Market Study Report on Mobile OS and Mobile App Distribution (Summary)

February 2023
Japan Fair Trade Commission
Due to the worldwide spread of COVID-19, the digitalization of the economy has progressed further. **Smartphones are the main means by which people access various digital contents and services.**
- **Smartphones have become a daily necessity for consumers,** and the usage rate (all ages) is **95.3%** (2021).
- The usage time of mobile devices such as smartphones (all ages, weekdays) also increased from **37.6 minutes** (2012) to **110.0 minutes** (2021).

In order to provide services through apps on smartphones or products used in conjunction with smartphones, **access to mobile OS and app distribution routes such as app stores is essential.**

It is very important to understand the actual state of competition in mobile OS and app distribution routes from the viewpoint of improving the competitive environment of the market for apps provided on smartphones and the market for products used in conjunction with smartphones, as well as the mobile OS market and the app distribution service market.

The JFTC decided to conduct a **market study into the mobile OS market and the app distribution service market.**

### Market Study regarding Mobile OS and Mobile App Distribution

#### Purpose
- Due to the worldwide spread of COVID-19, the digitalization of the economy has progressed further. **Smartphones are the main means by which people access various digital contents and services.**
  - **Smartphones have become a daily necessity for consumers,** and the usage rate (all ages) is **95.3%** (2021).
  - The usage time of mobile devices such as smartphones (all ages, weekdays) also increased from **37.6 minutes** (2012) to **110.0 minutes** (2021).
- In order to provide services through apps on smartphones or products used in conjunction with smartphones, **access to mobile OS and app distribution routes such as app stores is essential.**
- **It is very important to understand the actual state of competition in mobile OS and app distribution routes from the viewpoint of improving the competitive environment** of the market for apps provided on smartphones and the market for products used in conjunction with smartphones, as well as the mobile OS market and the app distribution service market.

The JFTC decided to conduct a **market study into the mobile OS market and the app distribution service market.**

#### Method

#### Questionnaire survey

- **For app developers**
  - The JFTC conducted a web survey for app developers (whose contact information was obtained) providing apps on app stores
  - **Period:** Mar. 4th-24th, 2022
  - **Survey subjects:** 9,562
  - **Respondents:** 596 (response rate 6.2%)

- **For consumers**
  - The JFTC conducted a web survey for consumer monitors (smartphone users) of a research company
  - **Period:** Feb. 7th-16th, 2022
  - **Respondents:** 2,000 (1,000 iOS users and 1,000 Android users)

#### Voluntary interview

- The JFTC interviewed 23 business operators including smartphone manufacturers and app developers.
- The JFTC received answers to written questions from Google and Apple.
- The JFTC interviewed 3 experts who have specialized knowledge.

#### International cooperation

The JFTC exchanged opinions with the Australian Competition and Consumer Commission, the UK Competition & Markets Authority, and the Directorate-General for Competition of the European Commission.
On smartphones(*), the mobile ecosystem has a layered structure consisting of smartphone device, mobile OS, app store, and native apps to connect smartphone users and developers.

(*) In this report, a “smartphone” is a device with a screen size of less than 7 inches.

**Device**

A device which has advanced information processing functions as well as conventional mobile phone functions such as calling and communication. Users can add additional functions on their devices by obtaining applications. Various companies, including Google and Apple, develop and provide smartphone devices.

**Mobile OS**

An operating system developed for and installed on smartphones(*). Mobile OSs are mainly developed by Google and Apple.

(*) Basic software necessary for realizing basic computer operations such as entering characters and saving data

**App store**

A platform for delivering native apps. App stores are mainly operated by Google and Apple. Only native apps that have passed a review by the app store operator will be posted on the app store.

**Native apps**

An application to be installed and used on a specific mobile OS. Various developers, including Google and Apple, develop and provide native apps.

(Web apps are developed using web technology. Web apps differ from native apps in that they are not installed on smartphones.)
In the device layer, smartphone manufacturers including Google and Apple are suppliers, and consumers using smartphone devices are customers.

In the mobile OS layer, mobile OS providers (Google and Apple) are suppliers, and app developers and consumers who use the mobile OS are customers respectively (*).

In the app store layer, app store operators (mainly Google and Apple) are suppliers, and app developers and consumers who use the app stores are customers respectively.

In the application layer (native apps and web apps), in addition to Google and Apple, many other app developers are suppliers, and the consumers who use the apps are customers.

(*) As for Android, smartphone manufacturers selling smartphone devices with a mobile OS are also customers of the mobile OS.
In this report, the **device layer** is regarded as the **device market**, the **mobile OS layer** is regarded as the **mobile OS market**, the **application layer** is regarded as the **app market**(*1). Also, **distribution**(*2) of apps or web services via **app stores or browsers** is regarded as the **app distribution service market**.

(*1) Together with the app market, the market for products used in conjunction with smartphones is regarded as the "**app market and other smartphone-related markets**."

(*2) The app distribution service market covers the following, which are methods for consumers to obtain or use apps from app developers in order to access digital contents and services on smartphones.

(A) Downloading native apps from **Google Play/App Store**
(B-1) Downloading native apps from **third-party app stores** other than Google Play/App Store
(B-2) Downloading native apps from outside the app store, such as via the browser (**Side-loading**) 
(C) Using **web services** via the browser

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<table>
<thead>
<tr>
<th>App Market</th>
<th>Web services (Web apps)</th>
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<tbody>
<tr>
<td><strong>Native apps</strong></td>
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<tr>
<td>Apple</td>
<td>Other developers</td>
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<tr>
<td><strong>App Store</strong></td>
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<td><strong>iOS</strong></td>
<td></td>
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<tr>
<td>iPhone</td>
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<tr>
<td><strong>Device market</strong></td>
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<tr>
<td><strong>Mobile OS market</strong></td>
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<tr>
<td><strong>App distribution service market</strong></td>
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<tr>
<td><strong>Google Play</strong></td>
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<tr>
<td><strong>Android</strong></td>
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<tr>
<td>Google Pixel</td>
<td>Other OEM's device</td>
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<tr>
<td><strong>Side-loading</strong></td>
<td></td>
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<tr>
<td><strong>Other developers</strong></td>
<td></td>
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<tr>
<td><strong>App stores</strong></td>
<td></td>
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<tr>
<td><strong>Other</strong></td>
<td></td>
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<tr>
<td><strong>Browser</strong></td>
<td></td>
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<tr>
<td><strong>Safari</strong></td>
<td></td>
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<tr>
<td><strong>Other</strong></td>
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Market share of mobile OS in Japan
(Based on the number of devices)


Market share of mobile OS in Japan
(Based on page views)

Source: Statcounter Mobile Operating System Market Share Worldwide (Dec 2022)

* The share in Statcounter is measured on a page-view basis. The number of page views for each device is not uniform, and this factor is thought to be causing a difference from the share based on the number of devices used.
Oligopoly of Google’s Google Play and Apple’s App Store

Sales amounts of Google Play and App Store in Japan

Source: The JFTC calculated based on Sensor Tower 2022-2026 Mobile Market Forecast

App store usage of Android users (n=1,000)

<table>
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<tr>
<th></th>
<th>Number of users (percentage)</th>
<th>Number of downloads (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Play</td>
<td>827 (82.7%)</td>
<td>14,729 (97.4%)</td>
</tr>
<tr>
<td>Amazon Appstore</td>
<td>50 (5.0%)</td>
<td>189 (1.2%)</td>
</tr>
<tr>
<td>Samsung Galaxy Store</td>
<td>14 (1.4%)</td>
<td>65 (0.4%)</td>
</tr>
<tr>
<td>HUAWEI AppGallery</td>
<td>8 (0.8%)</td>
<td>117 (0.8%)</td>
</tr>
<tr>
<td>Others</td>
<td>3 (0.3%)</td>
<td>29 (0.2%)</td>
</tr>
<tr>
<td>Haven’t downloaded any apps</td>
<td>164 (16.4%)</td>
<td>—</td>
</tr>
</tbody>
</table>

On Android, the usage rate of Google Play greatly exceeds that of other app stores.

Any other app store is not available for iOS.

Sales amounts of Google Play and App Store in Japan:
- Google Play: 1.04 trillion yen
- App Store: 1.59 trillion yen

On Android, the usage rate of Google Play greatly exceeds that of other app stores.
The business models of Google and Apple, which provide mobile OS and operate app stores, have the following characteristics.

<table>
<thead>
<tr>
<th></th>
<th>Google</th>
<th>Apple</th>
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<tbody>
<tr>
<td>Apps</td>
<td>Providing maps, emails, etc.</td>
<td>Providing maps, emails, etc.</td>
</tr>
<tr>
<td>Browser</td>
<td>Chrome</td>
<td>Safari</td>
</tr>
<tr>
<td>Pre-install</td>
<td>Own apps and third-party apps (generally determined by OEM)</td>
<td>Own apps only</td>
</tr>
<tr>
<td>Side-loading</td>
<td>Allowed</td>
<td>Not allowed</td>
</tr>
<tr>
<td>App store</td>
<td>Google Play</td>
<td>App Store</td>
</tr>
<tr>
<td>Other app stores</td>
<td>Installable</td>
<td>Not installable</td>
</tr>
<tr>
<td>Mobile OS</td>
<td>Android</td>
<td>iOS</td>
</tr>
<tr>
<td>Open source</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Device</td>
<td>OEM/Self-manufacture</td>
<td>Self-manufacture</td>
</tr>
</tbody>
</table>
The use of smart watches and voice assistants in Japan is still spreading. Google and Apple are also expanding their business into products and services used in conjunction with smartphones.

**Smart Watch**

<table>
<thead>
<tr>
<th>Consumer usage of smart watches</th>
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<tbody>
<tr>
<td><strong>iOS (iPhone)</strong></td>
</tr>
<tr>
<td><strong>Android</strong></td>
</tr>
</tbody>
</table>

- a) Have a smart watch and pair it with a smartphone
- b) Have a smart watch and don’t pair it with any smartphone
- c) Don’t have a smart watch

**Voice Assistant**

Those who use one or more voice assistants

| iOS (iPhone) | 37.3% |
| Android      | 21.9% |
In the mobile ecosystem that has achieved a certain scale, an operator of a mobile OS or app store can make its position more consolidate with sufficient **indirect network effects**, stronger **lock-in effect**, and **economies of scale**, and it can easily expand its own service in the mobile ecosystem with **economies of scope**.

1. **Indirect Network Effect**
   - When there are multiple participant groups belonging to the same network, an additional participant in one group increases the benefits of the participants in the other group (positive indirect network effect).

2. **Lock-in Effect**
   - Even if users want to stop the use of a good or service and switch to another one, they are unable to do so due to switching cost, indirect network effect, or any other reasons.

3. **Economies of Scale**
   - The average cost per unit of a good or service decreases as the output increases.

4. **Economies of Scope**
   - The production cost of goods and services is lower and more efficient when they are collectively produced by the same company than by independently.
**Competitive pressure between Android and iOS**

- **Limited competitive pressure between Android and iOS** both from the point of view of consumer switching and from the perspective of app developers.

**Consumer switching**

- Under a hypothetical price increase of smartphones, few consumers will choose a smartphone with a different OS. For consumers, various costs are incurred in switching between Android and iOS, and there is a lock-in effect to the mobile OS currently in use.

**Competitive pressure from app developers**

- Most consumers use only one mobile OS, so it is reasonable for app developers to provide apps for both Android and iOS. Therefore, providing Android apps and providing iOS apps are not in a binary relationship.

User’s choice of smartphone when the price of smartphones with the mobile OS currently in use rises by 5-10%:

- iOS (iPhone) (n=800)
  - Buy a smartphone with the same OS as currently in use: 79.4%
  - Buy a smartphone with a different OS: 3.4%
  - I don't know: 17.3%

- Android (n=568)
  - Buy a smartphone with the same OS as currently in use: 63.6%
  - Buy a smartphone with a different OS: 5.8%
  - I don't know: 30.6%

Usage of multiple smartphones by consumers:

- iOS (iPhone) (n=1,000)
  - No (Using only one device): 87.7%
  - Yes (Using multiple devices with the same OS): 8.1%
  - Yes (Using multiple devices with different OSs): 4.2%

- Android (n=1,000)
  - No (Using only one device): 89.1%
  - Yes (Using multiple devices with the same OS): 8.2%
  - Yes (Using multiple devices with different OSs): 2.7%
In order for a developer other than Google and Apple to gain market share in the mobile OS market, it is necessary to develop a mobile OS with considerable consumer appeal and have it installed in smartphones. In this regard, **financial strength and technological capabilities are barriers to entry.**

⇒ **Limited competitive pressure from a mobile OS other than Android/iOS**

Factors that consumers consider important when choosing a smartphone

- Attractiveness of the OS (Functions, operability, security, etc.)
- Number of apps and contents available
- Prices of apps and contents available
- Same as the OS used by family or friends
- Connectivity with smartphone-related devices
- Attractiveness of the device (Camera performance, screen size, etc.)
- Price of the device
- I don’t know
- Other

⇒ **Insufficient competitive pressure on Android and iOS**

- For consumers, smartphones are not only used at home, but also always carried when going out, making them an indispensable device in daily life.

- Tablets, PCs, and other devices can be used instead of smartphones for certain purposes or specific usage situations. However, in principle, those devices cannot replace smartphones, but are **used in parallel with smartphones.**

⇒ **Limited competitive pressure from other types of devices**
Consumers do not have incentive to switch between Google Play and App Store. It is reasonable for app developers to provide native apps on both Google Play and App Store. Therefore, Google Play and App Store are not substitutable, and 
**competitive pressure between Google Play and App Store is limited.**

### Consumer switching

- Many app developers provide native apps on both Google Play and App Store, and there is no difference in terms of prices. Therefore, **consumers have no incentive to switch app stores.**

### Competitive pressure from app developers

- It is reasonable for app developers to provide apps on both Google Play and App Store. Therefore, **Google Play and App Store are not in a binary relationship.**

Pricing when app developers provide native apps on app stores

App stores where app developers provide native apps

- The price is changed (or sometimes changed) depending on the app store
- The price is not changed depending on the app store
- Offering different apps in different app stores
Competitive pressure from an app store other than Google Play/App Store

- Regarding iOS, **only App Store is available.**
- Regarding Android, app stores other than Google Play ("other app stores") are available. However, in the current situation:
  - Other app stores do not offer consumers the same benefits as Google Play
  - There is not much incentive for app developers to provide their apps to other app stores, or for smartphone manufacturers to choose other app stores
  - It is unlikely that new entrants will develop app stores and exert strong competitive pressure on Google Play

⇒ **Limited competitive pressure from other app stores**

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Usage of app stores other than Google Play and App Store by app developers

- [Image]

Status of providing side-loadable native apps by app developers

- [Image]
Competitive pressure from the use of web services

- Consumers prefer native apps to web apps for major services on smartphones.
- Due to factors such as poor operability for users, many of the app developers do not provide web apps offering the same service as native apps.
- Currently, web apps are not alternatives to native apps for consumers. Also, there is relatively little incentive for app developers to provide web apps as alternatives to native apps.

⇒ **Limited competitive pressure from web services (web apps)**

The reason why consumers use services through native apps

- Many apps are in line with the characteristics of smartphones, such as being able to send and receive information not only at home or at work but also in a variety of locations.
- Consumers use apps on smartphones and apps on other devices depending on factors such as the content of apps and the timing of use.
- Using apps on tablets, PCs, or other devices cannot be alternatives to using apps on smartphones. Those devices are complementary to smartphones.

⇒ **Limited competitive pressure from other types of devices**

⇒ **Insufficient competitive pressure on Google Play and App Store**
Competitive Concerns Regarding Google’s and Apple's Conduct

- The JTFC reviewed competitive concerns in each market regarding Google’s and Apple’s conduct.

**App distribution service market**

- In the mobile OS market and the app distribution service market, there is not enough **competitive pressure** on the mobile OS and app stores provided/operated by Google and Apple.

⇒ To address competitive concerns regarding Google and Apple in both markets, it is effective to create a healthy competitive environment in both markets through **measures in terms of competition policy** (see page 24), such as increasing the scope for potential competitors to enter the market.

**Mobile OS market**

- In the app market and other smartphone-related markets, new apps and products by Google, Apple, and third parties are emerging, and a certain degree of competition is taking place.

- While providing mobile OS and operating app stores, Google and Apple compete with other developers in the app market and other smartphone-related markets (dual role).

- From the standpoint of the Antimonopoly Act (AMA), the JFTC reviewed the following that Google and Apple may engage in using their position in the mobile OS market and the app distribution service market, where sufficient competitive pressure does not exist.
  - Exclusionary self-preferencing in the app market and other smartphone-related markets (see pages 16-19)
  - Conduct causing unjust disadvantage to the contracted party (see page 20)

* The JFTC also reviewed competitive concerns regarding the level of app store commissions (see page 21) and assessed security and privacy claims (see page 20).
Exclusionary Self-preferencing in the App Market and Other Smartphone-related Markets (1)

**Restriction of access, etc.** (by using their position as the mobile OS providers)

- Google and Apple are in a position to be able to exclude their competitors by treating their own apps, products, and services more favorably than those of competitors. Google and Apple might restrict competitors’ access to smartphone functions (API connection, etc.), or allow mobile OS update information to be accessed by their own app development staff earlier than by competitors.

**Examples of opinions from consumers and claims by app developers**

**Consumer**
- When I buy a smart watch, I want to choose one that is easy to link with a smartphone.

**App developer**
- It seems that the apps provided by Google and Apple can more easily access smartphone functions than the apps provided by third parties.

**Examples of claims by Google and Apple**

**Google**
- Android does not have the characteristic of prioritizing Google’s devices and apps. Update information is provided to other companies at the same timing as our company, taking into account the time required for other companies to respond to the updates.

**Apple**
- The reason why there are functions not offered to other companies is to ensure security and protect privacy. It is in line with the user’s own data control desires.

**Views from the AMA**

- Google’s and Apple’s conduct such as the following would be a problem under the AMA (Private monopolization, Interference with a competitor’s transactions, etc.) when such conduct leads to treating their own apps, products, and services more favorably than those of competitors and interferes with transactions between the competitors and consumers, causing a decrease in trade opportunities for the competitors or the exclusion of the competitors.

1. **Restricting competitors’ access to (part of) smartphone functions** that can be accessed by their own apps, products, and services
2. **Making their own apps, products, and services compatible with updates** of their mobile OS earlier than competitors
3. **Constraining the business models of competitors through updates** of their mobile OS
Exclusionary Self-preferencing in the App Market and Other Smartphone-related Markets (2)

Disadvantageous treatment in rankings, etc. (by using their position as the app store operators)

- Google and Apple are in a position to be able to exclude their competitors by treating their own apps more favorably than those of competitors. Google and Apple might display their own apps in a way that appeal to consumers on the app store rankings, such as by manipulating search algorithms.

Examples of opinions from consumers and claims by app developers

Consumer: When downloading an app, I refer to rankings and recommendations on an app store.

App developer: Google's and Apple's own apps do not have to bear commissions and app reviews, and they may be treated more favorably than the apps of competitors on the app store rankings.

Examples of claims by Google and Apple

Google: Google treats our own apps and other companies' apps fairly. In-app payment is a seamless and secure system. Actually, few app developers pay commissions.

Apple: App Store applies the same search algorithm to all apps. In-app payment provides a high-quality user experience. Actually, few app developers pay commissions.

Views from the AMA

- Google’s and Apple’s conduct such as the following would be a problem under the AMA (Private monopolization, Interference with a competitor’s transactions, etc.) when such conduct leads to treating their own apps more favorably than those of competitors and interferes with transactions between the competitors and consumers, causing a decrease in trade opportunities for the competitors or the exclusion of the competitors.

1. Manipulating search algorithms or app store rankings in order to display their own apps in a way that appeals to consumers
2. Disadvantaging the apps of competitors by collecting commissions from competitors while not collecting commissions from themselves
3. Treating the apps of competitors disadvantageously in app review, such as by arbitrarily rejecting those apps
Exclusionary Self-preferencing in the App Market and Other Smartphone-related Markets (3)

Use of data (by using their position as the mobile OS providers or the app store operators)

- Google and Apple are in a position to be able to exclude their competitors by creating a situation that is more advantageous than competitors when developing and providing their own apps, products, and services. Google and Apple might widely and cross-sectionally collect the data (location information, payment history, etc.) generated from apps, products, and services provided by other app developers, and use the data for developing and providing their own apps, products, and services.

Examples of claims by app developers

- Google and Apple may be collecting the data generated from our apps (while we cannot collect or use the data) and using the data for developing their own apps.
- Google and Apple may be able to develop apps that are easy to monetize based on the payment history generated from our apps.

Examples of claims by Google and Apple

- Google may collect specific data to improve our services and maintain quality but do not use undisclosed data of other companies to gain an unfair advantage.
- To protect user privacy, data processing is basically performed on the device. In addition, Apple do not share the information of other companies obtained from the App Store with our service business.

Views from the AMA

- Google’s and Apple’s conduct such as the following would be a problem under the AMA (Private monopolization, Interference with a competitor’s transactions, etc.) when such conduct leads to treating their own apps, products, and services more favorably than those of competitors and interferes with transactions between the competitors and consumers, causing a decrease in trade opportunities for the competitors or the exclusion of the competitors.

1. Widely and cross-sectionally collecting the data generated from apps, products, and services provided by other app developers, and using the data for developing and providing their own apps, products, and services
2. Through app review, collecting information related to new functions of apps provided by other app developers before the app is newly released, and using it for developing their own apps, products, and services
Google and Apple are in a position to be able to exclude their competitors by creating an advantage in consumer choice for their own apps or services compared to those of competitors, such as by disabling uninstallation of pre-installed apps or complicating settings of changing default.

Examples of opinions from consumers and smartphone manufacturers

**Consumer**
I’m using the pre-installed browser and don’t know the features of other browsers. Changing the browser's search engine is troublesome.

**Smartphone manufacturer**
One app per service is pre-installed on our devices because pre-installing too many apps takes up memory space and leads to consumer complaints.

Examples of claims by Google and Apple

**Google**
OEMs can pre-install apps other than ours. There is no obligation to pre-install our app on all devices.

**Apple**
Our apps are pre-installed so that users can use various services as soon as they get a new device. Users can easily use other apps.

Views from the AMA

Google’s conduct such as the following would be a problem under the AMA (Private monopolization, Tie-in sales, Trading on exclusive terms, Trading on restrictive terms, Interference with a competitor’s transactions, etc.) when such conduct leads to creating an advantage in consumer choice for its own apps or services compared to those of competitors, causing a decrease in trade opportunities for the competitors or the exclusion of the competitors.

1. As a condition of pre-installation of Google Play, urging other smartphone manufacturers to pre-install other Google’s apps, or to set other Google’s apps or services as default. Or disabling uninstallation of pre-installed apps, or complicating settings of changing default.
2. Providing financial incentives to smartphone manufacturers on the condition that they do not pre-install other apps competing with Google’s apps, or on the condition that they set Google’s apps or services as default.

(*) Apple, which is also a smartphone manufacturer, makes pre-installation and default settings on its smartphones. Although this section only describes the conduct of Google, it does not mean that Apple’s conduct would not be a problem under the AMA.
Conduct causing unjust disadvantage to the contracted party

- In the mobile OS market and the app distribution service market, while the market share of Google and Apple is almost 100% in total, the competitive pressure between them and from other companies, etc. is not sufficient. Therefore, Google and Apple are highly likely to have a superior bargaining position in service transactions with the contracted parties (i.e., other app developers(*)).

  (*) Regarding conduct as a mobile OS provider, companies providing products and services used in conjunction with smartphones may also be included.

(Example of concerns)
By making mobile OS specification changes (updates) frequently and without giving sufficient preparation time, incurring significant costs for other app developers to adapt their apps, products, and services to the changes in the mobile OS.

Views from the AMA
- When Google and Apple have a superior bargaining position in service transactions with the app developers, it would be a problem under the AMA (Abuse of a superior bargaining position) to unjustly cause disadvantage to the app developers in view of normal business practices.

Assessment of security and privacy claims
- Google and Apple argue that some aspects of their conduct in the app market and other smartphone-related markets are necessary from the perspective of ensuring security and protecting privacy among consumers.
- When judging whether any conduct violates the AMA, various factors must be comprehensively considered. In assessing those security and privacy claims, consideration will be given to the rationality of the objective and the appropriateness of the means (whether there are alternative means that are less restrictive, etc.).
- In the enforcement of the AMA, verifying such security and privacy claims (especially from the viewpoint of appropriateness of means) may require advanced technical evaluations related to security assurance and privacy protection. Also, in order to carry out such evaluations, there may be cases where a large amount of verification work and highly specialized knowledge are required.
Competitive Concerns Regarding the Level of App Store Commissions

- It has been pointed out that the level of app store commissions may remain high. Some app developers are deeply dissatisfied with the level of app store commissions.

Example of claims by Google and Apple

- **Google**: Most developers do not pay commissions. 15% or less commission rates are applied to most developers paying commissions.
- **Apple**: When App Store was launched, Apple thought a commission model would be the best way to encourage app development. At the time, many other software sellers charged commissions over 30%.

- In fact, as claimed by Google and Apple, the number of app developers paying a 30% commission rate is limited. On the other hand, since a 30% commission rate is applied to developers whose sales exceed a certain amount, commission income from these developers appears to account for a high percentage of total commission income.

Views from the AMA

1. High commission levels lead to the high price of digital contents and services subject to in-app payment, and interfere with transactions between the competitors and consumers, causing a decrease in trade opportunities for the competitors or the exclusion of the competitors.
2. When having a superior bargaining position in service transactions with the app developers, unilaterally setting excessively high commission levels, unjustly causing disadvantage to the app developers in view of normal business practices.

These would be a problem under the AMA (Private monopolization, Interference with a competitor’s transactions, Abuse of a superior bargaining position, etc.).

- Some other app stores set commission rates lower than 30% (around 12%). Because there is not enough competitive pressure on app distribution in the app stores provided by Google and Apple, the level of app store commission cannot be expected to decline by market functions.

⇒ Including the concerns about the level of app store commissions set by Google and Apple, it is important to take measures in terms of competition policy (see pages 23 and 24) to increase competitive pressure.
Proposals from the Competition Policy (1)

1. Prevention of self-preferencing in the app market and other smartphone-related markets

2. Ensuring a healthy competitive environment in the mobile OS market and the app distribution service market

3. Ensuring fairness in rule-making for the mobile ecosystem

The following three measures can be considered in terms of competition policy to create a healthy competitive environment in the mobile OS market and the app distribution service market and to complement the enforcement of the AMA with measures in terms of competition policy preventing AMA violations and encouraging the improvement of potentially problematic behavior under the AMA.

While it is desirable for Google and Apple to take the following measures, it is effective to secure them by law to the extent necessary to ensure the effectiveness of the measures.

Three desirable measures in terms of competition policy

1. Prevention of self-preferencing in the app market and other smartphone-related markets
2. Ensuring a healthy competitive environment in the mobile OS market and the app distribution service market
3. Ensuring fairness in rule-making for the mobile ecosystem
1. Prevention of self-preferencing in the app market and other smartphone-related markets

- Google and Apple may adversely affect competition through self-preferencing by using their position in the mobile OS market and the app distribution service market, where sufficient competitive pressure does not exist. Therefore, it is desirable for Google and Apple to take the following measures.

<table>
<thead>
<tr>
<th>(1) Ensuring equal footing regarding access to mobile OS functions and update information</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Permitting access to mobile OS functions at the same timing, scope, and level as Google’s/Apple’s apps, products, and services, so that other developers' apps, products, and services can be interoperable with the mobile OS (except when justifications are recognized from the viewpoint of security assurance and privacy protection)</td>
</tr>
<tr>
<td>(b) Disclosing information on mobile OS updates at the same timing and contents as for Google’s/Apple’s app development staff (excluding urgent updates such as vulnerability response)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(2) Ensuring equal footing regarding app store management</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Application of transparent, fair, and non-discriminatory terms regarding search results, rankings, recommendations, etc.</td>
</tr>
<tr>
<td>(b) App review based on fair, reasonable, and non-discriminatory terms</td>
</tr>
<tr>
<td>(c) Not restricting other app developers from indicating different terms of sale and payment within their apps, and not restricting the conclusion of contracts with or the receipt of service fee from users outside the app stores</td>
</tr>
<tr>
<td>(d) Making it possible to use Google’s/Apple’s in-app payment system and/or a system other than Google’s/Apple’s in-app payment system, and separately setting the commission for using the in-app payment system and the commission for using the app store</td>
</tr>
<tr>
<td>(e) Clarification of the app store’s operation costs and income, and actively responding to individual negotiations regarding commission rates, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(3) Ensuring equal footing regarding use of data collected from other developers' apps</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Not using non-public data generated by other developers' apps, products, and services for the purpose of developing competing apps, products, and services, and constructing a mechanism to share the data with other developers subject to the user’s opt-in consent</td>
</tr>
<tr>
<td>(b) Not using non-public data obtained in the app review regarding the apps of other developers for the development of Google’s/Apple’s apps, products, and services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(4) Ensuring equal footing regarding a consumer’s choice of apps and services</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Not imposing technical or other restrictions when consumers switch apps and services</td>
</tr>
<tr>
<td>(b) Respecting a consumer’s rational choice of apps by displaying choice screens</td>
</tr>
</tbody>
</table>
Proposals from the Competition Policy (3)

2. Ensuring a healthy competitive environment in the mobile OS market and the app distribution service market

In order to secure a healthy competitive environment by increasing potential entry pressure and revitalizing competition among business operators as much as possible, it is desirable for Google and Apple to take the following measures in the mobile OS market and the app distribution service market, where sufficient competitive pressure does not exist.

<table>
<thead>
<tr>
<th>Mobile OS market</th>
<th>App distribution service market</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1) Promoting consumer switching</strong></td>
<td><strong>(2) Promoting the entry of new mobile OS and app stores</strong></td>
</tr>
<tr>
<td>(a) Improving interoperability, such as providing data portability tools for free to consumers</td>
<td>(a) Not entering into a contract with a smartphone manufacturer that prohibits the manufacture of smartphone devices equipped with a competing mobile OS or the development of a competing mobile OS</td>
</tr>
<tr>
<td>(b) If there is no problem in terms of security assurance and privacy protection, improving interoperability, such as enabling consumers to access and use digital contents acquired from routes other than Google’s/Apple’s app store</td>
<td>(c) If there is no problem in terms of security assurance and privacy protection, regarding smartphone devices equipped with Google’s/Apple’s mobile OS, making it possible to download apps including app store apps regardless of whether Google’s/Apple’s app store is used or not</td>
</tr>
<tr>
<td>(b) When licensing major apps to smartphone manufacturers, making it possible to license app store apps and other apps separately</td>
<td>(d) Allowing app developers to make reasonable choices regarding the use of browser engines, and not imposing technical or other restrictions on web apps if there is no problem in terms of security assurance and privacy protection</td>
</tr>
</tbody>
</table>
3. Ensuring fairness in rule-making for the mobile ecosystem

- The mobile ecosystem functions as the foundation of consumers' daily lives, and a certain degree of publicness has emerged.
- Based on this, it is desirable for Google and Apple, which are in a position to make rules in the mobile ecosystem, to take the following measures to develop a fair competitive environment within their respective ecosystems.

(1) Notifying relevant developers in advance of any changes to rules within the mobile ecosystem. Also, after presenting the details and the grounds for such changes, providing a sufficient explanation, such as responding to inquiries appropriately.
(2) Providing a sufficient grace period between notification of any changes and implementation of such changes.
(3) When receiving reasonable complaints about the content of a change from related businesses, considering such complaints as much as possible and holding sufficient discussions with related businesses.

4. Promotion of competition related to the formation of new ecosystems

- In addition to the above three initiatives, it is desirable for Google and Apple, which are central players in the mobile ecosystem, to take the following measure.

  - Continuing to bring about innovation without hindering the creation of new products or services and the construction of new ecosystems centered on such products or services by developers other than Google and Apple.
1. The JFTC **continues to respond strictly and appropriately to concrete cases** involving a mobile OS provider or an app store operator **that become problematic under the Antimonopoly Act (AMA)**.

2. The JFTC will make public the contents of the report in order to realize the development of a competitive environment in the mobile ecosystem, and also continues to **proactively engage in collaboration and cooperation with the Headquarters for Digital Market Competition and other related ministries or agencies to develop a competitive environment**.

3. The JFTC also **pays close attention to trends related to new ecosystems** centered on products and services other than smartphones, and conducts market studies as necessary to clarify issues on the AMA and competition policy while taking consumer interests into consideration.

4. The JFTC **exchanges opinions with competition authorities in other countries and regions** and makes use of opportunities offered by organizations such as the Organization for Economic Cooperation and Development (OECD) and the International Competition Network (ICN) to promote **continuous collaboration with relevant overseas authorities** and develop a competitive environment.