

➤ As the digitization of economy has advanced in recent years, information systems, which form the foundation of business activities, must provide prompt and flexible support to meet the need of the frontline workforce, which changes rapidly. Considering that the **use of cloud services is expanding as one of the solutions to such need of businesses**, the Japan Fair Trade Commission (JFTC) has conducted a fact-finding survey regarding trade practices in the cloud service sector.

Market characteristics and assessment of competition environment

Cloud service sector

- ✓ Layered structures consisting of IaaS/PaaS/SaaS and software used in the cloud
- ✓ A number of enterprises (e.g. partners, software vendors) carry out various businesses that assume services provided by cloud service providers (CSPs). -> Formation of ecosystems led by CSPs

Concentration of market shares

- ✓ The degree of market concentration in the IaaS and PaaS markets is increasing every year. The Three CSPs (Amazon Web Services, Microsoft and Google), in particular, are expanding their market shares significantly.
- ✓ The degree of market concentration is likely to continue to increase with the Three CSPs as main players in the future due to the market characteristics such as economies of scale, economies of scope, a wide range of provided services, indirect network effects and preferential use of services provided by current providers.
- ✓ There is the trend that most users do not change from the cloud services they are currently using to on-premise or other services provided by other CSPs.

-> **There is the possibility that the market structure may become noncompetitive in the future**

Fairness and transparency of trade

- ✓ There appears to be asymmetry of information between CSPs and Cloud Service Customers (CSCs).

-> **As appropriate selection of services based on quality becomes difficult, competition may be distorted**

Recommended efforts for concerned parties on competition policy

Recommended efforts that should be made by CSPs

1. Minimization of constraints that obstruct porting to different cloud services, implementation of multi-cloud and hybrid cloud, etc.
2. Provision of information on service selections to CSCs before conclusion of contracts

Recommended efforts that should be made by CSCs

1. Examination of conditions for cease of use and withdrawal before concluding a contract
2. Checking whether the target cloud service meets CSCs' own requirements for porting and data portability
3. Adoption of system designs assuming porting as required
4. Recruitment and development of human resources who have expertise in cloud services

Commented acts that can become problems

Acts that can affect competition in cloud services adversely

1. Setting of data transfer fees
2. Integration of different functions that are traded independently
3. Self-preferencing for software licenses
4. Preferential treatment of exclusive partners

Acts that can affect competition in other markets adversely

1. Price parity clauses in the marketplace
2. Marketing in which using data on sales and purchases made by marketplace participants
3. Handling of CSC data

Acts that disadvantage customers

1. Trade between CSPs and CSCs
2. Trade between CSPs and partners

Future by the JFTC

1. Actively inform not only CSPs, but also CSCs of details of this report.
2. Actively inform relevant government offices that make related efforts of this report and also ensure the competition environment in the cloud service sector through collaboration with the relevant government offices as required.
3. Continue to watch the state of competition in this sector and also continue to respond strictly and appropriately to concrete cases that become problematic under the Antimonopoly Act (AMA).
4. Exchange opinions with competition authorities in other countries and regions at various levels and promote continuous collaboration with relevant overseas authorities.