹². Whether this theory can be applied to the Nike Japan case is a difficult question. Notwithstanding such a theory, JFTC regards RPM as *per-se* illegal¹³.

3.4. Restriction of Business Combination

AMA, Article 15, stipulates the following: No corporation shall effect a merger if any of the following items applies:

- (i) Where the effect of the merger may be substantially to restrain competition in a particular field of trade;
- (ii) Where unfair trade practices have been employed in the course of the merger.

¹² See Mathewson and Winter (1980) for instance.

¹³ However, exceptions to this rule are made as regards published works, such as newspapers, magazines, books, and music CDs (AMA Article 23). As a result, these (domestically produced ones) are sold at uniform prices across Japan.

The same applies to other acts of business combination, including the acquisition of businesses, acquisition of shares, cross-holding of shares, integration by means of a holding company, and cross directorship. For simplicity, we focus on mergers and on the condition (i) above.

A difficult question of course is how to judge whether a certain merger will have the effect "substantially to restrain competition" and what should be "a particular field of trade." JFTC, similarly to its US and EC counterparts, have published the Merger Guidelines¹⁴ to show how it intends to interpret these conditions. For instance, it clarifies the so-called safety harbor conditions in terms of the level and change of Herfindal-Hirshman index (HHI).

The Cournot oligopoly theory suggests that, unless entry threat is sufficiently strong, a merger reduces the number of competitors and results in a higher price, a smaller production level, and, therefore, an increase in welfare loss¹⁵. Hence, JFTC (and competition policy authority in any country) is watchful whether a certain merger is likely to result in such effects, that is, the condition (i) above. When such likelihood is large, JFTC may prohibit the merger or allow the merger subject to 'remedies', that is, certain actions by merging partners to reduce the expected anti-competitive effect, such as divestiture of a part of business or a promise to license their patented technologies on rational and non-discriminatory (RAND) terms.

In many cases, merging firms try to justify their merger arguing that it brings in a production, distribution, and R&D efficiency, thereby reducing costs and raise the social welfare¹⁶. The following gives such an example.

Case 6: Merger between Japan Airlines (JAL) and Japan Air System (JAS) (2002)

JAL and JAS announced its plan to merge in 2002. With this merger, in many Japanese domestic flight routes, the number of competitors was expected to decrease from three (JAL, JAS, and ANA, i.e., All Nippon Airways) to two (JAL/JAS and

¹⁴ Formally, *Guidelines to Application of the Antimonopoly Act Concerning Review of Business Combination*, available from the JFTC website. The most recent version was published in June 2011.

¹⁵ See Farrell and Shapiro (1990), Odagiri (2008), and Whinston (2007).

¹⁶ Williamson's (1968) now famous "welfare tradeoff" argument says that, even if the price increases owing to the merger, the cost saving may be large enough to offset the reduced consumers' surplus, causing the total social welfare to increase.

ANA), or two (JAL and JAS) to one (JAL/JAS). Thus, in preliminary consultation, JFTC warned that the merger might be judged to be anti-competitive and violating AMA. In response, JAL and JAS proposed the following remedies to minimize the competition-restraining effects: (i) To give up landing slots at the congested Tokyo Haneda Airport (expected to be offered to new entrants). (ii) To have the new entrants use their airport facilities, such as check-in counters, at reasonable fees. (iii) To decrease ticket prices for most routes by 10% and maintain these prices for at least three years. JFTC assumed that these remedies were sufficient and accepted the merger.

JAL and JAS emphasized that the merger would enhance efficiency. In the press release, they claimed 73 billion yen cost saving, 100 billion yen investment saving, 3000 staff reduction, and 10 aircraft reduction. With such saving, they claimed they would be able to attain ROE (return on equity) of 15 percent in three years, that is, in 2005, even though they were actually making losses at the time of the merger proposal.

What did happen in reality? First, despite the pledge of three-year price-freeze, JAL (the merged company) raised the price next year. Citing unanticipated rising fuel prices as the excuse, JAL raised the prices to the pre-merger level and JFTC did not object. Second, the actual ROE in 2005 was -32%, far below the promised 15%. In 2010, JAL virtually went bankrupt.

This case teaches us two valuable lessons. First, ‘conduct remedies’, such as promises on pricing, are non-credible and inadequate in view of the uncertain cost and demand conditions. ‘Structural remedies,’ such as divestiture, are preferable because it is non-reversible and therefore credible¹⁷.

Second, the merging firms’ claim of efficiency-enhancement effects should not be taken at face value, because managers tend to over-predict and overstate the efficiency gains. In fact, few of the empirical studies find the presence of efficiency gains from mergers¹⁸. Accordingly, it is unwise to assume without close scrutiny that the benefit of

¹⁷ On the difference between the two types of remedies, see U. S. Department of Justice, Antitrust Division, “Antitrust Division Policy Guide to Merger Remedies,” June 2011 (<http://www.justice.gov/atr/public/guidelines/272350.pdf>).

¹⁸ For a recent study in Japan, see Odagiri, et al. (2011).

efficiency enhancement (as claimed by the firms) will more than compensate the damage to the consumers that the merger may bring through reduced competition.

4. Competition Policy and Intellectual Property

Having now depicted the overall picture of competition policy in Japan, I will now discuss a very interesting and yet very difficult question of the relationship between competition policy and the intellectual property right (IPR) regime. IPR includes not just patents but also copyrights, designs, trademarks, and trade secrets. In Case 3, I have already given an example in which an incumbent firm intended to use trademarks for the sole purpose of excluding entrants. As this case illustrates, any form of IPR can be related to competition policy. In the following, however, let me focus on patents.

Patent is a legal device with which the government grants the inventor a monopoly right to use the invented technology. As such, it is bound to produce welfare loss due to monopoly as discussed in Section 2 and depicted by the area B in Figure 1. Necessarily, therefore, it is in direct conflict with competition policy that aims to eliminate monopoly.

However, the patent system is expected to provide incentives for research and development (R&D). Firms, both incumbents and entrants, will invest more in R&D when they expect to be granted patents and hence earn monopoly profits from them. With the R&D expected to promote new products, new processes, and new entrants, it may increase competition in the long run and benefit consumers with lower prices and better product quality.

That is, patent may hurt short-run competition and increase welfare loss but promote long-run competition and benefit consumers. The patent system or any other IPR system stands on this trade-off, which makes its treatment in competition policy extremely difficult.

4.1. Patent Pool and Competition Policy

AMA (Article 21) states that the law “shall not apply to such acts recognizable as the exercise of rights” under the IPR laws. To clarify what would be recognized as “the exercise of rights”, JFTC published IP Guidelines¹⁹ in 2007, which says that “any act

¹⁹ Formally, *Guidelines for the Use of Intellectual Property under the Antimonopoly Act*, available at the JFTC website.

that may seem to be an exercise of a right cannot be ‘recognizable as the exercise of the rights’ provided for in the aforesaid Article 21, provided that it is found to deviate from or run counter to the intent and objectives of the intellectual property systems, which are, namely, to motivate entrepreneurs to actualize their creative efforts and make use of technology”. Of course, to decide whether a certain act should be regarded “to deviate from or run counter to the intent and objectives of the intellectual property system” is not an easy task. It is even more difficult when such an act was done not by an individual patent-holder but as a collective action of multiple patent-holders forming a patent pool. The following is virtually the only patent pool case that JFTC regarded as violating AMA.

Case 7: Pachinko Machine Patent Pool Case (1997)

Pachinko is a type of game machines that are very popular in Japan. People play it in ‘pachinko parlors’ that usually have hundreds to (in big parlors) thousands of pachinko machines. The pachinko machine manufacturing industry is an oligopolistic industry, with 10 firms having more than 90 percent market share. They sell to pachinko parlors, which has a more divided market structure. It is also a high-tech industry with frequent model changes, and there were approximately 200 patents related to pachinko machines at the time.

In 1961, the manufacturers jointly established ‘Japan Association for Patent Management on Game Machines’ (my unofficial translation). The member firms commissioned the Association to license their patents, have the licensees show licensing seals on pachinko machines, and collect royalties. In short, the Association acted as a patent pool. However, the Association licensed only to 19 incumbent firms (including the 10 member firms) and refused to license the patents to newcomers, in order to prevent their entry. This behavior, JFTC ruled in 1997, had substantially restrained competition by excluding the activity of new firms that intended to manufacture pachinko machines. It cannot be regarded as the rightful ‘exercise of rights under the Patent Law’ and, hence, it violated AMA’s prohibition of private monopolization. JFTC ordered the Association to dissolve.

A very interesting question is whether JFTC would have taken the same view if the ten firms were instead integrated as a single firm, holding all the patents controlled by the

Association and having a market share exceeding 90 percent. Intel, for instance, has a similarly large market share in the CPU market and refuses to license its patents to potential entrants. Still, such refusal has been considered a rightful exercise of patent right. In the same token, the hypothetical dominant pachinko machine maker might be able to refuse licensing its patents to entrants without being regarded as violating AMA. If so, was the case considered illegal because it was undertaken by an association instead of a single firm? Or was it because the ten firms tended to act cooperatively not only in licensing but also in many other ways including pricing (which JFTC actually recognized)? JFTC's document does not provide a clear answer to this important question.

4.2. Patents in a Merger Case

In the regulation of business combination too, JFTC may investigate the likelihood that the merging firms substantially restrain competition through their combined ownership of IPR, such as patents.

Case 8: Acquisition of Vending Machine Business by Fuji Electric of Sanyo (2002)

Fuji Electric proposed to acquire an entire share of Sanyo's vending machine subsidiary. Fuji and Sanyo were the top and second largest makers of vending machines for drinks, with the combined market share of about 55 percent. With two other firms, four-firm concentration ratio was more than 80 percent. However, the buyers of the machines were drink makers, some of which, like Japan Coca Cola, were large firms, having a significant bargaining power against the vending machine makers. In JFTC's hearings to the drink makers, they in fact stated that, were Fuji/Sanyo to raise the price, they would not hesitate to switch supplier to the competitors including entrants.

However, JFTC became alerted that, with the combined patents of Fuji/Sanyo accounting for about 40 percent of all the patents related to vending machines, a technological barrier may become insurmountable to new entrants, thereby restraining competition and resulting in persistent dominance of Fuji-Sanyo. In response to this concern expressed by JFTC, Fuji proposed to guarantee to license their patents at reasonable conditions in case any competitor requested such licensing. JFTC regarded this proposed remedy as satisfactory and agreed to the acquisition.

Several years later JFTC made a follow-up study and found that by 2007 no firm had actually requested licensing.

This last fact is interesting. To JFTC's inquiry, one competitor replied that they did not know this remedy, suggesting that JFTC needed to compel the merging firms to announce their intention to license the patents at a RAND (reasonable and non-discriminatory) condition more widely. Some of the other competitors stated that they did not seek the license because the patents did not prevent them from making machines required by the buyers. It is well known that, in many industries, patents are not always a strong mechanism with which the inventors secure profits out of their inventions²⁰. The vending machine industry seems to have been such an industry. By contrast, in some industries, most notably pharmaceuticals, patents are known to be powerful. Thus, in these industries, licensing may prove to be an effective remedy to mergers that could otherwise have an anticompetitive effect.

5. Conclusion

The purpose of this paper was, first, to give a simple economic theory to show why competition policy is important; second, to give an introductory account of competition policy in Japan, both from legal and economic perspectives, and illustrating them with several actual cases; and, third, to show the difficult balance between competition policy, that prohibits monopoly, and intellectual property rights, that give monopoly rights to inventors to stimulate innovation.

As many textbook or readings on industrial organization and competition policy make it clear, economic theories and empirical analyses have progressed rapidly in the past decade or two, giving us a richer stock of knowledge with which competition policy can be pursued. And yet many actual cases are in the boundary between permissible strategic moves of firms and anti-competitive behavior, and the competition authority is forced to make a very difficult and subtle decisions. Towards this purpose, more rigorous thinking based on economic theories and statistical tests is required, as well as collaboration between economists, legal experts, and the authority.

²⁰ See the following survey studies: in the US, the Yale survey and the follow-up Carnegie-Mellon survey (Cohen, et al., 2000) and, in Japan, National Innovation Survey (Ijichi and Odagiri, 2006).

Another lesson is that competition policy cannot be pursued independently. We have shown that it is closely related to IP policy. It is also closely related to regulation policy. Airlines, telecommunications, electric power, and other public utilities are still heavily regulated in Japan. Deregulating them and promoting competition is desirable from the viewpoint of competition policy. Laws on business establishment and laws on location must be designed so as not to create entry barriers and hinder competition. Competition policy concerns have to be expressed and incorporated in these and other policy legislations. It is thus essential that policymakers and the public at large recognize the role of competition policy fully. The present paper, it is hoped, will provide one step forward to this direction.

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Figure 1. Comparison of the Competitive Equilibrium and the Monopoly Equilibrium

