

Report of the Study Group for Ideal Approaches to
Competition Policies for the Fourth Industrial Revolution

- Towards the realization of Connected Industries -

(Provisional translation)

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1. Introduction

(1) Development of the fourth industrial revolution

In recent years, technological innovation called the fourth industrial revolution has been underway and it encompasses significant increase in data which can be processed, as represented by big data, the improvement of computers' performance, and the advance in artificial intelligence (AI). As Japan's industries are seeing the need to change themselves according to the technological evolution, the government is advancing a variety of policy initiatives to create an industrial society called "Connected Industries," in which a variety of industries are connected and create new added value.

As competition policies aim to promote innovation by encouraging fair and free competition in the market, when an industry society changes, competition policies will need to be renewed as well to meet the demand of the new industrial society. In this respect, the "Interim Report on the New Industrial Structure Vision¹," released by Ministry of Economy, Trade and Industry (METI) in April last year, points out concerns on competition involving platformers which have achieved rapid growth in the digital market against the backdrop of such technological innovation. Based on this, METI put together characteristics and the actual conditions of transactions concerning platformers at the Cross-sectional System Study Group for the Fourth Industrial Revolution (hereinafter referred to as "Cross-sectional System Study Group"), and published a report in September last year². The report closely looked at digital platformers in particular which provided services through the internet, and discussed the change in the competitive environment caused by the fourth industrial revolution while suggesting that the source of value was shifting toward data due to technological innovation. The report also picked up transactions, etc. in the market of applications (hereinafter referred to as "app(s)") for smartphones as an example of transactions by digital platformers, and clearly presented a real picture thereof. (To be detailed later at 2.)

As data is a source of value, attempts to increase value of products and services (hereinafter referred to as "services, etc.") by use of data are nothing new and have been made by many business operators for quite some time now including but not limited to digital platformers which the Cross-sectional System Study Group focused on.

For instance, business operators have always been hungry for data, and thus conducted many experiments in their research and development activities to collect data, which has been used to develop new products. However, the fourth industrial revolution made it possible to acquire/transmit a large amount of real-time data thanks to the development of communication technology, and increased processing capacity through the advances of computers and AI, as a result of which business operators are now capable of not just collecting data in a limited environment provided by their research and development activities but also gathering a great amount of real-time data continuously from a wide variety of customers the moment they use services, etc. Consequently, business operators can now adopt strategies to keep attracting customers by continuously improving services, etc. through collecting data while providing the services, etc. This is epitomized by platformers but other forms of business operators have also

¹ http://www.meti.go.jp/committee/sankoushin/shin_sangyoukouzou/pdf/008_04_00.pdf

² <http://www.meti.go.jp/press/2016/09/20160915001/20160915001.html>

employed similar strategies, which suggest that data now holds a substantially greater impact on competitiveness in services, etc.

(2) Growing interest in the impact on a competitive environment (problem awareness)

Needless to say, it is desirable in terms of innovation that quality of services, etc. can be improved by data. On the other hand, concern is rising that data dominance may prevent competitors from providing services, etc. which use the data concerned because data is the source of competitiveness. This concern is widely shared by many countries, getting them to start discussion on how to assess data in terms of competition policies in recent years.

For instance, “BIG DATA: BRINGING COMPETITION POLICY TO THE DIGITAL ERA,”³ developed by the OECD Competition Committee in 2016, suggests that big data provide market power and competitive advantage and examines the implications of big data for enforcement of competition law. A similar initiative is taken in Europe as well, where competition authorities in Germany and France worked together to analyze problems related to the expansion of collection and utilization of data in terms of competition law, and released a report⁴ which summarized challenges arising from data collection in the digital industry, etc. which the competition authorities would need to address. However, these approaches offer too abstract solutions at least for business operators to find out whether their operations have any problems in terms of competition law; they seem to need more systematic examination which would delve deeper into the realities of data utilization.

In the meantime, it is important to continue improving quality of services, etc. through innovation based on full utilization of data in every field in order to create Connected Industries. In view of achieving this, while fair competition should not be impeded unjustly, it is also undesirable for business operators to hesitate to embark on utilization of data due to their vague concerns that they might violate competition policies. Therefore, it is crucial to discuss ideal approaches to competition policies concerning utilization of data and present them in a manner that is as clear and concrete as possible, thereby eliminating useless concerns business operators may have while protecting a fair competitive environment, and developing an environment where they could compete with each other without worrying about violation. In this respect, the “New Industrial Structure Vision,”⁵ released by METI in May this year, states that clear positioning of data-related rules, regulations, and systems within the context of competition policies is required as part of the effort for their revision in order to realize Connected Industries.

Against this backdrop, the “Study Group for Ideal Approaches to Competition Policies for the Fourth Industrial Revolution” (hereinafter referred to as “our Study Group”) was established to get an overview of the current state of data collection/archiving (hereinafter referred to as “accumulation”) and utilization, and examine how to assess competitiveness of data, what kind of situations are expected to arise going forward, and what needs to be closely looked at if such situations do arise in view of promoting innovation by developing a competitive environment.

³ [https://one.oecd.org/document/DAF/COMP\(2016\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf)

⁴ <http://www.autoritedelaconurrence.fr/doc/reportcompetitionlawanddatafinal.pdf>

⁵ <http://www.meti.go.jp/press/2017/05/20170530007/20170530007-2.pdf>

2. Follow-up on the Report of the Cross-sectional System Study Group for the Fourth Industrial Revolution

Prior to examination, our Study Group reviewed study by the Cross-sectional System Study Group, and interviewed app-related business operators on their current state.

(1) Outline of the Report of the Cross-sectional System Study Group

As discussed in the above 1, the Report of the Cross-sectional System Study Group reveals the change in the competitive environment caused by the advent of digital platformers and at the same time unveils the confirmed realities concerning the app market transactions, etc. as specific examples.

First, the Report provides the following four points as changes in the competitive environment⁶.

1) Network effects

Many platforms play an intermediate role connecting two customer groups, and are characterized by “network effects,” through which the increase in the number of users of services, etc. provided by the platforms will add to the value of the platforms, resulting in more users.⁷

2) Easy scale expansion

Platforms handling digital goods have properties of expanding easily and rapidly due to low cost for transportation, reproduction, etc., and low inventory risk.

3) Information-collecting abilities

As platformers can easily obtain information on transactions conducted on their platforms, they have advantage in accumulating not only information on services, etc. provided by participating business operators but also personal and purchase information of users required for provision of services, etc. In addition to being able to collect a great amount of information, they can use it to increase their negotiating power and value.

4) First-mover advantage

First platformers tend to be hugely influential and new and small to medium-sized enterprises are likely to face an uphill battle in a market environment created when network effects exist and accumulation of information is the source of competitiveness.

Next, the Report looks at places where apps can be downloaded (hereinafter referred to as “app stores”) to get more insight into the realities of transactions in the app market. The Report argues that smartphone OS providers operate app stores by themselves, which have special standing

⁶ Report of the Cross-sectional System Study Group, pp. 2-5.

⁷ Video game consoles are a textbook example. As the variety of software for a certain console grows, the console becomes more attractive to consumers, which increases users of the console, resulting in greater attraction of the console to game software providers as well.

cemented by large market shares held by OS providers and has found and provided the following seven types of transaction cases.⁸

1) Restrictions of payment methods

In some cases, app store operators forbid, in principle, app providing business operators (hereinafter referred to as “app providers”) from using any payment method which does not go through the app stores, thereby forcing app providers to use payment methods the app stores provide, and charge around 30% as a fee for every sale.

2) Inflexible pricing

In some app stores, app providers have no choice but choose prices from a price list provided by app store operators, and are precluded from determining prices as they want.

3) Prohibition of the use of common virtual currency between apps

In some cases, app store operators forbid virtual currency designed to be usable in multiple apps, and allow virtual currency to be functional only in the app where it was bought. As a result, users are not allowed to spend what is left unused in one app in other apps, and app providers cannot corral customers into their app groups.

4) Rejection of apps which compete with those provided by app store operators

Some app stores practically restrict functions of apps which compete with apps provided by the app store operators through app-screening standards for provision in the app stores, thereby putting rival app providers at a competitive disadvantage.

5) Little information provided about sales and refunds

In some cases, app store operators, which have signed a contract allowing them to make refunds to users on behalf of app providers, do not provide information, when they made refunds, on the reasons, users, amounts, etc. to app providers, resulting in difficulty in the prevention of double refunds and restoration to the original state before purchase.

6) Nontransparent screening standards and their application

With regard to screening of app contents conducted by app store operators, in some cases, screening standards as well as indications of standard violation are vague and murky, placing app providers on insecure ground.

7) Limitation of service provision which bypasses app stores

Apps provided through app stores rank high in search results when users search for apps on search engines pre-installed on OS, which indicates that users are practically led to app stores.

With regard to the realities of transactions as discussed above, some argued that these instances may constitute violation of the Antimonopoly Act during discussion at the Cross-sectional System Study Group. The Report, however, states, “A detailed and refined study is needed to determine if the above mentioned actual conditions of transactions violate any laws and regulations including

⁸ Report of the Cross-sectional System Study Group, pp. 8-11.

the Antimonopoly Act, and therefore sweeping conclusions cannot be drawn” and recommends that the government keep a close watch on the state appropriately for the time being.⁹

(2) Follow-up on the Report of the Cross-sectional System Study Group

Based on the argument of the Cross-sectional System Study Group, our Study Group interviewed app-related business operators on their current state and found the following:

- With regard to information-collecting abilities, policies vary considerably depending on the platformer. In some cases, platformers do not collect purchasing or other personal information of users by keeping required information to the minimum.
- First-movers do not necessarily keep an advantage considering the current state where consumers tend to favor services by newcomers and the total amount of data which can be acquired through the internet keeps growing.
- App store operators provide not only means which let app providers sell their apps with ease but also a development environment, etc. (including tools to develop and sell apps) while offering consumers places where they can safely obtain apps.
- App store operators provide their own payment systems, thereby preventing fraudulent activities and use for the purpose of money laundering, and making continuous sound store operation.
- App store operators prevent app providers from becoming free riders by charging them fees for their use of payment systems.
- The system where app prices have to be chosen from price lists is necessary in terms of healthy system operation, considering that stores make sure that apps could be available in a variety of countries which use different currencies and have different tax systems in place. As well, price lists come with various options, which make it possible for app providers to set prices in a flexible manner.
- It is systematically impractical to introduce functions to allow common currencies considering issues of security and fraudulent activities, technical limitations, etc.
- Some app store operators have already started making efforts, for example, by releasing API (Application Programming Interface) which lets app providers see the state of refunds.
- Screening standards are necessary in terms of consumer protection as well, and they are applied in a uniform and transparent manner. As well, coupled with related agreements, they act as guidance for app providers.
- Screening standards are applied in a uniform manner and app stores do not reject apps in an especially unfair manner just because they compete with apps which app store operators provide by themselves.

⁹ Report of the Cross-sectional System Study Group, pp. 11-14. As examples of possible violation, some pointed out that restrictions of payment methods and nontransparent refund process might constitute abuse of a superior bargaining position.

As discussed above, a detailed and refined study is needed to determine if an individual action violates any laws and regulations including the Antimonopoly Act, and sweeping conclusions cannot be drawn. However, these details and their appropriateness should be noted when determining if there is any violation of laws.¹⁰

According to “Japan Revitalization Strategy 2016”¹¹ and “Investments for the Future Strategy 2017,”¹² Japan Fair Trade Commission is supposed to enforce laws strictly and appropriately in the event that violation of the Antimonopoly Act has been confirmed.¹³

3. The actual state of data utilization

When examining the impact of data accumulation and utilization on a competitive environment, it is necessary to find out how data is accumulated and utilized. To this end, our Study Group interviewed app-related business operators on the current state concerning app store business as discussed in the above 2 (2) and the actual state of data utilization. As well, in view of collecting relevant cases widely and analyzing them accordingly, Committee Members, Harada and Hiratsuka, gave presentation on the actual state of data accumulation/utilization, and the secretariat (Competition Enhancement Office, Economic and Industrial Policy Bureau, METI) held hearings (hereinafter referred to as “hearing survey”) with around 40 business operators which operated business utilizing data.

As a result of these efforts, it has become clear that many business operators are providing various services, etc. by using a variety of data while the state of data accumulation/utilization varies widely depending on the business operator, and some have just begun data utilization. Nevertheless, analysis of how data is accumulated and utilized by individual business operators confirmed that they have many things in common as well regardless of what industries they do business in. Therefore, in view of investigating the impact of data on a competitive environment in the most concrete manner possible, our Study Group decided to look closely at commonality and attempt to create and classify models for business utilizing data.

(1) Properties of data

Data used in business varies widely in its types and contents. That is why, for the sake of argument, data is sometimes organized as follows:

- 1) Classification based on what data expresses
 - Personal data (data concerning individuals including age, gender, address, preference, etc.)

¹⁰ Report of the Cross-sectional System Study Group also states, “Some of these conditions of transactions contribute to the improvement in the protection or convenience of consumers and are not necessarily “unjust”, which needs to be taken into consideration for judging on their legality.” (p. 11)

¹¹ http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/2016_zentaihombun.pdf

¹² http://www.kantei.go.jp/jp/headline/pdf/seicho_senryaku/2017_all.pdf

¹³ Japan Revitalization Strategy 2016, p. 60. Investments for the Future Strategy 2017, p. 88.

- Industrial data (data concerning business activities including a machine operation status, a flow of people or goods, etc.)
 - Public data (data concerning areas of official statistics, tourism, public transportation, etc.)
- 2) Classification based on the place where an action indicated by data was taken¹⁴
- Virtual data (data collected online including through websites, etc.)
 - Real data (data collected through sensors, etc. installed in the real world)
- 3) Classification based on how data is managed or provided
- Open data (publicly available data including weather forecast, official statistics, etc.)
 - Closed data (secret data including personal data, industrial data, etc.)

As all of these classifications are made based on properties of data, and useful to organizing business models which accumulate/utilize data and examining the impact on a competitive environment, this Report also uses these classifications.

(2) Accumulation and utilization of data

Data is intangibles and cannot be used unless it has been accumulated in one way or another, but merely accumulating it does not translate into any value in business. It is considered to exhibit its value, in other words, be utilized in business in cases where: 1) Data itself is traded; or 2) Data is used for development, improvement, production, or provision of services, etc. (hereinafter referred to as “service provision, etc.”)

In the case 1) above, where a market has been formed, data is just another object of trading, and thus, in principle, all it takes is observation of the state of the relevant market share as in the case of other general services, etc.¹⁵ Therefore, for examination of “data utilization” in particular, this Report looks mainly at the case 2) above where data is used for service provision, etc. and attempts to reveal the actual state thereof.

(3) Creating models for business based on data accumulation/utilization

In the “first stage” of data utilization, where countries compete especially in virtual data, Europe and the US have taken the lead while Japan is also fast developing. The race is considered to shift to its “second stage” going forward, where countries will compete in real data.¹⁶ Our hearing survey has found that virtual data is used in a variety of fields including marketing, targeted advertising, recommendation, etc. and some business models are emerging with complex ecosystems composed of a combination of multiple services, etc. On the other hand, while real data is used for

¹⁴ Interim Report on the New Industrial Structure Vision (2016), p. 22.

¹⁵ This is true in principle. In reality, however, examination should be made on a case-by-case basis, and various theories can be found in terms of what should be considered important in what kind of cases; even in some cases of general services, etc. which are nothing to do with data, factors other than market shares can be important for examination.

¹⁶ Interim Report on the New Industrial Structure Vision (2016), p. 22.

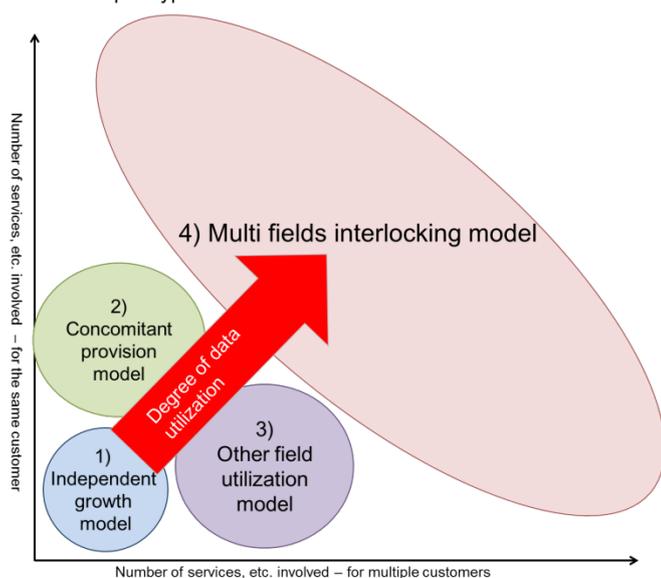
product development, improvement of operation efficiency in manufacturing facilities, energy-saving initiatives, and optimization of flows of people and goods and there are some business models which apply data gained from one service to other services, few complex business models have been developed which are based on ecosystems made of two or more such services, etc. which utilize data. Nevertheless, some startup business operators are emerging with intention to combine multiple services, etc. by adopting business models where they enhance their core services, etc., which they view as their strength, by working with various other business operators.

As seen in these business models, data cannot be utilized if not accumulated, and will not produce value either just by being accumulated. What is crucial when starting business which utilizes data is 1) how to develop a system to accumulate data and 2) how to produce added value (profits) from accumulated data. Data produces value, thereby securing market competitiveness for services, etc. only when a business model in which 1) and 2) are well-coordinated has been realized. On the contrary, if there is no clear data utilization model in mind, and “data is being gathered for future possible use without much thought,” then neither value nor competitiveness is likely to be gained.

Among ways to utilize data for services, etc., the most typical one which has been used for quite some time is considered to be developing and implementing services, etc. based on data acquired from research and development activities, etc. However, recent years have seen a spread of business models where data gained from providing services, etc. will be used to keep improving the value of services, etc. In light of this, this Report will classify business models utilizing data into four types in order to organize relationship between data utilization and improvement of value of services, etc. before assessing the impact on a competitive environment.

Before the outline and nature of each type will be discussed individually, the following overview of relationship among these types should be looked at, which clearly illustrates how competitiveness of a model grows as the number of services, etc. involved increases.

[Overview of relationship of types of business models which accumulate/utilize data]

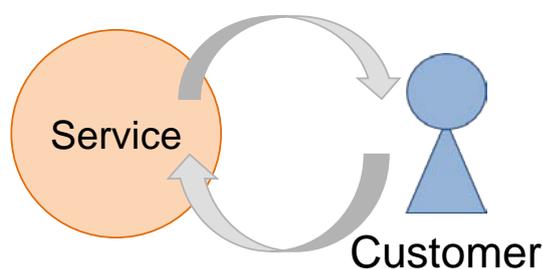


- Classified into the following four types based on how data is accumulated/utilized:
 - 1) Independent growth type
 - 2) Incidental provision type
 - 3) Other fields’ application type
 - 4) Multi-faceted linkage type
- As a model belongs to a type higher, more to the right on the chart, data utilization becomes more convoluted, and data value becomes greater accordingly, making the model more likely to be unrivaled and have higher competitiveness.

As a prerequisite for classification, the question of how a “single market for services, etc.” should be defined must be answered. In this regard, many say the market in this sense should be defined by

whether there is substitutability in both supply and demand aspects, especially in the demand aspect.¹⁷ For instance, let's look at a case of a product which requires regular maintenance and think if a maintenance service market should be defined separately from the market of the product. Here, the question comes down to whether there is a maintenance service provider available other than the product's manufacturer and therefore the buyer of this product has a choice of a maintenance service provider apart from the product's seller. To be more specific, if the maintenance service is provided as an after-sales service by the manufacturer or the seller and others have difficulty in providing maintenance, a single market including maintenance is likely to be defined; if independent maintenance providers exist or someone other than the manufacturer or the seller is providing maintenance, then separate markets are likely to be defined.

1) Independent growth model

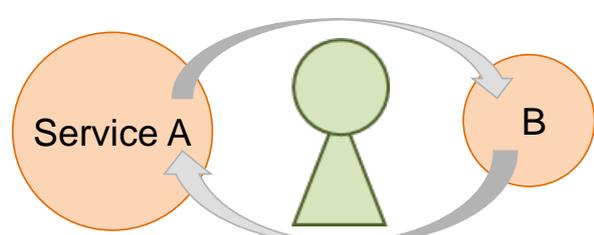


- Quality will continuously be improved through service provision, etc.
- The system of measuring effects of services, etc. is important.
[E.g.] Search service, recommendation, sales of updatable software

This type collects data by getting feedback from customers through service provision, etc., and improves services, etc. by the obtained data, hence higher added value.

For instance, search services, matching services, and other services equipped with search functions such as SNS, can collect and analyze search queries provided by users and what they chose from search results, thereby improving service quality, and increase accuracy of targeting and recommendation by gathering personal information of users and their selection results. As improving quality of services, etc. requires finding out how users evaluate the results of service provision, etc., how to develop a system to measure effects of one's services etc. is important.

2) Concomitant provision model



- Through provision of Service A, value of Service B provided to the same customer increases.
- Value of A also improves by B.
[E.g.] Sales of products and provision of maintenance service
Sales of devices and provision of applications

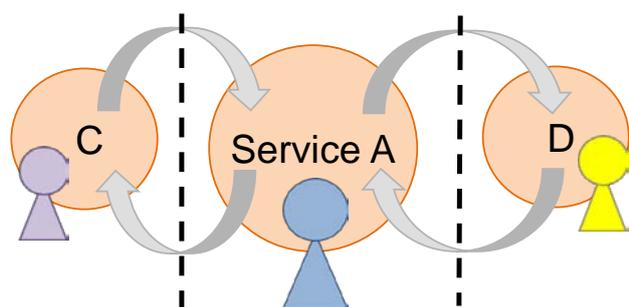
¹⁷ With regard to definition of a market, in the “Report of Study Group on Data and Competition Policy,” Japan Fair Trade Commission Competition Policy Research Center also states, “a market (particular field of trade) is to be determined in principle in terms of substitutability for users and, in addition, in terms of substitutability for suppliers where needed, ... upon evaluation according to the Antimonopoly Act” (p. 24), and “with regard to trade related to accumulation and utilization of data, ... it is reasonable to assume that how to define a related market is in general no different from how markets for other general goods are defined.” (P. 25)

This type applies to business models where if a company provides a customer of a service (Service A) with another service (Service B), added value of Service B improves by applying data gained from Service A. Furthermore, sometimes a virtuous cycle will be created as value of Service A also improves because it lets the customer receive high-value Service B.

One example would be a case where a company sells a product (Service A) which requires regular maintenance and is equipped with a sensor, and provides efficient maintenance service (Service B) based on data gained from the sensor, or offers consulting service (Service B) to advise customers on effective use of the product based on operation data obtained from the sensor. In this case, the fact that customers can receive maintenance service or consulting service could well lead to greater added value of the product.

On another note, in many cases of this type, there is a clear separation of profitable services and other complementary services, the latter often offered for free. For instance, the company selling the product equipped with a sensor in the above could increase their competitiveness in sales of the product (Service A) by offering maintenance or consulting service (Service B) for free. Alternatively, the company could provide the product with a sensor for free or at a bargain price (Service A), thereby increasing users of software for the product or of services provided by utilizing data obtained from the product (Service B), hence greater sales.

3) Other field utilization model



- Value of Service A is improved by using data obtained from other services, etc.(Service C or D) provided to different customers.
- Effective for corralling customers and increasing the source of revenue
[E.g.] Life insurance utilizing data gained from health support apps

This type includes business models which provide a core service (Service A) to a customer and combine it with other services provided to other users (Service C/D), thereby improving value of Service A, attracting customers to Service A, and securing source of revenue other than Service A. Services to be combined with the core service are assumed to be either (i) those in which data used in Service A can be collected (Service C) or (ii) those for which data gained as a by-product through provision of Service A can be effectively utilized (Service D). In the Concomitant provision model discussed in ii) above, multiple services, etc. are provided to the same customer whereas, in this type, multiple services, etc. are provided to different customers.

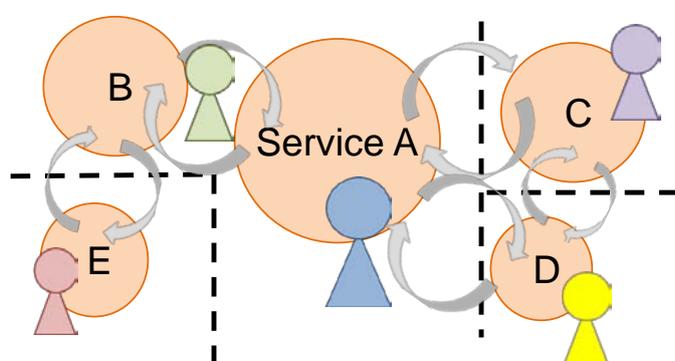
For instance, aiming to collect data to be utilized in a service (Service A), a company may distribute a free app (Service C) to the general public unrelated to Service A; or a company may provide actual or predictive values obtained by analyzing data gained from a product (Service A) to a third party for profit (Service D).

As this type involves services, etc. provided to different customers, it can reach a wider customer base. For this reason, there are benefits including: (i) a greater variety of data could be obtained; (ii)

core services, etc. could have greater customer attraction; and (iii) sources of revenue other than core services, etc. could be found.

On another note, as business models of this type aim to improve value of services, etc. by using data gained from other services, value of the data-collecting services may not automatically improve in some cases. For instance, if data gained from a search service (Service C) is used in targeted advertising (Service A), value of targeted advertising will increase by use of search service but it does not translate into higher value of search service. In cases like this, it is necessary to develop measures to improve value of data-collecting services, etc. in order to further strengthen multiple services. This challenge is seemed to be overcome, in case of search services, through improving search accuracy by using data they gain by themselves as discussed in the above i) Independent growth model.

4) Multi fields interlocking model



- By combining multiple services, etc. data obtained through each service, etc. will increase value of another peer service, etc.
- As multiple services, etc. work with each other in a complex manner, it is not easy to clarify the whole picture of a business model of this type.
[E.g.] Advanced targeted advertising

Combining the types discussed above, this type groups business models where multiple services, etc. work together and construct a system to accumulate and utilize data as a whole (ecosystem), through which individual services, etc. will mutually improve their value. In this type, having only one profitable core service is often the case but there may be multiple of them. Even in the case of a single core service, the overall picture could be complex, for example, with the existence of a service, etc. (Service E) which is not directly connected to the core service (Service A) but works to improve value of Service A indirectly through other services, etc. (Service B).

For example, in case of providing targeted advertising (Service A), another separate service is run to collect data of targets for Service A as a matter of course. But sometimes other services (Service C/D) are combined to get more data. In addition, these other services (Service C/D) may be working with each other, or connected to yet another service (Service E), thereby enabling involved services to mutually use data and improve their value. Through this, the core service can utilize data gained by other services and attract customers from them as well, while improving the accuracy of targeted advertising and strengthening competitiveness.

In this type, as a huge ecosystem will be developed by combining various services, which enables it to reach a wider customer base than in the other field utilization model of iii), benefits which can be gained include: (i) a greater variety of data could be obtained, (ii) one service could act as an opening and lead customers to other services, etc. in the ecosystem, and (iii) many sources of revenue could be found. And it is reasonable to think that the greater the ecosystem is, the greater

differentiation from other business operators can be realized, and the greater success can be expected.

4. Organizing general understanding in terms of competition policies

(1) Our Study Group's stance upon organizing understanding in terms of competitive policies

With regard to how to understand data-utilizing trade in terms of competition policies, discussion is underway in Japan as well and the “Report of Study Group on Data and Competition Policy” (hereinafter referred to as “CPRC Report”) released in June this year by Japan Fair Trade Commission Competition Policy Research Center (CPRC) presented its view that data collection, especially if done unjustly, or unreasonable data hoarding by monopolistic or oligopolistic business operators may constitute violation of the Antimonopoly Act.

While it is of great significance that the CPRC Report clearly provided some of the actions which may be deemed as violation, it is important to present not only specific actions but also a simple framework of understanding for business operators that are not specialized in competition policies to examine what kind of problems could arise from business they are conducting or are going to conduct. Therefore, this Report will present how to understand competition policies from the perspective of what approach business operators should take when considering utilization of data in Japan in order to avoid risk associated with competition policies.

For an approach to be easily adopted by business operators, it needs to let them consider their own case easily, and therefore, it seems to be effective to present a method through which examination would be made based on business models classified in the above 3 (3). With this in mind, this Chapter organizes general understanding in terms of competition policies, the next Chapter 5 presents possible acts and points to be noted according to the classification of business models, and finally the Chapter 6 applies specific understanding gained in Chapter 5 to cases presented in the CPRC Report as examples (assumed examples).

On another note, as authority to interpret and enforce the Antimonopoly Act, which is at the basis of competition policies in Japan, is held by Japan Fair Trade Commission, the Commission will determine legality of each case appropriately. Therefore, please note that understanding and assumed examples in this Report are provided only in generalities.

(2) General understanding in terms of competition policies

Generally speaking, competition is held in a market amid various regulations, which is true in the case of data accumulation and utilization; it is a given fact that competition thereof is restricted by, for example, the Act on the Protection of Personal Information and the Unfair Competition Prevention Act.¹⁸ These individual regulations were established for respective purposes, but they, in terms of competition, collectively provide a field within which business operators work hard

¹⁸ With regard to relationship with other laws are regulations, the CPRC Report states, “Apart from the Antimonopoly Act, Japan has the Act on the Protection of Personal Information and other laws in place, and in the event of consumers, etc. suffering damage by an unjust act according to those laws, the case should be addressed based on the Act on the Protection of Personal Information or consumer laws in principle.” (p. 39)

together and compete with each other thereby maximizing social surplus while making incessant innovation more likely.

Competition policies aim to secure fair and free competition in the market, and for that reason find a problem when specific acts, if conducted in a market, impede competition. In this respect, “Act X Situation” will be found at the basis of understanding in terms of competition policies. To be more specific, a problem is confirmed if competition is found to be actually impeded based on (i) the fact that a specific “act” was conducted and (ii) examination of in what “situation” the said act was conducted; the same “act” could result in different assessment in terms of competition policies depending on the “situation.” In other words, exclusionary practice which, if conducted by business operators with market power, would certainly be found problematic, may not be deemed to be impeding competition if there is little impact on the market’s competitive environment due to circumstances, e.g., the company which conducts this act does not have a large market share. As well, even if a company has dominance in a market, if it is a result of fair competition, then the company is not to blame.

This idea is considered evident in the Antimonopoly Act which embodies Japan’s competition policies. The Act extracts and categorizes “acts” which may impede competition if conducted by business operators into groups, and prohibits each of them, as seen in Article 3 concerning private monopolization and unreasonable restraint of trade and Article 19 on unfair trade practices.¹⁹ For instance, definition of private monopolization (Article 2(5)) first provides details of acts as in “such business activities, by which any enterprise, individually or by combination, in conspiracy with other enterprises, or by any other manner, excludes or controls the business activities of other enterprises”. In addition, for an act to constitute private monopolization and be prohibited, it has to be not only an act of exclusion or control, but also done in a certain situation, “thereby causing, contrary to the public interest, a substantial restraint of competition in any particular field of trade.”

Determination of violation in terms of competition policies requires examination of a “situation” in order to answer key questions: if a violating act can be confirmed or not, and in addition, if the act is impeding (or is likely to impede) competition or not. This basic premise will not change even in the case of data-utilizing services, etc. In this regard, a big challenge in the market of data-utilizing services, etc. is finding a way to understand a “situation” appropriately.

(3) Assessment of a “situation” in data accumulation/utilization

Determination of whether competition is impeded or not is usually made on a case-by-case basis by examining whether a position which allows a business operator to influence price, quantity, etc. in a certain market (dominant position) will be created, maintained, or strengthened, or, even if not that serious, will be leading to lessening of free competition from the perspective of market shares, the degree of market concentration, and how easy new entry is.²⁰

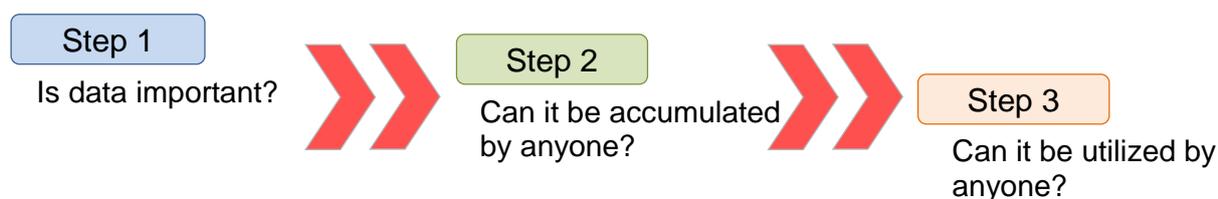
¹⁹ It is considered that unreasonable restraint of trade includes cartels (Article 2(6)), and unfair trade practices include tie-in sales (the General Designation (10)), trading on restrictive terms (the General Designation (12)), trading on exclusive terms (the General Designation (11)), abuse of a superior bargaining position (Article 2(9)(v)), etc.

²⁰ For instance, a “substantial restraint of competition,” which is a prerequisite for private monopolization discussed in the main text, refers to circumstances in which “due to a decrease of competition itself, it has emerged, or it is emerging that the specific entrepreneur or entrepreneur group may, to a certain extent, freely

This is true in the case of data-utilization services, etc. except that competition could also be impeded in these services, etc. when value of services, etc. by others is impaired by restrictions concerning data accumulation and utilization because value of these services derives from data. Therefore, with regard to data-utilization services, etc., not only a “situation” of the market of services, etc. revealed by market shares or other information but also a “situation” concerning data has to be looked at.

Unlike services, etc., however, data is created by business operators themselves, or received from those who created it, and that is how data is accumulated. Therefore, in many cases there is no market for trading data. For this reason, it is not surprising if a “situation” concerning data is not suitable for examination in terms of shares or the degree of concentration of the market. This is why an approach to examine a “situation” concerning data without relying on simple market shares, etc. has to be formulated.

From this perspective, by focusing on competitive injury by data accumulation and utilization, the “three step” approach, as seen in the following diagram, will emerge: 1) the impact of data, (b) possibilities of accumulation, and (c) possibilities of utilization.²¹



Each step is detailed below.

On another note, even in cases where competitive injury is determined as a result of examination of a “situation,” there could also be competition-promoting effects through streamlined service provision, etc. and quality improvement realized by data utilization, which should also be noted.²²

control the market by influencing conditions including price, quality or quantity.” (Tokyo High Court judgement, September 19, 1951 (Toho-Subaru case), Tokyo High Court judgement, December 7, 1953 (Toho-Shintosho case). Quoted from the latter.) This is interpreted as indicating a “substantial restraint of competition” means existence of so-called market power. The Supreme Court judgment on the NTT East case (December 17, 2010) clearly states that a “substantial restraint of competition” refers to “creation, maintenance, and strengthening of market power”.

²¹ The CPRC Report states that determination of whether competition in the market of data accumulation/utilization will be lessened or not will be made by considering comprehensive issues including the position held in the market by the business operator in question as in other cases. In addition, the Report states, “upon determination of anticompetitive effects caused by data accumulation, ... it should be considered whether or not it is technically and economically possible for new entrants to realize data accumulation which has equivalent utility value while looking at the effect of what will become available from combination of different kinds of data, the degree of increase of utility value due to accumulation of a greater amount of similar data, and limitedness of source of the data concerned.” (p. 32)

²² With regard to competition-promoting effects stemming from data accumulation/utilization, the CPRC Report also states, “data accumulation/utilization itself ... is an activity promoting competition, hence desirable in terms of competition policies, and is not a problem in terms of the Antimonopoly Act.” (p. 21) In addition, the Report calls for regulation by the Antimonopoly Act in the event of “an unjust act such as an act to exclude competitors” and states, upon judgement, “the act in question needs to be judged in terms of the Antimonopoly Act while taking into account competition-promoting effects, if any, including promotion of

1) The impact of data

The impact which data has on services, etc. needs to be examined as a prerequisite for understanding competitiveness realized by data accumulation/utilization. If equivalent service provision, etc. is possible without data, then competition could arise even if there is a business operator which holds a dominant position in data accumulation/utilization. In this case, data accumulation/utilization itself is in general unlikely to impede competition, and there would be no need of examination especially in terms of data.

When data does affect services, etc., in some cases data is crucial and services, etc. could not be provided without it, but in many other cases, data merely realizes greater competitive advantage by improving quality of services, etc. or reducing prices compared to cases where data is unavailable. For instance, when providing maintenance service to a product, operating data of the product is not essential but allows a business operator to improve the product's operation efficiency by providing maintenance service at the right time or to keep cost low by avoiding excessive parts replacement.

If data is essential, it goes without saying that it is necessary to consider the impact of the situation of data accumulation/utilization on a competitive environment. But even if data is not absolutely necessary for a service, it is equally necessary to examine the impact of data accumulation/utilization if a great impact is confirmed on quality or price of the service by looking at the difference from competitors produced by data accumulation/utilization.

2) Possibilities of accumulation

In cases where the impact of data is found to be substantial as a result of consideration in 1), examination will be made to find out whether a business operator which accumulates and utilizes data could impede competition by use of competitiveness realized by data. As securing of fair competition can be rephrased as securing of an environment where competitors could exist, it should be examined whether existing competitors or new entrants could utilize data in the same way as (or whether they could follow) the one which utilizes the concerned data. In this regard, the question comes down to whether or not other business operators could conduct business without accumulating necessary types of data by the necessary amount for utilization, which makes the second step.

To answer this question, it is important to specify "types of data required for services, etc. under examination." For instance, if data on movement of people is required for provision of some service, possibilities of data accumulation differ greatly if data is on people on street or in factories. Furthermore, even if data required is that on movement in factories, there could be different levels of requirements – Is data on any factory acceptable? Does it have to be some sort of factories which have introduced certain equipment? Or does it have to be on a specific company's factories?

What data is required has to be determined on a case-by-case basis, but in general it corresponds to those whom the service in question will be provided to. For instance, in case of providing a service to consumers, data of the target segment for the service is required, but it does not have to be data of specific individuals as long as data comes from the same segment that the business operator targets.

As well, in case of factories, if a business operator wishes to provide services, etc. widely to factories in general, the business operator wants data of factories of any kind, whereas, in case of providing services, etc. related to specific equipment, the business operator wants data of factories which use such equipment regardless of what company runs those factories. From this perspective, data of specific business operators or individuals is required only in limited cases, for example, where some data provider has established a dominant position in a market and nobody else can secure sufficient data.

From the above discussion and understanding, possibilities of data accumulation are considered to be determinable from the following perspectives:

(i) Accessibility

Whether competitors can create/generate data by themselves, or obtain it from others needs to be examined from the perspective of if they have access to data or not.

In cases where data itself is traded and a market has been formed for that, anyone can obtain data by partaking in the trade, and thus there will be no issue of accessibility in general.²³ Even if data is not traded but in very few cases require data which is held only by specific entities as discussed above, then it is reasonably assumed that competitors operating similar business normally have access to similar data in many cases.²⁴ Therefore, examination will be made to find out if there is economical, contractual, legal, technical, or other special restrictions so significant as to preclude competitors from accumulating data.

For instance, some may question if it is possible to invest capital to install sensors and a large-capacity server and to secure communication functions in case of a company creating data by itself (economical restrictions). As well, things to be considered include whether, in case of a company obtaining data from others, a contract stipulates that the counterparty allows the company to keep data (contractual restrictions) and whether laws limit handling of data (legal restrictions).

In the meantime, it should be noted that the state of the restrictions will constantly change as technology advances. In some cases, change in an assumed environment may promote competition. For instance, storing a large amount of data used to require installation of a large-scale server, hence substantial initial investment. But as major business operators spread their cloud services, cost of data storage has relatively declined.²⁵

As well, in cases where there are many ways to obtain data, accessibility is considered to increase accordingly. For instance, if the location information of customers is required, smartphones would allow use of Wi-Fi and radio data from a base station in addition to GPS data through apps, some or all of which may be accessible by not only OS providers and telecommunications carriers but also

²³ If an act to unjustly impede competition is conducted in the said data trading market, it may become a problem as a matter of course.

²⁴ In this respect, the CPRC Report also states, “it is often the case that, even if a specific entity holds certain data, others could also hold and use the same or similar data easily by obtaining it by the same or other means or reproducing it from the specific entity.” (p. 3)

²⁵ In response to the fact that tools to accumulate and analyze a large amount of data are provided to customers, the CPRC Report also states, “the case like this promotes competition in the sense that customers ... will be able to accumulate/analyze data efficiently at low cost.” (p. 17)

app providers. As well, in some cases, GPS location data may be obtained from not only smartphones but also car navigation systems and wearable devices.

(ii) Securing quantity

As improving service provision, etc. or value requires a certain amount of data, it has to be examined whether competitors can secure a sufficient amount of data even if data accumulation is possible.

A sufficient amount of data has to be determined on a case-by-case basis, by analyzing services, etc. that are currently provided. Upon determination, especially the following has to be noted:²⁶

○ Network effects

In cases where network effects are in place, in other words, the increase of users of a service, etc. will increase value of the service, etc., thereby further attracting users, prospective users will be more likely to choose services, etc. with greater value, in other words services, etc. which already have a great number of users. As a result, competitors will face greater difficulties in attracting new customers and following the leading business operators. Therefore, in cases where services, etc. utilizing data gained from customers will be provided, whether and to what degree network effects exist is a significant issue related to data quantity.

Examples of services, etc. which produce network effects include websites for e-commerce and travelling where a greater number of products bring in a greater number of users, which then attract even more products, as well as SNS whose value increases as a user base expands.

○ Switching cost

Switching cost refers to cost incurred when a user changes services, etc. he or she uses, and more specifically it is considered to include history of access, information provided and saved in the past, the level of operation proficiency, etc. If the switching cost is high, customers are less likely to move over to a new service from familiar providers, presenting difficulties accordingly for competitors to follow the leading business operators by data accumulation and utilization. On the other hand, if data portability is provided and customers can easily switch to other services, then switching cost is low, resulting in an environment which is likely to see competition.

For instance, in a new service which provides schedule and address management functions, requiring users to enter the same information they store in another similar service from scratch could prevent their switch, but if users could transfer data they have already provided in one service to another easily, switching cost declines substantially, promoting competition.

○ The state of homing

In some services, etc., multi-homing may occur where multiple similar services, etc. are used in parallel. In this case, even if there is already a dominant service in a market, other services, etc.

²⁶ The Facebook/WhatsApp case determined that the presence of network effects is a factor which affects users' switching cost and the expansion of supply capabilities of competitors. (Case No COMP/M.7217-Facebook/WhatsApp para.114,126,129)

have a greater chance to be used, which makes data accumulation relatively easy, resulting in an environment where it is not difficult to secure a sizable amount of data.

Take for instance general software provided for free. Users could install multiple software programs and use them for different purposes²⁷, which makes it relatively easy for even new software developers to enter the market, and accumulate a sizable amount of data.

However, it should be noted that even if multi-homing is theoretically possible, competitors could have difficulties in keeping pace with the leading business operators in cases where users almost always use the services provided by the leading business operators although they have competitors' services installed as well.

(iii) Types of data

If multiple types of data have to be combined for service provision, etc., each type of data has to be examined from the perspectives of (i) and (ii) above.

As well, each data has to be examined in the same way in cases where a need can be met by any of mutually substitutable data. However, in general, the more substitutable data is, the less likely completion is to be impeded by data.

For instance, in case of targeted advertising, data related to target consumers' interest is needed, which can be satisfied by their search queries, website-browsing history, service-purchasing history, SNS entries, etc., each of which, therefore, will be examined to see whether other competitors have difficulties in accumulating not any data but all of them.

3) Possibilities of utilization

As seen in 2) above, in terms of whether competitors are able to follow the leading business operators, it is not sufficient for them to be able to accumulate a necessary amount of data. They have to be able to utilize data to gain competitiveness in services, etc. In this respect, it is necessary to examine whether competitors who have accumulated data can fully utilize it, for which the following two points should be looked at:

(i) Possibilities of utilization

As in the argument on accumulation, it is necessary to examine whether there are economical, contractual, legal, technical and other restrictions in terms of whether competitors can utilize data by themselves or outsource utilization, thereby improving development and value of services, etc.

Assumed restrictions, for instance, include whether it is possible to secure sufficient human resources both in terms of the number and quality for data analysis (economical restrictions), processing capacity of hardware, AI and performance of software including analysis programs (economical restrictions, technical restrictions), knowledge of individual products required for data analysis (technical restrictions), whether data utilization is allowed by the counterparty of a

²⁷ The notion that the presence of network effects has impeding effects on new entrants was rejected in the Facebook/WhatsApp case partly due to the possibility of multi-homing. (Case No COMP/M.7217-Facebook/WhatsApp para.130-133.)

contract (contractual restrictions), whether data handling is restricted by laws as in the case of personal information (legal restrictions), etc.

As in the previous discussion on accumulation, it should also be noted that the state of these restrictions will constantly change as technology advances. For instance, it is possible that fundamental technology or a platform will be provided for free and made available for anyone or a market for outsourcing development of systems and apps may boom and lower development cost.

(ii) Possibilities of competition through utilization

In cases where first movers have already kept growing their services, etc. by utilizing data, it is possible that their superior positions are solidified and there is too large a gap for competitors, even if utilizing data in the same way, to close. Therefore, it is important to find out how value of services, etc. will improve by utilization of data and how great the current gap is.²⁸ For instance, in general, an additional increment of data, after a certain amount of data has been accumulated, is considered to bring a lesser degree of improvement in value. It is reasonable to assume competitors are more likely to be able to catch up with first movers in cases where the “certain amount” can be easily achieved than in cases where it cannot be reached until services, etc. have taken off and achieved some success.

(4) Assessment of “acts” in data accumulation/utilization

As discussed in (2) above, before deciding on whether there is a problem in terms of competition policies or not, an “act” has to be confirmed and Japanese laws classify subject acts. As they are legally categorized, subject acts are considered not especially different from before even in case of data-utilization business. Naturally, there are some requirements to be met before an “act” is confirmed and these requirements vary depending on the type of acts. However, it can be generalized, though rather forcibly, that it is important whether or not there is “an unnatural characteristic deviating from the scope of normal competition methods.”²⁹

As well, many of data-utilizing services, etc. have just begun, and they are considered to create markets full of new innovators and competitors, going forward. In such markets, things change fast, making it difficult for fellow traders to cooperate and avoid competition. Rather, a more likely problem is that they may individually try to exclude other competitors. For this reason, it is more reasonable to assume, among all “acts”, those of exclusionary private monopolization and of excluding others from the market through unfair practices, etc.

From this perspective, possible “acts” can be reasonably assumed for each model based on classification of business models provided in 3 (3) above.

²⁸ In a hearing survey, one respondent said, “in general, value of services, etc. increases as the amount of data grows but only to a certain amount of data, after which value will not rise as easily.” As well, the CPRC Report states, “in a situation where there is already a great amount of data, the effect of additional data may diminish.” (p. 4)

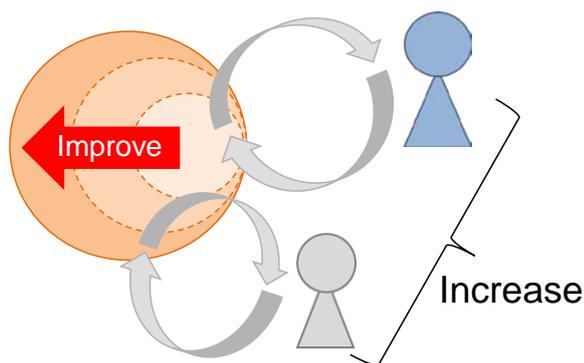
²⁹ The Supreme Court judgment on December 17, 2010 (the NTT East case). Although the quote is from a passage on private monopolization, the idea of looking for unnatural characteristics to distinguish results of natural competition and those of unjust acts is considered generally valid in other types of acts as well.

5. Relationship between classification of business models and understanding in terms of competition policies

Previous Chapter 4 provided generalization of understanding on how to assess data-utilizing services, etc. in terms of competition policies. To provide more specific points to be noted, this Chapter will discuss in what respect problems are likely to arise in terms of competition policies for each type of data-utilizing business models provided in 3 (3) above. As discussed in 4 (4), a data-utilization market is relatively more likely to see problems of exclusion of competitors, therefore the following examination will mainly focus on exclusionary acts.

Before moving on to the following itemized discussions which will provide detailed examination, speaking in generalities, the more complex the kind of trade, the greater the number of factors to be looked at. Nonetheless, it should be noted that, as discussed in 4 (3) 1), data utilization in any type of business operators may improve efficiency or quality of services, etc. resulting in competition-promoting effects among services, etc. and thus it does not always impede competition.

(1) Independent growth model



- While there is a risk of a dominant position being established due to continuous value improvement of a model stemming from the increase in customers, competition is considered to be impeded only in limited cases.
- As the number of customers and data quantity correlate, market share is important upon examination in terms of competition policies. In addition to that, the impact of network effects, etc. should be considered.
- In the independent growth type, which involves a single market, maintaining a share in the market is crucial, and thus, problems are unlikely to arise especially in the phase of competition.

As data accumulation and utilization is closed to a service, etc. in the independent growth model, in general, examination of a competitive environment of the market of the service, etc. alone is considered sufficient.

A service, etc. being completed in a single market means that the number of customers of the service, etc. directly indicates data quantity, which simply means that a market position can be continually strengthened by network effects: if quality improves by data utilization, it increases attraction of the service, etc. which will attract even more customers.³⁰ For this reason, it is

³⁰ This type of network effects where “the increase of users itself adds to the convenience of the concerned service, etc.” is sometimes called “direct network effects.” Often illustrated by telephones, which “automatically become more convenient as users grow” (for instance, the increase in the number of telephone users naturally adds to the convenience of telephones because there are many numbers one can call), direct

considered possible that an excessively popular service, etc. outstrips competitors in quality and shows a downward spiral of cost, thereby establishing its position in the market.

Nevertheless, as many business operators regularly improve quality by utilizing consumer feedback though to a varying degree, in reality, it is reasonable to assume that only very limited cases will find establishment of a market position. Therefore, confirmation of anticompetitive effects should require careful assessment. Specifically, it should follow the understanding of a “situation” provided in 4 (3) above and should apply the three steps. In the process, after looking at whether a sufficient amount of data can be secured as in 2) (ii), special attention should be paid to possibilities of competition as provided in 3) (ii) in order to examine possible competitive injury in future.

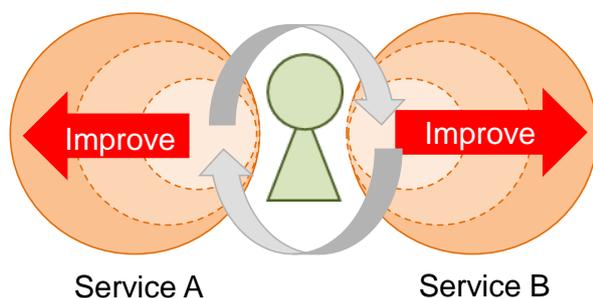
With regard to securing a sufficient amount of data, how large the customer base is, in other words, the share of the concerned service, etc. in the market is important since the number of customers correlates with data quantity. In fact, as it turns out this case will boil down to a share of the service, etc., and in that sense, it is no different from existing services, etc. which do not use data in terms of competition policies. Having said that, while it is important to examine network effects, switching cost, and the degree of multi-homing in addition to market shares from the perspective of how a customer base will change (whether customers switch to other services, etc.), the impact of network effects has to be closely examined since, in the independent growth model, network effects are assumed to be present as discussed above.

In addition, considering that many business operators are considered to be regularly improving quality by utilizing feedback from customers, other competitors are considered capable of following leading business operators in general except in special circumstances, which makes establishment of a market position unlikely. For this reason, possibilities of competition as provided in 4 (3) 3) (ii) should be carefully examined to see if there is no special circumstances. Upon examination, it should be noted that there are various kinds and degrees of value improvement. Take, for instance, service quality improvement based on data collected from users. Merely repairing a service and reducing errors by collecting malfunction or other error data is surpassed in terms of the impact on value improvement by a case where a service, etc. equipped with search functions improves its accuracy by collecting results of how often displayed search results were selected.

As discussed above, data utilization in the independent growth model rarely impedes competition unless strong network effects are in place or data utilization has greatly improved value. Even if it does impede competition, if a relevant “act” is not confirmed then it is not considered a problem in terms of competition policies as has been mentioned a number of times. In this respect, the independent growth model does not allow fast data accumulation before realizing a certain position in the market of the service concerned, which makes it unlikely that a business operator conducts an “act” which may result in competitors stealing its customers in the initial phase of competition. On the other hand, once a business operator has established a dominant position and a “situation” has been developed where a clear gap with competitors will arise through value improvement of data-utilizing services, etc., the business operator may impose conditions to exclude competitors on customers or collect data from customers unjustly in order to maintain or strengthen its position, and therefore whether such acts exist or not will be an issue.

network effects are indicated to have wider network effects if combined by data utilization.

(2) Concomitant provision model

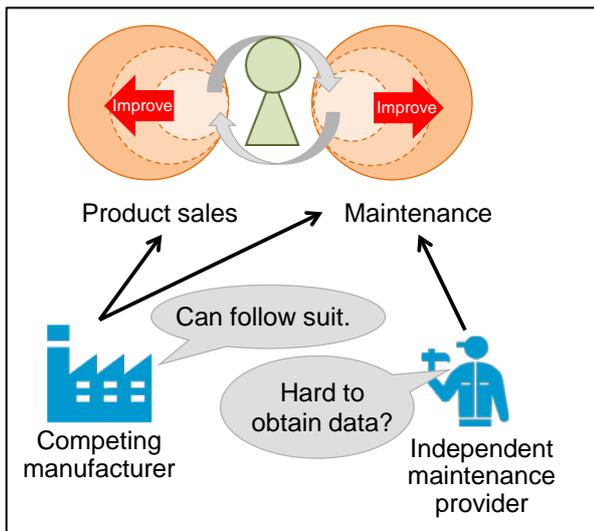


- In general, other business operators can adopt the same business model, which makes competition more likely to be maintained.
- However, competition could be impeded with business operators providing only one service.
- Even in such cases, nevertheless, only in very limited circumstances is competition considered to be impeded in light of the impact of data and competition-promoting effects.

As in the independent growth model, value of services, etc. will be improved by data utilization in the concomitant provision model. However, it is assumed that if a business operator has built strong competitiveness and established a position in a market for a service, etc. (Service A), it could lead to creation, maintenance, or strengthening of its position in another market for a different service, etc. (Service B) in the concomitant provision model where one service contributes to value of another service, etc. Therefore, unlike in the case of the independent growth model, not only the market for Service B, which should be examined for competitive injury as a matter of course, but also the market for Service A, which adds to the value of service B, should be taken into account.

More specifically, when examining competitive injury in the market for Service B, first, its market share has to be examined as in cases where data has no effect in a competitive environment. After that, the three-step approach provided in 4 (3) above should be taken in order to examine data which adds to the value of Service B. When determining possibilities of data accumulation discussed in 2), part of the three-step process, Service A should be examined as a place where the relevant data is accumulated.

As evident from the above, the characteristic of the concomitant provision model stands out when examining data accumulation possibilities in the step provided in 4 (3) 2), therefore the following will delve into this aspect. In the concomitant provision model, because Service B is provided to customers of Service A, naturally Service A and Service B are closely related. Therefore, it is reasonably assumed that, in many cases, a business providing Service A can provide Service B by utilizing data from Service A. If this is the case, then competitors in the market for Service A can enter the market for Service B, which contributes to maintenance of competition, apart from special circumstances where competitors have too small a share in Service A to secure a sufficient amount of data. In the meantime, it is assumed that business operators which only provide Service B have difficulties in obtaining necessary data. In this regard, close examination should be made to find out if there is competitive injury with such business operators by taking the step provided in 4 (3) 1) above and looking at the impact of data.



For instance, let's suppose that a manufacturer sells a product equipped with a sensor and provides efficient maintenance service based on data gained from the sensor. (See the left diagram.) In this case, it is considered relatively easy for a manufacturer which sells a competing product to adopt the same business model, and if that happens, competition is likely to continue in the maintenance service market. On the other hand, for independent maintenance providers which do not sell products, the same level of maintenance service may be hard to achieve. However, they could still provide data-based maintenance service as the product's manufacturer does if data from the sensor is shared by the product users and could be transferred to the

independent service providers. As well, even in cases where data is not shared with others including users, lack of data does not necessarily mean exclusion of independent providers from competition considering that they have provided maintenance service without using data in the first place. Rather, use of data could be viewed as promoting competition by lowering maintenance price and improving service quality. From this perspective, accumulation/utilization of data is considered to be impeding competition only in a very limited "situation."

With competitors providing products and maintenance services and competitors who only provide maintenance in mind, this example illustrates possibilities of competitors following leading business operators. Similar possibilities are considered to exist in a market where there are new entrants. Especially in cases where the entry barrier of Service A is low,³¹ the market of Service B is more likely to see new entrants because those who plan to enter the Service B market can enter the market for Service A at the same time and collect data as existing business operators do.

As discussed above, because the concomitant provision model is characterized by utilization of data gained from a different but closely related service, if an "act" should occur, it would be most likely to take advantage of this relationship. For instance, there could be cases where a business operator, upon providing Service A, forces customers to purchase Service B as well, thereby excluding other business operators from the market of Service B (tie-in sales³²), or a business operator withholds data from specific providers of Service B (refusal to supply³³ and

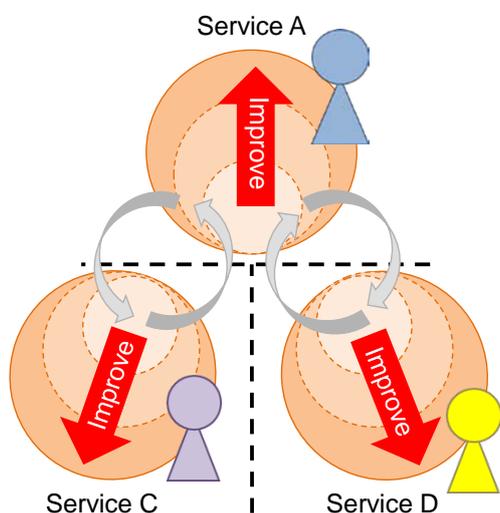
³¹ A good example would be cases where development cost is low and a sales channel can be easily developed, such as provision of online services or apps for which platformers provide a development- and supply-friendly environment.

³² Act of supplying one product (tying product) only on the condition that the trade partners also purchase another product (tied product). If this causes difficulty in the business activities of competitors who are unable to easily find alternative trade partners in the market of the tied product, and therefore undermines competition in the market of the tied product, it may fall under the category of exclusionary conduct.

³³ Act of refusal to supply beyond reasonable degree in the upstream market concerning a product (data in this case) necessary for the trading customers to carry out business activities in the downstream market (the market for services, etc. utilizing data in this case). If this causes difficulty in the business activities in the downstream market of the trading customers who are unable to easily find an alternative supplier in the upstream market, and undermines competition in the downstream market, it may fall under the category of exclusionary conduct.

discriminatory treatment³⁴). As discussed, however, since the “situation” in which competition is considered to be impeded is very limited, these acts do not necessarily become problems in terms of competition policies.

(3) Other field utilization model



- Because this type combines services, etc. provided to different customers, in some cases, different knowhow, etc. is required, which makes it hard for competitors to follow.
- On the other hand, due to greater options for combination, similar effects can be expected without using the same data depending on the combination, which makes it easy for competitors to follow.
- Therefore, it is important whether competitors can adopt the same form of business, or whether similar data can be obtained with a different combination of services. If one of the two conditions is confirmed, then it is unlikely that competition is impeded.

As the other field utilization model is the same as the concomitant provision model in that it is made of a combination of a core service, etc. (Service A) with other services, etc. (Service C/D), the three-step examination provided in 4 (3) should likewise be applied while using the shares of each service, etc. However, it should be noted that the other field utilization model often requires different facilities, capabilities, knowhow, etc. from those required for providing Service A because it combines services, etc. provided to different customers. Therefore, it should be assumed that other providers of Service A may not always be able to offer Service C/D.

Therefore, it is required to examine whether or not competitors providing Service A can accumulate and utilize data likewise. For instance, in cases where a business operator provides smartphone apps for health management or safe driving thereby obtaining relevant data, which the business operator utilizes for product development including core services, etc., it is reasonable to assume that a competitive environment can be assessed by looking at competitors’ technical capabilities and availability of app developers who are willing to work with them. After that, if competitors are considered to have difficulties in data accumulation/utilization, close examination should be made to find out if competition is impeded by further looking at the impact of data as discussed in 4 (3) 1) above.

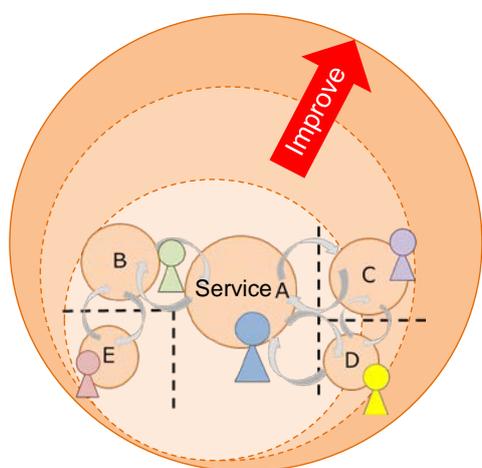
Conversely, the fact that this type is made of combination of multiple services to different customers can also suggest greater options for services to be combined. Therefore, it is possible that competitors combine services other than Service C or D. And if this is the case, it suggests the existence of alternative means for data accumulation, or even the existence of alternative data, which means that competitive injury is unlikely if use of alternative means or data secures

³⁴ Supplier’s act of imposing restriction on the quantity or contents of a product to supply, or applying discriminatory treatment to the condition or implementation of supply in the upstream market beyond reasonable degree.

competitiveness for competitors. Therefore, in the other field utilization model, examination of possibilities of accumulation as provided in 4 (3) 2) is particularly important among all the three steps. For instance, in the previous paragraph’s example using apps, examination would be made to determine if it is possible to accumulate data from devices other than smartphones such as wearable terminals and driving recorders.

As evident from the above, there are more things to be examined for a “situation” in the other field utilization model than in the concomitant provision model. As for “acts,” on the other hand, basically similar acts are assumed in these two types because both types are the same in that value of one service will be improved by data gained from another. However, in the other field utilization model, each service is different and has different customers, which makes tying sales unlikely.

(4) Multi fields interlocking model



- Many different markets are involved and affecting each other, which makes it difficult to use market shares for assessment.
- It is important to determine which markets to be examined and an appropriate scope of impact, and then examine possibilities of data accumulation/utilization while keeping in mind difficulties of following leading businesses and a wide variety of combinations.
- It should also be noted that there could be exclusionary acts in a market where a business operator does not do business especially if it operates a platform business.

Unlike the other types where the relationship between a market for data collection and a market for data utilization is relatively plain, the multi fields interlocking model is characterized by the difficulty of distinguishing the markets for data collection and the markets for data utilization since multiple services, etc. directly or indirectly improve value of other services, resulting in a quite complex relationship of involved services, etc. Therefore, when examining the possibilities of competitive injury by data accumulation/utilization, existing approaches of competition policies through which an impact on a competitive environment will be determined based mainly on individual market shares are considered less useful in the multi fields interlocking model because it is hard to tell which service’s market share should be looked at to determine possibilities of data accumulation, in contrast to the other types where possibilities of data accumulation can be inferred from market shares of services, etc.

This is clearly illustrated, for example, by the targeted advertising market provided in 3 (3) iv). With an aim to improve its targeting accuracy, one business operator may be using search queries, website-browsing history, app-usage records, and various other data, and providing a variety of services, etc. to obtain such data. Furthermore, these services, etc. are not totally independent from each other but have a system to share data and users with each other, for example, through coordination of an app and a website, thereby improving value of each other’s service, etc. In the meantime, the business operator’s competitor may be taking a totally different approach, in which the competitor operates SNS, thereby gaining personal information, interests, etc. of users to be

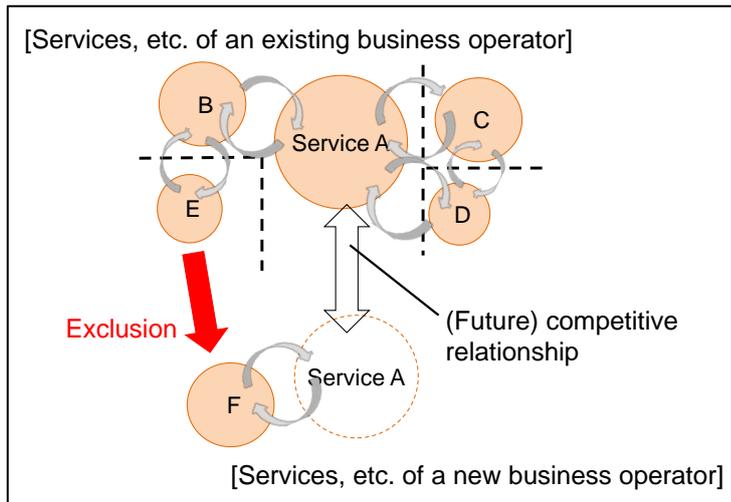
used for targeting. To accumulate more data on users' interests, etc., the competitor may be using other means such as operation of a news website. In cases like this, it is considered quite hard to determine a share for each market.

Therefore, it is important to assess the impact of data by a phased examination process such as the three-step approach provided in 4 (3) above rather than simply relying on market shares. When applying the three-step approach, it is necessary to determine relationships of connected markets and an appropriate scope of examination by, first, closely observing the impact of data on the market of each service, etc. while looking over the whole ecosystem. After that, possibilities of data accumulation/utilization related to each market should be examined. However, it should be noted that difficulties of competitors following leading business operators and a wide variety of combinations, which are also seen in the other field utilization model, will further stand out in the multi fields interlocking model since various services, etc. are intricately combined. For instance, against a business operator which provides various online services in many different markets, and by doing so, obtains information for targeted advertising, competitors are considered to have difficulties in attaining competitiveness by taking the same approach. In this sense, competition could be impeded. On the other hand, however, it is considered feasible for competitors to provide targeted advertising by combining services, etc. that are different in kind from the business operator's, and therefore, the point at issue will be how much competitiveness competitors can gain by combining other kinds of services.

Another thing to be noted is that assessment of the multi fields interlocking model, which involves many different services, etc., will vary widely depending on which services, etc. are looked at. For instance, if a business operator holds a dominant position in the market of a service which collects data for targeted advertising, the company's core business, and is considered to take advantage of such dominance to impede competition in a third market that is not the market for the business operator's core business, then a matter of concern may arise in the market for data collection service even if the market of targeted advertising is seeing fierce competition and not problematic at all.

As evident from the above, examination of a "situation" will be more difficult and require a more careful study than in the other cases. On the other hand, "acts" are generally assumed to be the same as those in the other field utilization model because they are no different in terms of improving value of one service by using data gained from another. However, it should be noted that a business operator may exclude competitors from a market in which the business operator is not directly operating in order to maintain its position in the market of another service, etc. because, especially in the multi fields interlocking model, competitors may enter a market with a totally new combination of services as discussed above. (See the following diagram.)³⁵

³⁵ The same problem may arise in the incidental provision type or the other fields' application type too because data derived from one market is utilized in another in these types as well. However, as discussed in the main text, the multi-faceted linkage type involves more patterns of combinations, and often includes a platform business which is used as a base of services, etc. provided by others, the problem will be more noticeable in this type.



For instance, let's go back to the previous example of targeted advertising. The business operator whose core business is targeted advertising does not provide a matching service by itself, but still may see a benefit in excluding a matching service provider if the provider aims to use data gained from the matching service for targeted advertising. As the multi fields interlocking model business operators provide various services, etc. by themselves, it is not surprising that they provide platform

businesses including devices, OS, browsers, etc. which could be a base of other companies' services. If this is the case to the business operator in our example, the business operator may use its position in its platform business to exclude the matching service provider in question. More specifically, the business operator could ban the use of its platform by the provider, let the provider use the platform but limit available services, or enter the matching service market and give preferential treatment to itself on the platform.

On another note, since the business operator which is suspected of exclusionary act is not providing a matching service, indicators of the "situation" in the matching service market such as market shares are no use. Instead, analysis of the "situation" concerning data accumulation/utilization is considered to be required.

6. Assumed cases

While data-utilizing business widely varies depending on the business operator, today, not a few companies are engaged in active competition by exerting their originality and ingenuity. Our hearing survey found no case which could be viewed problematic in terms of competition policies, either.

However, it does not necessarily mean that competition would continue going forward. As well, in order to prevent cases where a business operator, without knowing, impedes competition, it is important to anticipate possible cases and organize and examine them in terms of competition policies beforehand. The following will provide a number of assumed cases, and examine what "acts" could occur in relation to data accumulation/utilization and, if they do occur, whether presence or absence of competitive injury can be confirmed by approaches provided in 4 and 5 above.

The following assumed cases are strictly fictional. If a case suspicious of violation of laws does occur in reality, Japan Fair Trade Commission is considered to judge it appropriately.

(1) Assumed cases by type of act

1) Access denial

As discussed so far, securing data is an important challenge for business operators because the source of competitiveness is increasingly found in data accumulation/utilization as the fourth industrial revolution proceeds. Therefore, it is possible that business operators which hold data keep it to themselves without sharing it with others, thereby reducing others' competitiveness or making others unable to enter the market. It is a concern shared by the CPRC Report as "Acts concerning access to collected data". The Report states, with regard to access denial (including acts which make it impossible to use means of data acquisition) solely implemented by a business operator, "acts, by those who collect data, of rejecting other business operators' access to it ... are unlikely to be found violating the Antimonopoly Act in principle." However, the Report also provides an opinion that some acts, depending on their kinds, may fall under prohibited acts under the Antimonopoly Act, and examines this issue as follows:³⁶

- Speaking in generalities, business operators can choose to whom they provide their products on what conditions, and thus their selection of product recipients does not violate the Antimonopoly Act, in principle. This is true in the case of accumulated data, and basically, no problem will arise in terms of the Antimonopoly Act.
- However, under exceptional circumstances which meet all of the following, unreasonable restrictions on others' data access may violate the Antimonopoly Act.
 - 1) A specific company holds dominance in a certain market.
 - 2) Data collected by business activities in the market concerned plays an essential role in the same market or other markets.
 - 3) Alternative data is technically or economically hard to obtain.
 - 4) For instance, the following circumstances exist:
 - Without a good reason, the company denies data access which was allowed in the past even though it is assumed that there is no reasonable purpose other than the purpose of excluding competitors from a market for data-utilizing products.
 - Without a good reason, the company denies data access by competitors (or consumers) even though it would suggest exclusion of competitors from a market for data-utilizing products in cases where the company is considered to have an obligation to allow the competitors (or customers) concerned to access data.
 - 5) The company is impeding competition. (The company substantially restricts competition in a particular field of trade or tends to impede fair competition.)
- Likewise, the following case may violate the Antimonopoly Act: 1) A business operator which has established an influential position in a data-trading market or a market for a data-utilizing product by using data collected through an unjust act which involves falsity or violation of law, 2) even though the data concerned is essential to business activities of

³⁶The CPRC Report, p. 43.

competitors and it is technically or economically difficult for them to obtain alternative data, 3) without a good reason, 4) denies data access by the competitors, 5) thereby making it difficult for them to conduct business.

The factors which were looked at in this opinion will be equally considered if the assessment approach for a “situation” provided in 4 (3) above is followed. For instance, necessity of data will be examined when the impact of data is studied in 1), and possibilities of alternative data acquisition is considered to be covered by identification of necessary data and examination of (i) Accessibility provided in 2) Possibilities of accumulation. Therefore, all it takes is considered to be examination of the impact of data and accessibility, etc. including substitutability; more specifically, examination as discussed in 5 above according to the type of data-utilizing business model.

Conversely, it is considered promoting completion and desirable that companies widely allow data access by others including competitors, or that companies, even if they do not allow competitors access, provide data to trading partners and allow them to use as they want

2) Restriction on data providers

The above 1) looked at access to data already stored in a company. In fact, a company may try to attain “data hoarding” when collecting data as well by making sure that others are unable to collect similar data.³⁷ Cooperation of others is essential in data accumulation. This is true of course in the case of having users enter information in view of utilizing personal data for example or even in cases where a company installs sensors to collect data by itself, which often requires cooperation of the counterparty of the installation location. In such situations, the company may set conditions on these counterparties that they should not provide data to the company’s competitors, thereby keeping data to itself.

As evident from the above, it is possible to view data as parts and therefore a kind of input goods to make a finished product, which just happens to be a service, in cases where a company receives data from others and uses it to provide services, etc. In this respect, the “Guidelines Concerning Distribution Systems and Business Practices under the Antimonopoly Act” (hereinafter referred to as “Guidelines Concerning Distribution Systems and Business Practices”) provides examples of violation, one of which is a case where “an influential finished product manufacturer in a market requests an influential parts manufacturer in a market to refrain from selling its parts to the finished product manufacturer’s competitors or to restrict such supply, and obtains the supplier’s consent to do,” which is considered as “Restrictions on Dealings with Competitors, etc.”³⁸ However, according to the Guidelines Concerning Distribution Systems and Business Practices, acts like this

³⁷ The CPRC Report also states, in addition to access denial discussed in 1), “Various acts may be assumed including restrictive trading and exclusive dealing which make it possible for a company to use data unjustly by requiring the counterparty to trade data only with the company, or restricting collection or use of data by parties other than the provider concerned (including owners of equipment concerning industrial data) as a condition for providing underlying technology such as machine learning technique for a fee or free.” (p. 50.)

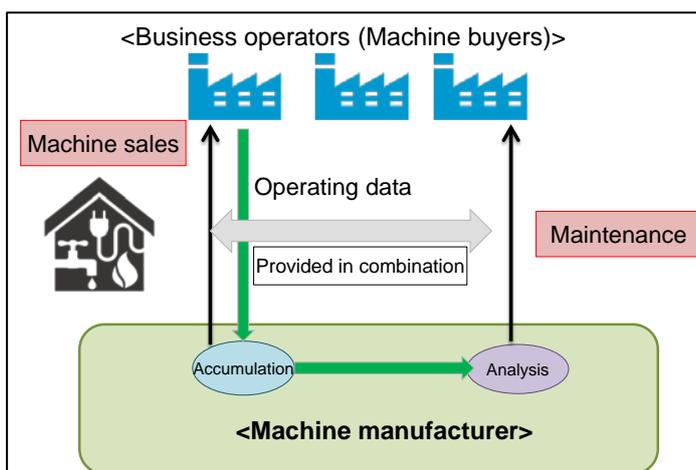
³⁸ Guidelines Concerning Distribution Systems and Business Practices, PART I, Chapter 2, 2 (1) b (ii).

do not immediately suggest violation; rather, violation may be confirmed only in cases where foreclosure effects are produced by such acts.³⁹

If the term “parts” are replaced with “data” herein, the passage indeed suggests examination of possibilities of data accumulation discussed in 4 (3). Therefore, all it takes is considered to be assessing the impact of data prior to examination of possibilities of accumulation, and then examining whether or not data can be accumulated even after such acts according to the approach discussed in 4. (3) 2). On another note, upon examination, there are things to bear in mind for each type of data-utilizing business model as discussed in 5 above.

3) Package deals

When looking at the aspect of provision of data-utilizing services, etc., if a company provides multiple services, etc. to a customer as suggested in the concomitant provision model, it can do so separately of course but, in many cases, such a company offers a package deal which comes with discount. As one of common promotion activities by not just data-utilizing service providers but business operators in general, package deals, in fact, often contribute to increase of utility for users, and thus not an imminent problem. However, they may be viewed as so-called “tie-in sales,” hence problematic in some cases.^{40 41}



One example would be a case where a business operator sells a machine in conjunction with after-sale service such as maintenance in a situation where machine sales and maintenance provision should be considered separate services, etc. due to the circumstances such as the existence of a business specialized in maintenance service. In this case, if the business operator uses operating data gained from the machine for its maintenance service, then the case falls under the concomitant

³⁹ Cases where foreclosure effects are produced refer to “cases where a vertical non-price restraint tends to cause situation that new entrants to the relevant market and the enterprise’s existing competitors are excluded and/or opportunities available to them are reduced (for example, a situation where such restraint makes difficult for them to easily acquire alternative trading partners, and causes increase of their expenses for conduct of business and/or their discouragement from entering the market or developing new products).” (Guidelines Concerning Distribution Systems and Business Practices, PART I, 3 (2) a.)

⁴⁰ As a kind of unfair trade practices, tie-in sales, an act “Unjustly causing a counterparty to purchase other goods or services from oneself or from an enterprise designated by oneself in conjunction with supplying goods or services” (the General Designation (10)), is restricted. In addition, tie-in sales may become an issue as exclusionary private monopolization. (“Guidelines for Exclusionary Private Monopolization under the Antimonopoly Act” (hereinafter referred to as “Guidelines for Exclusionary Private Monopolization”), Part II, 4)

⁴¹ In addition, tie-in acts may be found in a data-trading market. In this respect, the CPRC Report states that “acts such as tie-in sales by combining data provision and other services including analysis” can be assumed. (p. 50)

provision model.

As discussed in 4 (2) above, in general, determination of violation of competition policies requires answering a question of whether the “act” is indeed impeding or likely to impede competition or not. Tie-in sales are no exception; in general, violation will be confirmed if 1) tie-in sales exist, and 2) they impede (or are likely to impede) competition.⁴²

Whether or not tie-in sales exist are basically determined by whether or not there was an act, when providing one service, etc. (tying product), to make trading partners also purchase another product (tied product). A typical example would be a case where a business operator provides customers no choice but purchase a package deal by taking measures to refuse selling a machine or necessary parts alone to customers who will use the business operator’s competitors for maintenance service. However, it is understood that tie-in sales can be sufficiently confirmed just by a business operator being confirmed to have practically made customers purchase tied products even if there is no forcing on individual customers.⁴³ Therefore, tie-in sales can be confirmed if the price of a package deal is significantly lower than the total of individual prices of a machine and maintenance service when separately purchased. However, generally, a price reduction is desirable in terms of competition, and could also be considered rather promoting competition if cost was reduced by better efficiency realized by data utilization as in the case of the concomitant provision model. Therefore, if the price of a package deal is low, then the question will be whether the reduction in cost is far greater than how much putting multiple services in one package would save and the price reaches a level where competitors will see difficulties in continuing business.⁴⁴

As well, with regard to whether or not competition is impeded, it is important to examine the “situation” concerned in addition to whether or not tie-in sales exist. However, in general, all it takes is examination according to the discussion provided in 5 (2) above, and there are considered

⁴² Strictly speaking, the degree of competitive injury required varies depending on the type of violation. In private monopolization, whether competition is substantially restrained or not is looked at whereas determination of unfair trade practices questions whether fair competition is likely to be impeded. Nonetheless, examining anticompetitive effects including exclusion is essential at all events.

⁴³ The hearing decision of the Fujitaya case (on February 28, 1992) stated, “whether or not ‘causing another party to purchase’ specified in the General Designation (10) will apply shall be determined by not whether individual customers subjectively felt that they were forced into purchasing but, as discussed previously, by whether it can be said from an objective standpoint that more than a few customers had no choice but purchase another product.”

⁴⁴ In this respect, the Guidelines for Exclusionary Private Monopolization states, “when the price of the product combined together is lower than the sum of the prices of the tying product and tied product, thereby attracting more users, it is also deemed to substantially make the trade partners purchase another product.” (Part II, 4 (1)) As well, Note 9 of 2 (1) of the “Points at issue in terms of the Antimonopoly Act concerning bundle discounts” (<http://www.jftc.go.jp/cprc/conference/index.files/161214bundle01.pdf>) states, “It is possible that a business operator offers a bundle discount for the purpose of establishing a product equipped with a new function in a market, or achieving economies of scale required for getting a new function fully utilized. Upon determining violation concerning such a bundle discount, competition-promoting effects created by the bundle discount may be taken into account from the perspective of 1) whether a substantially new function was created, 2) whether part of benefits including cost reduction at the business operator, as previously discussed, will in fact be returned to consumers, and 3) whether consumers’ cost for searching a trade partner and trade cost will be reduced.”

to be very limited cases where competitive injury is confirmed due to exclusion as far as data utilization is concerned.⁴⁵

(2) Examination of acts, not based on types of business models, but cutting across different types of business models

Acts which may come under discussion in terms of violation of competition policies include those which cut across different types of business models in addition to those related to the classification of business models discussed so far. The following will provide assumed cases of specific acts.

1) Joint exclusionary act

Examples which have been provided so far focus on cases where a business operator independently accumulates and utilizes data. But it is possible for multiple business operators to jointly accumulate and utilize data in cases where a wide range of data or a huge amount of data is required, or development of new technology which requires new standards is aimed at by utilizing data. In such cases, the business operators may decide to exclude specific others and prevent them from using data. In this respect, the CPRC Report examines each of the following three cases as access denial jointly made by business operators while touching on the existence of competition-promoting effects, including a greater variety of data combinations and lower procurement cost, of joint acts at the time of data collection, etc.⁴⁶

(i) Multiple business operators which collectively have a substantially large share jointly collect data, in which they limit participation of specific competitors, and then do not allow the competitors access to collected data under reasonable conditions.

⇒ If a third party which was not allowed to participate is likely to face difficulties in finding alternative measures and continuing business activities, thereby facing exclusion from the market, violation may be confirmed exceptionally.

(ii) Business operators which are competing in a data-trading market pool data which they individually collected and are mutually substitutable and collectively license or refuse its use by a third party.

⇒ To be judged in a comprehensive manner by taking into account the following: 1) the importance of data in light of how popular products which use pooled data are, 2) the state of the market including the availability of an alternative data pool, 3) possibilities of licensing bypassing the pool on an individual basis, 4) possibilities of selective licensing of partial data, and 5) the reasonable necessity of or whether competition-promoting effects are produced by pooling data and licensing collectively.

(iii) Business operators which are competing in a data-trading market jointly prevent new entry by others to a market for products which use data as input goods, or refuse without a good

⁴⁵ This does not mean business operators may get away with giving any negative effects on competition as long as there is no exclusion of competitors, considering that an unfair trade practice has been confirmed based on, not exclusion of competitors, but restrictions on competition on the merits by preventing customers from choosing products as they want (the Fujitaya case which was provided previously).

⁴⁶ The CPRC Report, p. 48.

reason licensing a third party to access data through the data pool concerned or original data, which is the source of the data pool, held by individual business operators in order to exclude existing competitors from the market.

⇒ Violation may be confirmed in general.

The argument provided in this view is considered to be covered by examination made according to the approach provided in 4 (3) above. For instance, in the case of (i), the degree of a total share and whether other means can be found will be examined when possibilities of accumulation are looked at in 4 (3) 2), and whether or not business activities become hard to continue will be examined when the impact of data is looked at in 1).

In addition to these acts to exclude other business operators, there could be cases where competition is avoided by competitors jointly accumulating/utilizing data. For instance, joint data accumulation may promote cooperative acts of the participating business operators because it reveals contents and prices of each other's services, etc. As well, joint data accumulation may limit individual data accumulation by the participating business operators.⁴⁷

2) Digital cartels

Some argue that there are concerns of so called "digital cartels" where competing multiple business operators have introduced AI or algorithms which automatically decide optimum price based on the market data, etc. and maximize profits, which results in a cessation of price competition in the market.⁴⁸ For instance, there could be cases where competitors use the same pricing algorithm and automatically price data based on the same market data, or even if they do not use the same algorithm, price competition may not occur hence competition impeded if the algorithms used in different business operators are designed to set price by referring to each other's sales price.⁴⁹

As the approach provided in 4 above is applicable to digital cartels in general, determination of whether competition is impeded or not will be made basically by looking at whether there is an act of cartels and the "situation." However, cartels are often considered already problematic even without a "situation" concerning data being examined according to the three steps because cartels concerning price or quantity are naturally considered impeding competition.⁵⁰ However, in this

⁴⁷ See the CPRC Report (p. 39) for details of avoidance of competition by competitors jointly accumulating data.

⁴⁸ "BIG DATA: BRINGING COMPETITION POLICY TO THE DIGITAL ERA" by OECD raises issues to the effect that "price adjustment is possible based on market data when business operators use the same pricing algorithm" and that "tacit collusion is possible by setting up AI-based profit-maximizing algorithm." The CPRC Report also points out digital cartels as a remaining problem concerning data and competition policies and states, "it is desirable to observe their actual conditions going forward and, if needed, organize points at issue in terms of relationship with understanding of 'communication of intent' in the context of 'unreasonable restraint of trade.'" (p. 56)

⁴⁹ The example provided only touches on price issues. However, anticompetitive effects suggested here are not limited to price issues. For instance, competition in quality may be impeded by use of AI for research and development activities.

⁵⁰ Price cartels, quota fixing cartels, customer assigning cartels, zonal cartels, and bid rigging are collectively called "hard core cartels," and in many cases, they are naturally considered impeding competition the moment their existence is confirmed. It is because realization of a cartel itself is considered as a proof of creation,

case, attention should be paid to in what scope competition is held, in other words, definition of a market. For instance, even if different business operators seemingly set a cooperative price automatically by algorithm for online trade, it may not necessarily be determined as impeding competition if active competition is ongoing in other trade means including sales at real stores and that is putting restrictions on price for online trade.

As for “acts,” violation will not be confirmed just because business operators happen to set the same price as a result of individual efforts to pursue economic rationality. Violation as a cartel can be confirmed only if there is “communication of intent” through which competition will be impeded by, for example, keeping price unchanged among multiple business operators.^{51 52} Therefore, the question will be what determines the existence of communication of intent upon decisions made by AI or algorithm.

In this respect, communication of intent is said to indicate cases where multiple business operators have the same understanding about arrangement concerning action decision and are in an established relationship of mutual expectations where they believe “if we act according to the shared understanding, other business operators will follow suit.”⁵³ As well, communication of intent does not require an explicit agreement in writing, etc. It can be sufficiently confirmed if intent is communicated in a tacit manner.⁵⁴

From this perspective, judgement is considered to be made by whether communication of intent existed or not in light of contents and usage of AI, etc. and the state of usage by other business operators.

Discussion on AI-related cartels is ongoing in other countries as well. The latest example is a roundtable⁵⁵ concerning “Algorithms and Collusion” held in June 2017 by OECD, where the European Commission released a useful paper.⁵⁶ With regard to horizontal restrictions (restrictions

maintenance or strengthening of market power as only influential business operators can operate such cartels effectively.

⁵¹ The hearing decision of the Yuasa Mokuzai case (on August 30, 1949) stated, “Conformity in conduct and results is not enough to establish a concerted activity; existence of specific communication of intent among participants is considered necessary.”

⁵² Similarity is found in other countries; “Every contract, combination in the form of trust or otherwise, or conspiracy” (The Sherman Antitrust Act, Section 1) is declared to be illegal in the US and “all agreements between undertakings, decisions by associations of undertakings and concerted practices” (Treaty on the Functioning of European Union, Article 101) are prohibited in EU. Some sort of unnatural characteristics such as “conspiracy” or “concerted activity,” if not a clear agreement, is required in the US and EU as well.

⁵³ The Tokyo High Court decision in the case of request for rescission of decision against Toshiba Chemical Corporation (on September 25, 1995) states, in the context of a case which found establishment of an agreement on price-raising, that the presence of communication of intent refers to a situation where “an entrepreneur recognizes or predicts implementation of the same or similar kind of price-raising among entrepreneurs and accordingly, intends to collaborate with such a price-raising. In order to prove communication of intent, it is not sufficient to show the recognition or acceptance of an entrepreneur’s price-raising by another entrepreneur.”

⁵⁴ The decision of the case of request for rescission of decision against Toshiba Chemical Corporation also follows by saying “explicit agreement to bind upon the related parties is not necessary to prove communication of intent. In other words, communication of intent can be proved by showing mutual recognition of other entrepreneurs’ price-raising and tacit acceptance of such a price-raising of another.”

⁵⁵ <http://www.oecd.org/competition/algorithms-and-collusion.htm>

⁵⁶ [https://one.oecd.org/document/DAF/COMP/WD\(2017\)12/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2017)12/en/pdf)

on business activities among competitors, so-called “horizontal cartel”), the paper states that algorithms are used (a) to monitor if a price-cartel agreement is observed, (b) to implement an explicit cartel agreement, and (c) as a means to implement a tacit agreement including so-called “hub and spoke” collusion, and provides possible scenarios accordingly.⁵⁷ In addition, the paper argues that price setting, with which violation would be found in offline trade, is likely to be a problem even if it is done online by using algorithms, and that even if price is decided by algorithms, business operators are responsible for action by algorithms.

As evident from the above, new topics have emerged due to the advent of AI, etc., and it is not necessarily clear what would be required for determining the existence of tacit communication of intent. At any rate, apart from cases where business operators have adopted AI, etc. as a means to create a cartel, it is reasonable to assume that competition-promoting effects can be readily found in cases where business operators have adopted AI, etc., on reasonable grounds, for the purpose of dealing with the ever-changing state of supply and demand or competing rivals in price.

3) Abuse of a superior bargaining position against trading partners

With regard to acts which may violate competition policies in terms of data utilization, there are concerns against acts by one business operator (Company A) to put another (Company B) which is a trading partner at a disadvantage, in addition to acts to exclude competitors as discussed in (1) above and joint acts by competitors as seen in 1) and 2) of (2). For instance, the CPRC Report points out that acts such as keeping all data and technologies to oneself even though they were obtained through a business alliance or joint research and development activities conducted prior to such an alliance may constitute restrictive trading or abuse of a superior bargaining position.⁵⁸ As well, the Report also provides an argument that regulations concerning private monopolization or abuse of a superior bargaining position may apply to cases where a platformer makes a change concerning data collection in a way that puts users at a disadvantage, or even utilizes obtained data after making such a change.⁵⁹

As well, apart from cases provided by the CPRC Report, there could be cases where data-related disadvantage is created unilaterally. Some argue that there may be cases where, for instance, a prime contractor demands factory operation data from a subcontractor to get better informed on the state of production line operation, thereby gaining advantage in price negotiation on products delivered by the subcontractor, or cases where a prime contractor creates a situation where it can change suppliers (cancel orders to a subcontractor and place the same orders to another) by making it possible for other subcontractors to manufacture similar products by taking advantage of data

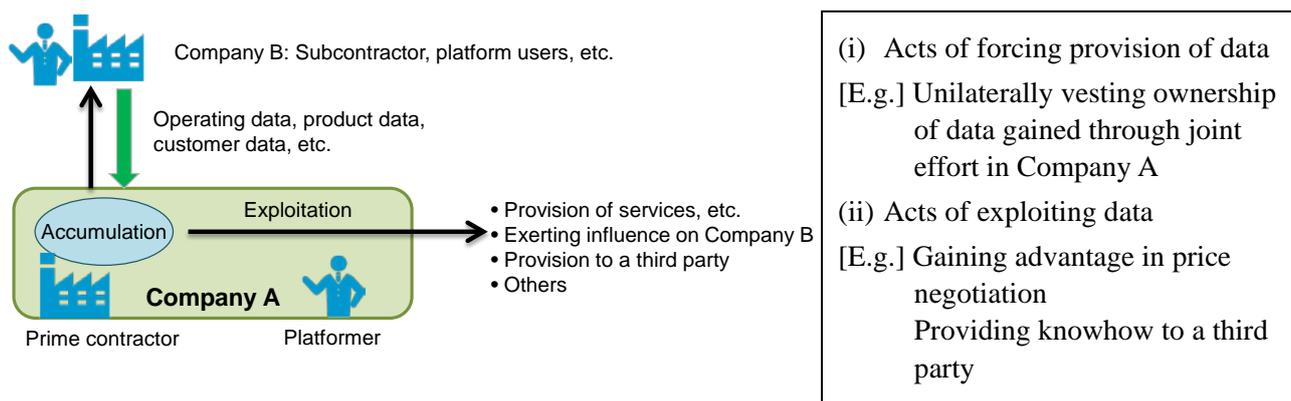
⁵⁷ For instance, violation is likely to be confirmed as in the offline world in cases where business operators agree on using pricing algorithms to lead to aligned and higher prices than absent the collusion, or cases where a business operator signals pricing intentions to competitors through pricing algorithms.

⁵⁸ The CPRC Report (p. 36).

⁵⁹ The CPRC Report (p. 38). With regard to trade with platformers, the CPRC Report assumes cases where users are consumers. Unlike the CPRC Report, discussion in our report is based on the premise that platform users are business operators. The CPRC Report states that cases where users are consumers require special examination. (See *2 on p. 39.)

necessary for manufacturing, such as data which could lead to manufacturing knowhow held by an existing subcontractor.⁶⁰

In summary of the above, it is considered there are two kinds of acts by Company A to unilaterally penalize Company B with regard to data accumulation/utilization as the following diagram shows: (i) acts of Company A demanding ownership of data which Company B, under normal circumstances, has no obligation to relinquish or data which is supposed to be shared, and (ii) acts of Company A using data gained from Company B in a way that is unfavorable for Company B.



Acts provided above are considered to constitute abuse of a superior bargaining position.⁶¹ As Article 2, paragraph (9), item (v) of the Antimonopoly Act forbids certain acts carried out “in a way that is unjust in light of normal business practices, by making use of a superior bargaining position,” the question, in general, will be whether or not such requirements are met.

First, “a superior bargaining position” is defined as a situation in which, “if Company A makes a request, etc., even if it is substantially disadvantageous to Company B, Company B has no choice but to meet that request, because any difficulty Company B has in continuing the transaction with Company A would substantially impede Company B’s business management.” More specifically, such a situation will be determined by giving comprehensive consideration to 1) the degree of Company B’s reliance on Company A, 2) Company A’s position in the relevant market, 3) possibilities of Company B switching to other customers, and 4) other specific facts confirming the necessity of Company B trading with Company A.⁶² Reviewing assumed cases provided in the above diagram based on this idea will produce following points to be noted.

- In cases where Company B does business on a platform provided by Company A, does Company B have places to do business other than Company A? For instance, if Company B

⁶⁰ “The fourth industrial revolution and SME,” document 5, the third meeting of Smart SME (small and medium enterprises) Study Group.
(<http://www.chusho.meti.go.jp/koukai/kenkyukai/smartsme/2017/170517smartsme05.pdf>)

⁶¹ As stated in the CPRC Report, they may constitute restrictive trading or private monopolization depending on their kind. As well, in cases where business operators are in a relationship of a prime contractor and a subcontractor, the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors may also apply.

⁶² Guidelines Concerning Abuse of a Superior Bargaining Position under the Antimonopoly Act (hereinafter referred to as “Guidelines Concerning a Superior Position”), II.

runs a store in an e-commerce website provided by Company A, then it is considered that Company B could do business in other websites or at a real store, instead. However, even in this case, Company A may still be considered to have a superior bargaining position if sales on Company A's website accounts for a large part of Company B's total sales.

- In cases where Company A provides some sort of services, etc. to Company B in exchange for the data provided by Company B, is a network effect or switching cost generated? If it is, then Company B may be considered to have difficulties in switching services, etc. and have lower possibilities of switching trading partners accordingly.
- In cases where Company B delivers products to Company A as a subcontractor, do sales from Company A account for a large part of Company B's total sales?

Next, the requirement suggested by “in a way that is unjust in light of normal business practices,” indicates that “the presence or absence of abuse of a superior bargaining position is judged separately for each circumstance in which there is a cause for concern, from the standpoint of maintaining/promoting fair competition that allows enterprises compete to provide better quality or lower prices,”⁶³ which is essentially referring to examination of whether competitive injury exists or not. However, it should be noted that competitive injury required for confirming abuse of a superior bargaining power is different from competitive injury discussed in 4 (3) above. In the case of the latter, the question to be asked is whether such effects are produced as a business operator creating, maintaining or strengthening its influence over a market to manipulate price, quantity, etc. to a certain extent (market power). To determine that, whether the “situation” allows competitors to emerge is crucial, and the three steps were presented to examine this matter. In contrast, competitive injury in abuse of a superior bargaining position is defined as “violation against foundations of free competition, that is, transactions should be based on the free and autonomous judgment of transacting entities,”⁶⁴ indicating that it is not whether competitors exist or not but whether free judgement of a trading partner is impeded or not that matters. For this reason, what comes to an issue is whether transaction conditions are presented clearly in advance (whether there is any “surprise” which prevents the counterparty from making reasonable judgement) and whether or not the transaction conditions unjustly impose a disadvantage on the counterparty.⁶⁵ In this respect, for instance, the following may be taken into account.

- Does the contract clearly state that Company A may accumulate/utilize Company B's data?

⁶³ Guidelines Concerning a Superior Position, III.

⁶⁴ Study Group on the Antimonopoly Act, “Basic understanding concerning unfair trade practices” (July 8, 1982).

⁶⁵ For instance, the Guidelines Concerning a Superior Position states that “if the amount of the monetary contribution to be paid, the basis for the calculation of that amount, and the use of the money have not been made clear to the counterparty, thereby imposing a disadvantage on the counterparty the cost of which it cannot calculate in advance,” or “if the cases in which they (employees, etc.) are to be dispatched and the conditions for their dispatch have not been made clear to the counterparty, thereby imposing a disadvantage on the counterparty the cost of which it cannot calculate in advance,” requesting such a monetary contribution or employee dispatch unjustly imposes a disadvantage on the counterparty in light of normal business practices, and that this is an issue in terms of abuse of a superior bargaining position. (IV. 2 (1), (2))

Even if that is the case, was the agreement made based on Company B's acceptance of the terms and conditions after sufficient discussion?⁶⁶

- Are the contents and scope of data accumulated by Company A appropriate? Is there a benefit for Company B by providing data, for instance, the data being essential for or improving services, etc. provided by Company A to Company B?
- Does the usage of accumulated data harm Company B? For instance, if important data, such as trade secrets, is provided to Company B's competitors without compensation, it is likely to result in a huge disadvantage.

The last unaddressed question is whether an act falls under certain acts, which are specified in Article 2, paragraph (9), item (v), (a)-(c) of the Antimonopoly Act, based on which the "Guidelines Concerning Abuse of a Superior Bargaining Position under the Antimonopoly Act" sets forth provisions on forced purchase/use, payment of a monetary contribution, etc., request to dispatch employees, etc., refusal to receive goods, return of goods, delay of payment, and price reduction.⁶⁷ In addition, because acts constituting abuse of a superior bargaining position are not limited to these, acts concerning data accumulation/utilization which have been discussed so far may also constitute abuse of a superior bargaining position. Therefore, if there is a clear disadvantage such as changing suppliers, for instance, it may fall under the requirements specified in (c): "otherwise establishing or changing trade terms or executing transactions in a way disadvantageous to the counterparty".

(3) Others

The discussion so far has been focused on acts assumed in individual trade. However, market power may be created, maintained, or strengthened by not only such acts but also business combinations by merger, share-holding, etc. Therefore, regulations concerning business combinations are also an important challenge in competition policies in various countries, and many countries investigate cases of business combinations which meet requirements in terms of scale, etc. Japan is no exception and Japan Fair Trade Commission conducts review on cases of business combinations. Upon review, however, there is a question of how to assess the impact of data on a market.

Unlike other behavior regulations, the review of a business combination looks at whether competition will be impeded in a future market after the business combination in question takes place, which is considered to make it harder to examine what kind of services, etc. can be realized by combination of data which has been or can be accumulated by the parties concerned, and how those services, etc. affect relevant markets. In fact, in the case of merger between Facebook and WhatsApp, the European Commission approved the merger on the ground that Facebook would unlikely use personal data collected by WhatsApp due to a number of reasons including technical

⁶⁶ Guidelines Concerning a Superior Position, IV. 2 (2) Note 14.

⁶⁷ Guidelines Concerning a Superior Position, IV.

difficulties. However, after finding that WhatsApp’s data was actually used, the Commission fined Facebook for providing misleading information during the Commission’s investigation.⁶⁸

At any rate, what is important remains the same: examination on competitive injury. In this case, the relevant “act” is a business combination, and therefore, it is considered to be basically sufficient to examine the other factor, the “situation” according to the approach provided by 4 (3). On another note, it is recommended to refer to the CPRC Report, which provides a number of points to be noted with regard to the review of a business combination while calling for consideration of data scarcity and whether or not it is substitutable (as in the case of other acts).⁶⁹

The review of a business combination sometimes removes concerns of competitive injury by taking appropriate measures. However, it is considered especially challenging, in case of concerns stemming from data, for the executive authorities to come up with appropriate measures since it is difficult to determine the scope of the relevant market to be affected by the data and its impact.

7. Closing remark

Under the fourth industrial revolution, the source of competitiveness of business operators is shifting to data due to technological innovation. Against such a backdrop, our Study Group carried out discussion seven times from January to June this year, where we revealed the actual conditions of “data accumulation/utilization” by business operators, classified business models, and then presented understanding in terms of competition policies.

The issues discussed by our Study Group are still new in and outside of Japan, and are expected to be debated more actively going forward as the fourth industrial revolution advances. This Report, therefore, by no means suggests a “conclusion” of such discussions, but rather, should be considered as a trigger for further discussion among all interested parties in industry, government and academia.

As well, the Report presents the reality and understanding concerning data-utilizing business and things to be noted in terms of competition policies to a certain degree, which, our Study Group hopes, help create an environment where competition will be promoted among data-utilizing business operators which take advantage of their originality and ingenuity. For instance, a business operator which does business by utilizing data may find the type it belongs to, thereby being able to organize its business strategies to decide how to proceed going forward. In the meantime, as our Study Group was composed of various members including economists (specializing in industrial organization and strategic management), jurists, engineers, lawyers, and business managers, this Report may provide a good starting point for discussion as “shared understanding” by experts from various fields. We hope this Report will be used by various entities, thereby creating greater added value and leading to further development.

⁶⁸ http://europa.eu/rapid/press-release_IP-17-1369_en.htm

As the punishment is only for providing misleading information, the result of the investigation will not be affected.

⁶⁹ The CPRC Report, pp. 52-54.