Chapter 2

The Current Status and Issues of Data Distribution and Utilization

With the advancement of telecommunications infrastructure, the volume of data distribution has exploded, and various businesses and services utilizing data have emerged. While such services offer improved convenience for users, various issues have become apparent in the distribution and utilization of data on the Internet.

This chapter summarizes the status and issues of accelerating data distribution and utilization, and analyzes the status of each country's initiatives.

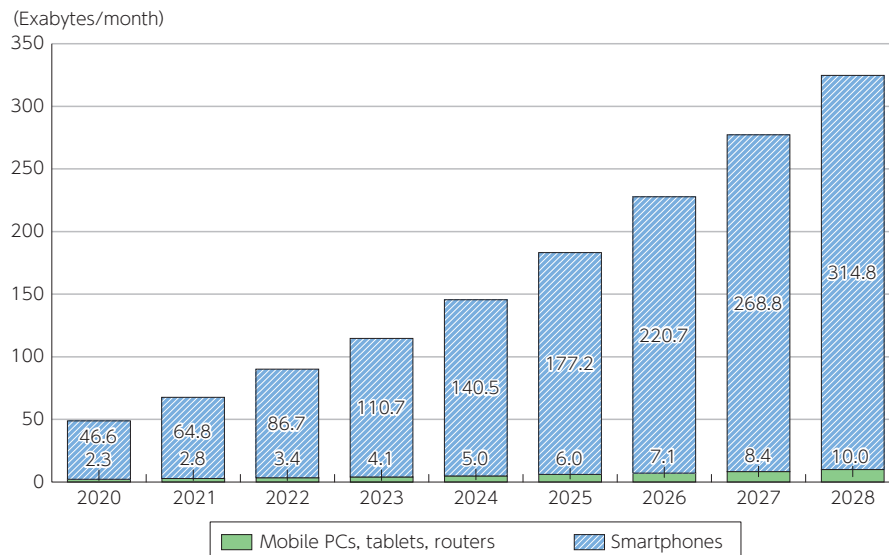## Section 1　The Continuing Acceleration of Data Distribution and Data Utilization

1. The explosive increase in data distribution

With the advancement of telecommunications infrastructure and the spread and diversification of digital services, the volume of data distribution on networks in Japan has increased exponentially. Since the COVID-19 pandemic, digitization has progressed, enabling people to live non-contact and work non-face-to-face. As of November 2022, the total download traffic of fixed-line broadband service subscribers increased by 23.7% year on year, and that of mobile communications subscribers as of September 2022 increased by 23.4% year on year.[1]

Globally, the volumes of data traffic and data distribu-tion, especially through mobile terminals, have increased significantly and are expected to increase further. For example, the Ericsson Mobility Report published by Ericsson (Sweden) in November 2022 shows that worldwide data traffic via mobile devices (excluding FWAs) has increased significantly, reaching approximately 90 exabytes per month by the end of 2022, and it is expected to reach approximately 325 exabytes per month by 2028 **(Figure 2-1-1-1)**. Also, the percentage of 5G in mobile data traffic is expected to be about 17% by the end of 2022 and is expected to be 69% by 2028.

Figure 2-1-1-1　Predicted global mobile data traffic by device

(Exabytes/month)

Year	Smartphones	Mobile PCs, tablets, routers
2020	46.6	2.3
2021	64.8	2.8
2022	86.7	3.4
2023	110.7	4.1
2024	140.5	5.0
2025	177.2	6.0
2026	220.7	7.1
2027	268.8	8.4
2028	314.8	10.0

(Source) Prepared based on "Ericsson Mobility Visualizer by Ericsson"[2]

Figure (related data) Global mobile data traffic forecast (5G and Non-5G)
Source: Prepared based on "Ericsson Mobility Visualizer by Ericsson"
URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00004
(Data collection)

[1] https://www.soumu.go.jp/main_content/000861552.pdf
[2] https://www.ericsson.com/en/mobility-report/mobility-visualizer

Furthermore, in recent years, globalization of corporate activities and the normalization of the provision of international services via the Internet have led to the active distribution of data beyond national borders. According to TeleGeography (U.S.), the volume of cross-border data distribution has grown rapidly since the COVID-19 pandemic, as the use of online shopping and video distribution services, etc. increased due to measures such as national lockdowns and emergency declarations. In 2021, for example, the volume of cross-border data distribution reached 785.6 terabits per second (Tbps), an increase of about 2.7 times from 2017. Looking at countries and regions, Germany came in first followed by the U.S. and France, with Japan ranking 11th at 33 Tbps **(Figure 2-1-1-2)**.

Figure 2-1-1-2   Cross-border Internet bandwidth by top countries and regions
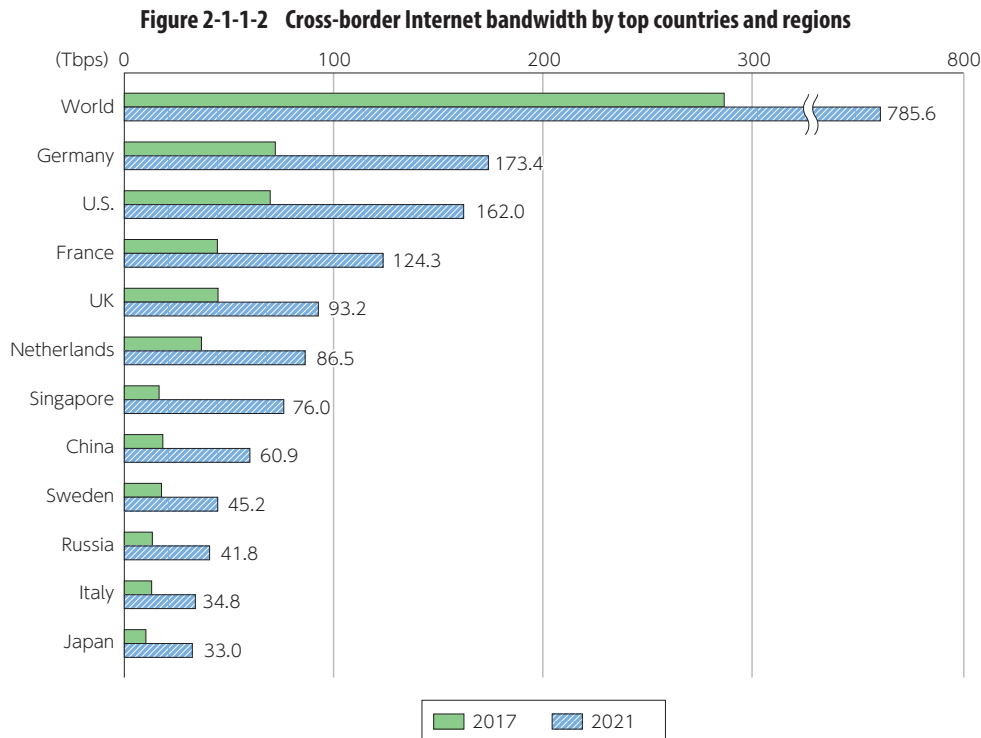
* The classification of regions is based on TeleGeography's definition, and the regional totals are the sums of the countries for which data is available.
(Source) Japan External Trade Organization (JETRO) (Aug. 2, 2022) "The data environment is now (worldwide) - A look at cross-border data flows, investment and trade rules"

2. The awareness of companies and consumers regarding the provision and utilization of data

As the volume of data distribution within countries and across borders increases, we surveyed companies and consumers regarding their awareness of the provision and use of data in four countries: Japan, the U.S., Germany, and China.
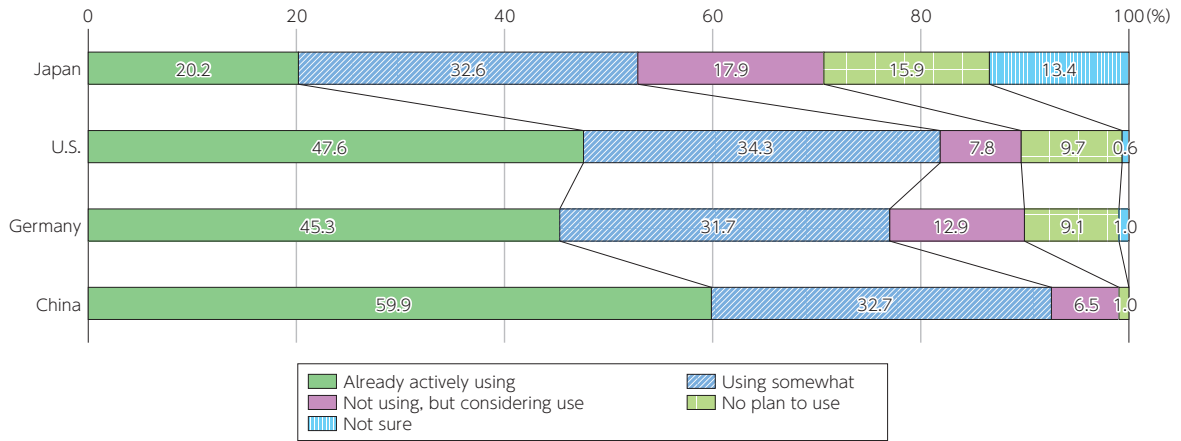
(1) Corporate awareness

First, we asked companies in each country how they use personal data, such as basic customer information. The percentage of Japanese companies that responded they were able to utilize personal data (the sum of "already actively utilizing personal data" and "somewhat utilizing personal data") was 52.8%, which was higher than the results of the survey conducted in fiscal 2019[3] but lower than that of foreign companies **(Figure 2-1-2-1)**. The percentage of Japanese companies that can utilize data other than personal data (51.8%) was low compared to other countries.

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[3] MIC (2020) "Survey Research on Consumer Awareness of the Data Distribution Environment"

Figure 2-1-2-1   Utilization of personal data by companies in each country

Country	Already actively using	Using somewhat	Not using, but considering use	No plan to use	Not sure
Japan	20.2	32.6	17.9	15.9	13.4
U.S.	47.6	34.3	7.8	9.7	0.6
Germany	45.3	31.7	12.9	9.1	1.0
China	59.9	32.7	6.5	1.0	

Legend:
- Already actively using
- Using somewhat
- Not using, but considering use
- No plan to use
- Not sure

(Source) MIC (2023) "Survey Research on R&D on the Latest Information and Communications Technologies and Trends of Use of Digital Technologies in Japan and Abroad"

Figure (related data) Utilization of data other than personal data
Source: MIC (2023) "Survey Research on R&D on the Latest Information and Communications Technologies and Trends of Use of Digital Technologies in Japan and Abroad"
URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00007
(Data collection)

When asked about issues and barriers to handling and utilizing data, many Japanese companies cited "Lack of methods for utilizing data," "Unclear cost-effectiveness and a lack of human resources for handling data (processing and analysis, etc.)." However, companies in the other surveyed countries frequently cited "Risk to company's reputation associated with handling data (consumer backlash, etc. even when there are no legal issues)," and "Fact that the data does not belong to the company, or it is unclear who the owner is" as issues and barriers **(Figure 2-1-2-2)**.

Figure 2-1-2-2   Issues and barriers envisaged in the handling and use of personal data
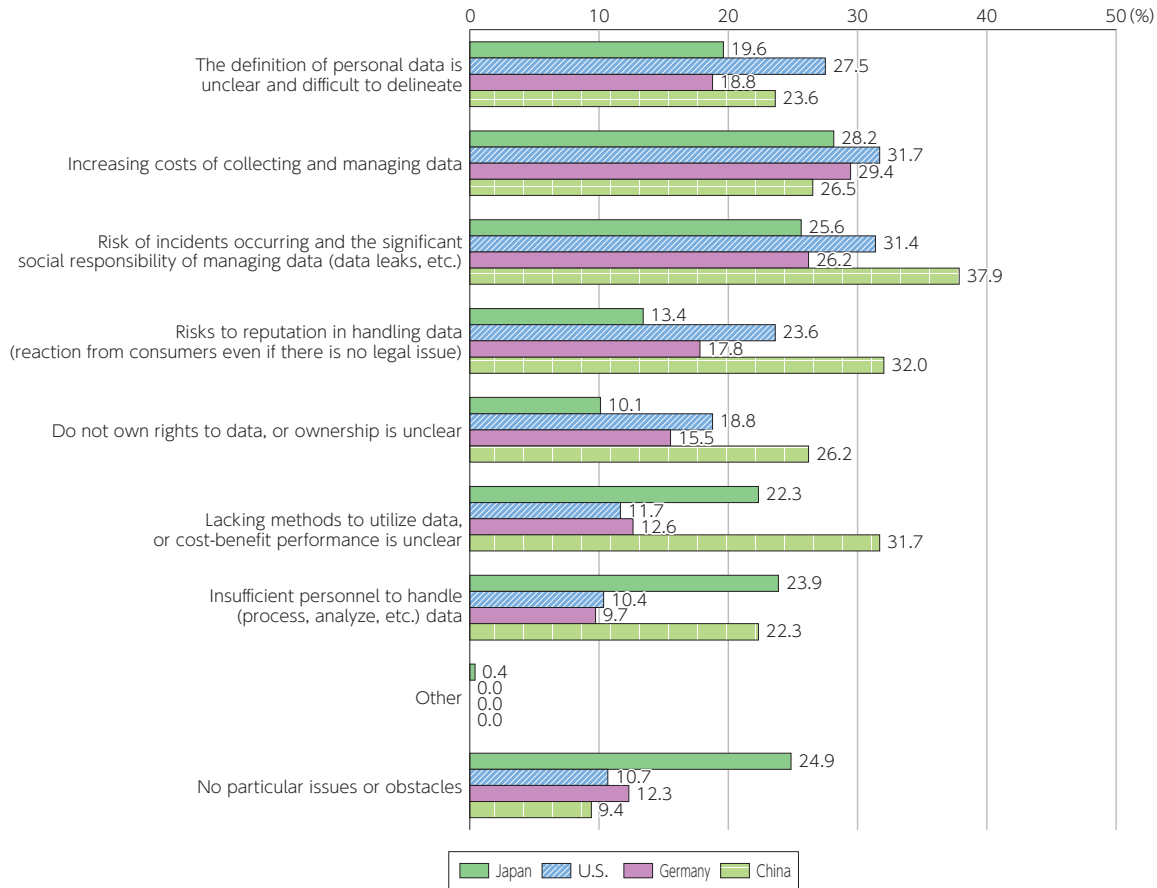
(Source) MIC (2023) "Survey Research on R&D on the Latest Information and Communications Technologies and Trends of Use of Digital Technologies in Japan and Abroad"

(2) Consumer awareness

When consumers in the four target countries were asked how they felt about providing personal data to companies in order to use services, 58.7% of respondents in Japan answered that they would provide personal data (the sum of respondents who answered "I will actively provide personal data in order to receive better service," or "It is only fair to provide personal information in order to use a service," or "I feel some reluctance to providing personal data but I will to use a service"), which was about 15% lower than in other countries **(Figure 2-1-2-3)**.
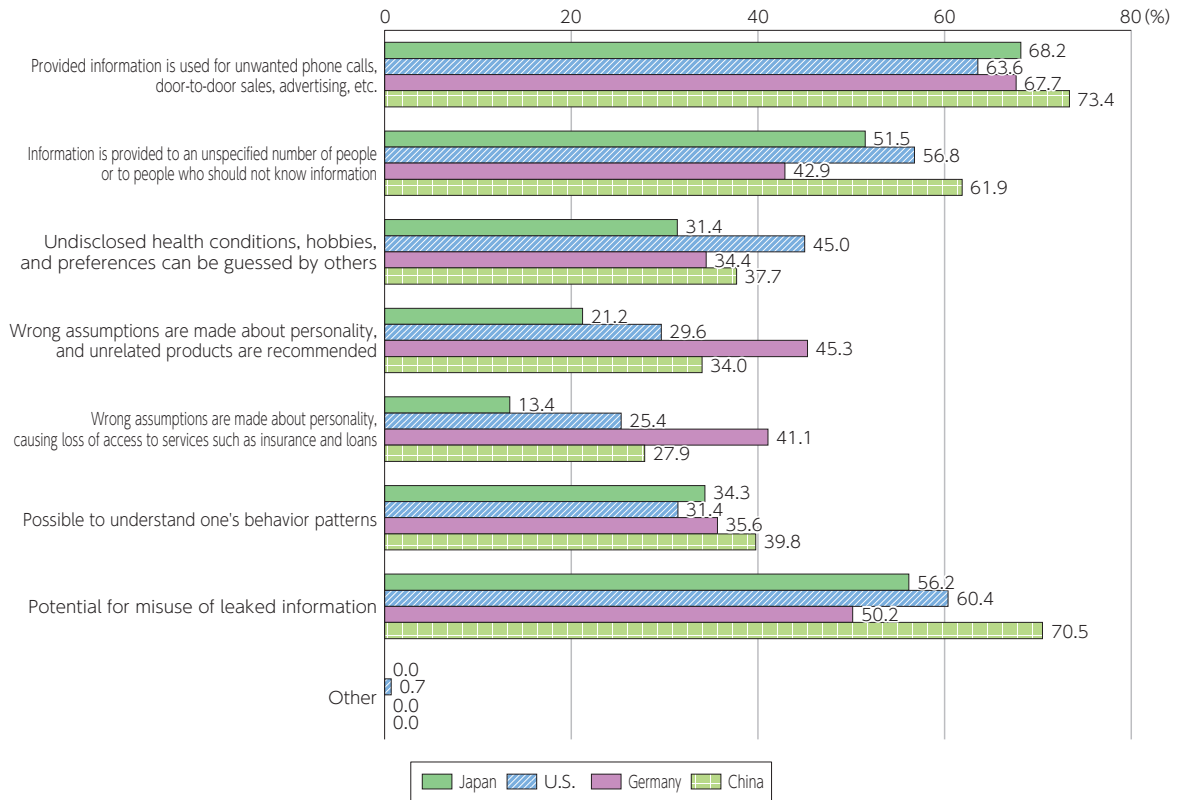
In all four countries, the most common reasons for concern and reluctance in providing personal data to companies were "Unintentional information leaks and that information may be used in undesired ways" **(Figure 2-1-2-4)**.

Figure 2-1-2-3   Intent regarding using services that require the provision of personal data
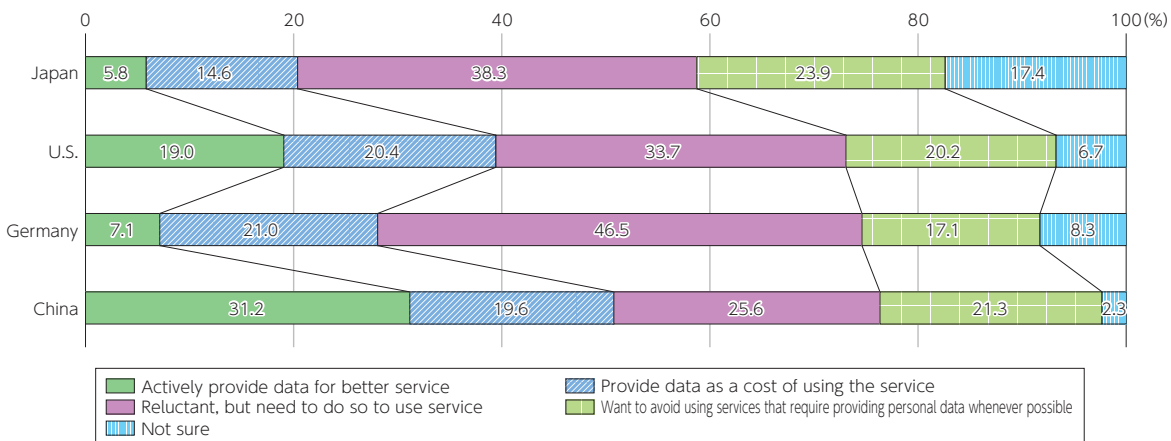
(Source) MIC (2023) "Survey Research on R&D on the Latest Information and Communications Technologies and Trends of Use of Digital Technologies in Japan and Abroad"

Figure 2-1-2-4 Reasons for reluctance to provide personal data when using services

Provided information is used for unwanted phone calls,
door-to-door sales, advertising, etc.
- 68.2
- 63.6
- 67.7
- 73.4

Information is provided to an unspecified number of people
or to people who should not know information
- 51.5
- 56.8
- 42.9
- 61.9

Undisclosed health conditions, hobbies,
and preferences can be guessed by others
- 31.4
- 45.0
- 34.4
- 37.7

Wrong assumptions are made about personality,
and unrelated products are recommended
- 21.2
- 29.6
- 45.3
- 34.0

Wrong assumptions are made about personality,
causing loss of access to services such as insurance and loans
- 13.4
- 25.4
- 41.1
- 27.9

Possible to understand one's behavior patterns
- 34.3
- 31.4
- 35.6
- 39.8

Potential for misuse of leaked information
- 56.2
- 60.4
- 50.2
- 70.5

Other
- 0.0
- 0.7
- 0.0
- 0.0

Legend: Japan | U.S. | Germany | China

(Source) MIC (2023) "Survey Research on R&D on the Latest Information and Communications Technologies
and Trends of Use of Digital Technologies in Japan and Abroad"

Furthermore, when asked about the conditions for providing personal data to companies, the most common answer in all four countries was "To receive an economic benefit" followed by "To improve the service for me,"

showing that the more obvious the advantage was to the personal data provider, the greater the intention was to provide personal data.

Figure (related data) Conditions for providing personal data to companies
Source: MIC (2023) "Survey Research on R&D on the Latest Information and Communications Technologies and Trends of Use of Digital Technologies in Japan and Abroad"
URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00011
(Data collection)

3. Initiatives by country for promoting data utilization (national strategies, etc.)

Against the backdrop of increasingly higher volumes of data distribution through the advancement of digitalization, the promotion of innovation, and the enhancement of the economic value of data, countries around the world, including Japan, have formulated comprehensive

and specific data strategies, and they are actively promoting measures in line with them with the recognition that data is the foundation for national wealth and international competitiveness in the digital society.

(1) Japan

In June 2019 the Cabinet approved the Declaration to be "The World's Most Advanced IT Nation — the Basic Plan on the Advancement of Public and Private Sector Data Utilization" with the aim of creating the world's most advanced IT nation. The plan calls for the use of data to realize benefits to people's lives as a priority item, and the thorough use of data in the public and private sectors is one of the initiatives for realizing the plan.

Furthermore, in June 2021, the Cabinet approved the

National Data Strategy. This strategy presents the following principles of data utilization: (1) data is connected and can be used anytime anywhere; (2) the use of data is controlled so it can be used safely; and (3) everyone cooperates to create new value. These are action guidelines common for both the public and private sectors in order to realize a citizen-centric society that combines economic development and solving social issues (creation of new value) based on a system (a digital

twin) that highly integrates physical space (real space) and cyberspace (virtual space). The strategy summarizes issues and measures on seven levels. The issues that each level should focus on in particular are "Trust[4]" in level 5 (Rules), "Platform" in level 3 (Tools) and level 4 (Service Platform), "Development of base data" in level 2 (Data), and "Development and expansion of digital infrastructure" in level 1 (Infrastructure). The National Data Strategy will be carried over to the revised Priority Policy Program in 2023, and the Government will continue to promote measures that should be prioritized.

(2) The European Union (EU)

In February 2020, the European Commission published its European Data Strategy with the aim of creating a single market for data to enhance Europe's international competitiveness and data sovereignty. The strategy describes the aim of creating the European Data Space, which is a single market for data in order to ensure Europe's competitiveness and data sovereignty around the world and to make more data available for socioeconomic activities while maintaining an environment where companies and individuals can manage the data they generate.

In November 2020, the European Commission introduced the European Data Governance Act to promote the sharing of trustworthy data within Europe. The act stipulates the promotion of the reuse of certain data held by the public sector, improved trustworthiness and neutrality in data sharing, and a mechanism for managing the use of data generated by companies and individuals, etc. In May 2022, the act became law, and it will begin to apply 15 months after coming into force.

In addition, the Gaia-X European Association for Data and Cloud AISBL (hereinafter referred to as Gaia-X) was established in 2021 as an international non-profit organization for information infrastructure that links industrial data in nine fields: industry (manufacturing), the green deal, mobility, healthcare, finance, energy, agriculture, the government, and skills. Gaia-X aims to build an ecosystem in which data can be shared and used in a trusted environment and to incorporate key European values, such as interoperability, reversibility, transparency, and cybersecurity into the cloud infrastructure. As of the end of January 2023, 357 companies from within and outside the EU[5] are participants. At Gaia-X, a consortium called IDS, which is differentiated and organized by industry, is examining use cases, such as areas of application and business processes. For example, in the automotive industry, Catena-X, an alliance centered in Germany for sharing data across the automotive value chain, has been established with the aim of enhancing the competitiveness of the automotive industry and reducing CO_2 emissions, etc., and it is studying use cases, such as business partner data management, traceability, and quality control.

(3) The U.K.

In September 2020, the Department for Digital, Culture, Media and Sport formulated the UK National Data Strategy. The strategy positions data as a driving force in the economy and trade, and it sets forth various measures to build the world's most advanced data economy while gaining public trust in the utilization of data. Priority issues include: (1) unlocking the value of data across the economy, (2) promoting growth and ensuring trustworthy data systems, (3) transforming government data use to increase efficiency and improve public services, (4) ensuring the security and resilience of the infrastructure on which data depends, and (5) promoting international data flows. The four pillars of efficient data utilization are (1) data foundations, (2) data skills, (3) data availability, and (4) data responsibility.

(4) The U.S.

In the U.S., home to many of the world's largest IT companies, the government has not intervened strongly to promote the use of data in the private sector, but in the public sector, both federal and state level governments are actively undertaking initiatives.

At the federal level, the Federal Data Strategy (FDS), a 10-year vision for the use of federal government data, was formulated and published in February 2019. It is a vision for the integrated use of data security, privacy, and confidentiality by all federal government agencies to serve the public and manage resources. It consists of a mission, 10 principles, 40 best practices, and 20 annual action plans. The principles and best practices guide the management and use of data from the federal government to individual agencies. In addition, the best practices are divided into three categories: "building a culture that values data and promotes public use," "data management and protection," and "promoting the efficient and appropriate use of data." To promote the strategy under strong leadership, a Chief Data Officer (CDO) has been established at each agency, and a Federal Chief Data Officers Council has been established to focus on data sharing between agencies.

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[4] "Trust" refers to the trustworthiness of data itself in cyberspace and the trustworthiness of the attributes and sources of data, and it has been pointed out that there is a need for a mechanism that ensures trust when exchanging physical space information.
[5] Four Japanese companies and organizations, EY Consulting & Strategy, NTT Communications, NEC, and the Robot Revolution and Industrial IoT Initiative, are participants as of the end of January 2023.

4. Advanced Initiatives for Data Utilization

Initiatives to promote the use of data in various fields are being carried out in numerous countries, and in Japan progress is being made on examination of the appropriate and efficient use of personal data in education, medicine, etc. and the provision of advanced services by private companies.

(1) Education

The GIGA School Program was launched in December 2019 with the aim of creating an educational environment that is fairly and individually optimized to enable the further development of the qualities and abilities of diverse children without leaving anyone behind by integrating one terminal per person with a high-speed, large-capacity communications network. Due to the COVID-19 pandemic starting in 2020, the development of one terminal per person has been accelerated, and the introduction of the system is expected to be completed in 1,769 municipalities (97.6% of all municipalities) by the end of fiscal 2020.[6] In addition, from the viewpoint of improving individual learning and teacher guidance and support by utilizing educational data, studies on the use of educational data were promoted, and the Roadmap on the Utilization of Data in Education was published in January 2022.

Under such circumstances, various services that strive to utilize data efficiently in educational settings are also being provided by business operators. For example, Google Workspace for Education from Google Inc. is used by more than 170 million students and educators worldwide.[7] In November 2022, Google launched the Google for Education DX Package, which supports DX (digital transformation) in school settings, including elementary schools and junior and senior high schools. Learning logs and other information are centrally managed in the cloud to support analyzing the trajectory of learning and provide learning guidance, etc.

Microsoft also offers Microsoft 365 Education, which is a learning platform that promotes visualization of the education field using data. In addition to the data from Microsoft 365 Education, data from other learning and school affairs systems can be stored, analyzed, and visualized in combination according to the purpose of utilization of the educational data.[8]

An example of the utilization of educational data by local governments is the Shibuya City Board of Education, which has been building an "educational dashboard" that aims to improve school satisfaction through guidance, based on each teacher's understanding of their students, with the aim of realizing the happiness (well-being) for each child. Units such as "whole school," "class," and "individual students" are used to ascertain information from multiple sources.

In addition, initiatives by private cram schools and preparatory schools are progressing to utilize AI to analyze the data they have accumulated and then provide each student with the customized shortest route for learning. For example, the AI tool atama+ was provided to more than 3,100 cram schools and preparatory schools nationwide as of the end of May 2022, and the cumulative number of answers has exceeded 300 million.[9] To realize individualized optimal learning, educational materials are being improved, and the accuracy of recommendations is becoming more precise on a daily basis through the analysis of large amounts of accumulated learning data. By accumulating data on the platform in this way, education is being realized according to the needs of each student.

(2) Medication

In the medical field, the concept of a national medical information platform is being examined for the realization of medical DX. It is expected that the realization of such a platform will lead to the provision of better quality medical care as medical information currently stored and managed individually will be consolidated onto a single platform.

The MDV Data Platform Service is an example of the utilization of medical data as a service for supporting hospital management. It integrates data scattered throughout a hospital, including electronic medical records, medical systems, and other systems, and it enables data analysis from the perspectives of "increased revenue," "work style reform," "quality of medical care," and "improved patient satisfaction."[10] The service is powered by Amazon's AWS cloud service.[11]

Many applications for promoting the health of users are also being provided. Smartwatches, such as Apple's Apple Watch and those offered by Fitbit, which was acquired by Google, can capture the wearer's heart rate, hours slept, physical activity, and other data and store it in the cloud. By linking apps, such as Pep Up, it is possible to integrate and analyze not only the data obtained by a smartwatch but also medical data to promote a person's health.

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[6] MEXT https://www.mext.go.jp/a_menu/other/index_00001.htm
[7] https://edu.google.com/intl/ALL_jp/workspace-for-education/editions/overview/
[8] https://news.microsoft.com/ja-jp/2022/12/21/221231-introducing-case-studies-and-technologies-for-utilizing-educational-data-to-advance-the-giga-school-initiative/
[9] https://corp.atama.plus/news/2416/
[10] https://www.mdv.co.jp/solution/medical/hospital/mdv_dps/
[11] https://d1.awsstatic.com/local/health/20220324%20MDV%20session%203.pdf

Section 2　Concentrating Data with Platform Providers

In line with increasing volumes of data distribution and advances in data utilization, data is becoming concentrated with some platform providers.

This section provides an overview of the current state and background of data acquisition and storage by platform providers. It also addresses two issues caused by the concentration of data with platform providers, which are "harm to a fair competitive environment" and "concerns about transparency and fairness in the handling of acquired and stored data," and it examines each country's response to these issues.

1. Data Acquisition and Storage by Platform Providers

As information and communications technology have advanced and massive amounts of data have been generated, platform providers have grown rapidly as innovators that continue to generate innovative businesses and markets. Currently, various services offered by platform providers have penetrated deeply into our lives. Using search services to find things what we want to know, communicating on social media and watching videos on the Internet are all part of everyday life for many people.

According to SANDVINE (Canada),[1] Facebook has the largest share of mobile internet traffic by application (company) in the world at 27.82% followed by Google at 19.09%, Tiktok at 13.76%, and Netflix at 2.41% **(Figure 2-2-1-1)**.

Figure 2-2-1-1　Mobile Internet traffic by application (first half of 2022)
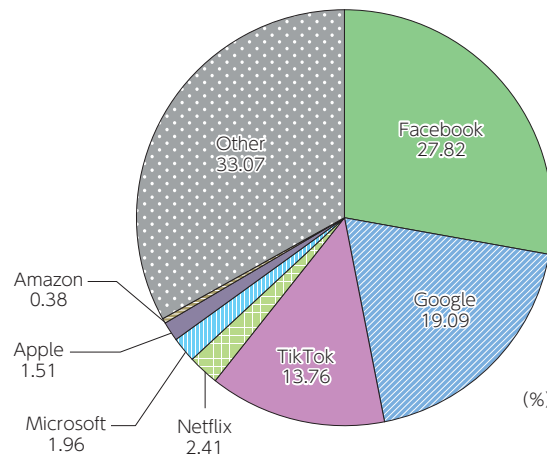
(Source) Prepared based on "PHENOMENA (THE GLOBAL INTERNET PHENOMENA REPORT JANUARY 2023)" by SANDVINE.

Furthermore, according to a study by Statista, all five GAFAM (an acronym for Google, Apple, Facebook, Amazon, and Microsoft) companies were included in the top 10 platforms with the most monthly users in the U.S. as of July 2022.

Figure (related data) Platforms with the most monthly unique users in the U.S. (July 2022)
(Source) Statista "Most popular multi-platform web properties in the United States in July 2022, based on number of unique visitors"
URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00014
(Data collection)

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[1] "The Global Internet Phenomena Report January 2023" was compiled by SANDVINE, which collected data from more than 2.5 billion subscribers using more than 500 fixed and mobile telecom operators worldwide. It is important to note that the report covers North America, South America, Europe, Asia, and the Middle East but does not include data from China or India.

Through the provision of various services, platform providers acquire attribute data, such as names, user names, and IP addresses, and various activity data, such as purchasing activities and communications **(Figure 2-2-1-2)**. Considering the large number of users using their services, it is assumed that these platform providers acquire and accumulate huge amounts of data.

Figure 2-2-1-2　Example of data items collected by platform providers

Data item	Platform			
	Google	Facebook	Amazon	Apple
Name	○	○	○	○
User name	–	–	○	–
IP address	○	○	○	○
Search word	○	–	○	○
Content	–	○	–	–
Link between content and displayed ads	○	○	–	–
Time, frequency, and duration of activity	○	○	–	○
Purchasing activity	○	–	○	–
Persons with whom you communicated	○	○	–	–
Activity in third-party apps	○	–	–	–
Browsing history	○	–	○	–

(Source) Prepared using an extract from "The Data Big Tech Companies Have On You" by Security.org

2. Issue (1): Impediments to a Fair Competitive Environment due to Platform Providers Having an Oligopoly on Data

(1) The current status and background

In recent years, GAFAM and other platform providers have established a strong economic position in the digital-related market by utilizing the vast amount of collected data for businesses, etc., and their market dominance has further increased.

As of the end of March 2023, GAFAM were in the top 15 companies by market capitalization in the global digital-related market, with Tencent (7th) and Alibaba (13th) also making the list.[2] Looking at the sales trends of these companies, it can be seen that they have all been expanding sales at a high rate **(Figure 2-2-2-1)**.

Figure 2-2-2-1　Sales trends of major platform providers
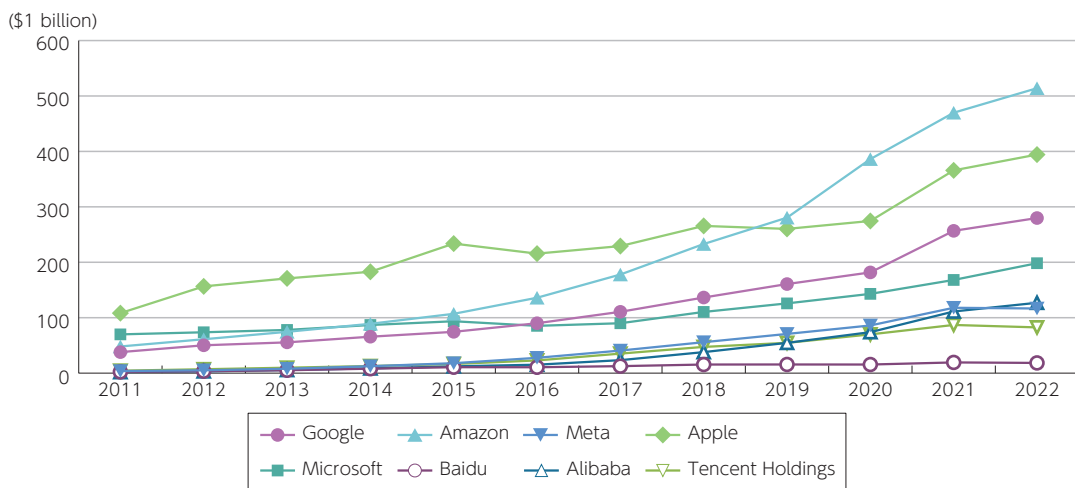
(Source) MIC (2023) "Survey Research on ICT Market Trends in Japan and Abroad"

The services provided by platform providers have a network effect,[3] where the more participants a network has the more valuable the network becomes and the more participants it attracts. As a result, services with large numbers of users tend to be able to gain more users and grow in size. This concentration of data with plat-

[2] See Part 2, Chapter 4, Section 6. Platform trends.
[3] The effect of a person joining a network and not only increasing the utility to that person but also increasing the utility to other subscribers is called the "network effect." The network effect can be divided into direct and indirect effects. The "direct effect" is when the utility to subscribers of a network increases as their number increases. The "indirect effect" is when an item (e.g., a hardware device) and its complementary item (e.g., software) are closely related, and as the item is used more, more complementary items corresponding to it are supplied, thereby increasing its utility.

form providers through the network effect and economies of scale, etc. increases the utility to users. And as the platform providers integrate and utilize the data and build business models based on the data, it creates a cycle in which the platform providers further accumulate and utilize data, resulting in them maintaining and strengthening their competitive advantage.[4]

In addition, the services offered by platform providers are said to have high switching costs.[5,6] When the switching cost is high, users are hesitant to switch even if there are other cheaper, higher-quality alternatives. In particular, when a platform provider provides various services that are interlocked, the switching cost becomes higher. As a result, the user is locked in to the service provider, reducing the competition between services.

Concerns about the strengthening of the market dominance of platform providers and the data oligopoly have also been raised in other countries. For example, the U.S. House Committee on the Judiciary conducted a study on digital market competition titled "Investigation of competition in digital markets," and it identified the following as the main issues with respect to platform provider oligopolies:

(1) There is a winner-takes-all market structure because the more users there are due to the network effect, the stronger the ability to attract other users
(2) Platform providers may act as gatekeepers to other business operators entering the market
(3) There are high switching costs when users switch to another service
(4) Online services have structures that make it easy to retrieve and concentrate data

As the market dominance of platform providers increases, there is a risk that other companies may be prevented from entering the business, and competition between companies may be hindered. Platform providers are also in a position to operate and manage their platforms and conduct transactions that disadvantage business operators using their platforms. Currently, a considerable amount of data, such as internet activity history, communication history, and location information, has already been accumulated by some platform operators, and the utilization of such data can provide highly convenient services to users. However, because of the lock-in effect, it is possible that diverse competition utilizing data will not be ensured, and high-quality services will not be provided to users in the medium to long term.

In order to promote the appropriate distribution and utilization of data and create diverse businesses and services utilizing data, it is important to prevent excessive enclosure of data by some business operators and ensure a transparent and sound competitive environment.

(2) Initiatives by each country to ensure a fair and appropriate market environment

In order to ensure a competitive environment in the market, countries are taking measures to strengthen regulations and promote transparency with respect to platform providers and others that are expanding their market dominance.

a　Japan

In Japan, the Japan Fair Trade Commission is conducting investigations based on the provisions of the Antimonopoly Act. For example, in 2016, they investigated Apple[7] because it was suspected that while operating the App Store, which lists applications for the iPhone, Apple was restricting the business activities of business operators that provide applications with respect to sales of digital content.[8] In February 2023, the Japan Fair Trade Commission released its "Market Study Report on Mobile OS and Mobile App Distribution" in which it assessed that there was not enough competition in smartphone operating systems and app stores, where the market is split between Apple and Google and that a healthy competitive environment needs to be created.

In addition, in order to improve the transparency and fairness of transactions on digital platforms, the Act on Improving Transparency and Fairness of Digital Platforms (Act No. 38 of 2020) came into force in February 2021. Under the act, companies that provide digital platforms with a particularly high need to enhance transparency and fairness in transactions are designated as "specified digital platform providers."[9] They are required to report their operational status to users, including advance notice of disclosures and changes to transaction conditions, to ensure fairness in operations and the status of complaint handling and information disclosures.

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[4] https://www.jftc.go.jp/dk/guideline/unyoukijun/dpfgl.html
[5] The switching cost is the financial, procedural, and psychological burden incurred by an individual to switch from the product or service the individual is currently using to another alternative product or service.
[6] The Ministry of Economy, Trade and Industry, the Japan Fair Trade Commission, and the Ministry of Internal Affairs and Communications (2018) "Summary of interim issues concerning the development of a trading environment for digital platform providers"
[7] Apple submitted an improvement measures offer, such as revising the provisions of the related guidelines. The Japan Fair Trade Commission examined the offer and found that the above issue would be resolved. Therefore, the review was concluded after confirming that Apple would implement improvement measures in the future. https://www.jftc.go.jp/houdou/pressrelease/2021/sep/210902.html
[8] Suspected violation of the provisions of Article 3 (Private Monopolization) or Article 19 (Unfair Trade Practices, Paragraph 12 [Trade Subject to Constraints], etc.) of the Antimonopoly Act
[9] As of October 2022, in the comprehensive online retail mall category, three companies, Amazon, Rakuten, and Yahoo, were subject to restrictions. In the app store category, two companies, Apple/iTunes and Google LLC, were subject to restrictions, and in the online advertising category, three companies, Google, Meta Platforms, and Yahoo, were subject to restrictions.

b The U.S.

In the U.S., there has not been much movement to regulate companies, including platform providers, which are private companies, but in recent years there have been moves to strengthen regulations on platform providers from the perspective of competition policy. In July 2019, the Department of Justice (DoJ) announced a major antimonopoly investigation of GAFA (an acronym of Google, Apple, Facebook, and Amazon), and a hearing on antitrust laws with respect to GAFA was held before the U.S. House Committee on the Judiciary in July 2020.

In October 2020, the DoJ filed an antitrust lawsuit against Google, alleging that its search service had a market monopoly, which violated antitrust laws. In January 2023, the DoJ and eight states filed a lawsuit against Google's internet advertising business for alleged partial antitrust violations and sought a partial separation of its advertising business.

c The EU

In Europe, the Digital Market Act (DMA) and the Digital Service Act (DSA) have been developed as the Digital Service Act Package to solve various online issues, such as the significant evolution of platform services, increasing concentration and power imbalances, and new problems, such as disinformation.

The DMA,[10] which aims to create an open digital marketplace, imposes obligations on providers of large core platform services identified by the European Commission as gatekeepers[11] to prohibit unfair service delivery and data handling. It stipulates that gatekeepers should do specific things, these include: (1) allow third-party services to interoperate with gatekeeper services under certain conditions; (2) allow business users to access data generated using the gatekeeper platform; and (3) allow business users to enter into contracts with customers outside the gatekeeper platform. It also stipulates that gatekeepers should not do specific things, these include: (1) display their own services and products in preference to other services on the platform; (2) prevent users from linking to companies outside the platform; and (3) track users on services other than the gatekeeper's platform services for targeted advertising purposes without obtaining valid consent. If a gatekeeper violates these obligations or prohibitions, the European Commission can impose a fine equivalent to up to 10% of the previous fiscal year's global sales.

d China

In August 2022, the Anti-Monopoly Law was amended to include measures aimed at platform operators that prohibit operators with a dominant market position from abusing their position by using data, algorithms, technology, platform rules, etc.

3. Issue (2): Concerns about transparency and appropriateness of data acquisition and utilization by platform providers

(1) The current status and background

As mentioned above, through the provision of services, platform providers have acquired a range of data from a huge number of users, and they have used that data to grow their businesses. One example is its use in digital advertising.

The digital advertising market continues to grow at a high rate, and when we look at global advertising spending by medium, digital advertising is expected to reach $394.4 billion in 2022 (up 13.7% year on year).[12] In Japan, of the 2,480.1 billion yen (115.0% year on year) spending on internet advertising media in 2022, search-linked advertising spending was 976.6 billion yen (122.2% year on year), video advertising spending was 592 billion yen (115.4% year on year), and social advertising spending, such as for social media and video sharing, was 859.5 billion yen (112.5% year on year); thus, spending in each area grew significantly.[13]

Google and Facebook, which offer advertising services that link with search engines and social media, earn more than 80% of their revenue from advertising by connecting their platforms, which serve as places for people to gather, with their advertising businesses. In 2022, Google's ad revenue was about $224.5 billion (79.4% of total revenue), and Facebook's ad revenue was about $113.6 billion (97.5% of total revenue). Together, the two companies made about $338.1 billion (44,461.5 billion yen). Considering that the Japanese advertising market is 7,102.1 billion yen, we can see how huge this amount is **(Figure 2-2-3-1)**.

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[10] The DMA came into effect on May 2, 2023, but with respect to preparatory work, including the adoption of enforcement rules and guidelines, the DMA actually began to apply from November 1, 2022.

[11] The European Commission's criteria for identifying gatekeepers include annual regional sales of at least €7.5 billion over the past three years or an average stock market capitalization of at least €75 billion in the previous fiscal year as well as at least 45 million monthly users of platform services in the region and at least 10,000 annual business users.

[12] "Global Ad Spend Forecast (2022 to 2025)" (Dentsu Group) https://www.group.dentsu.com/jp/news/release/000888.html

[13] "Detailed Analysis of Japan's Advertising Expenditures on Internet Advertising Media in 2022" (Dentsu Group) https://www.dentsu.co.jp/news/release/2023/0314-010594.html

Figure 2-2-3-1 Advertising spending as a percentage of platform provider sales (2022)

	Advertising	Cloud	Subscriptions	E-commerce	Other
Google	79.4	9.3			11.3
Facebook	97.5				2.5
Amazon	7.3	15.6	6.9	42.8	27.4
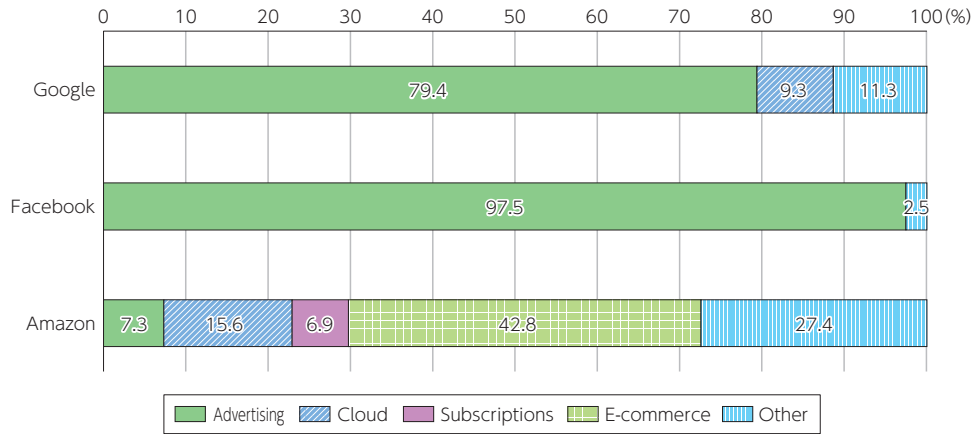
(Source) Prepared based on the published data of each company

Against this backdrop, countries are investigating and prosecuting the use of data by platform providers **(Figure 2-2-3-2)**.

Figure 2-2-3-2 Cases of investigation and prosecution of platform providers

Overview	Details
Use search data to lower search rankings of other companies' shopping sites (Google)	• In December 2017, the European Commission sued Google for using user search data to rank its Google Shopping service higher than other similar services. In November 2021, the European General Court upheld the European Commission's complaint. • In February 2022, Swedish price comparison service PriceRunnner sued Google for similar reasons.
Leverage data from third-party sellers who use Amazon to develop their own products (Amazon)	• In 2020, the Wall Street Journal reported that Amazon was using sales data for third-party products to develop its own products. • In April 2022, the U.S. Securities and Exchange Commission (SEC) began investigating the case.
Facebook linked to Facebook Marketplace (Meta)	• In December 2022, the European Commission linked Facebook to Facebook Marketplace, an advertising service for the sale of goods between individuals, and warned Meta for distorting competition in the market for similar services. • The European Commission also pointed out that Meta imposes adverse conditions on competing business operators that advertise on Facebook and Instagram, which allowed them to leverage data related to competing ads.

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

(2) Consumer awareness

Major platform providers acquire and analyze personal data, such as end user attribute information, location information, purchase histories related to e-commerce, and viewing histories related to video and music distribution, and they provide value-added services, such as presenting advertisements and content according to the preferences of each end user. Meanwhile, there are also growing concerns about transparency and fairness in the acquisition and handling of such data by platform providers. The Ministry of Internal Affairs and Communications conducted a questionnaire survey of consumers in Japan, the U.S., Germany, and China in order to understand their attitudes toward the acquisition, accu-

mulation, and use of data by major platform providers.

First, consumers in each country were asked about their experiences using internet services provided by major platform providers (multiple responses). Across all countries, Google Maps (66.5%), YouTube (63.8%), Amazon (online shopping) (61.3%), Gmail (56.1%), Google Search (55.3%), and Facebook (50.2%) were the most used. In Japan, the most used were YouTube (79.1%), Gmail (65.2%), and Google Maps (63.6%). In China, the percentage of user's using their own country's services was high, including WeChat (90.8%), WeChat Pay (88.6%), and Alipay (85.3%).

Figure (related data) Services that individuals have used (multiple responses)
Source: MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"
URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00020
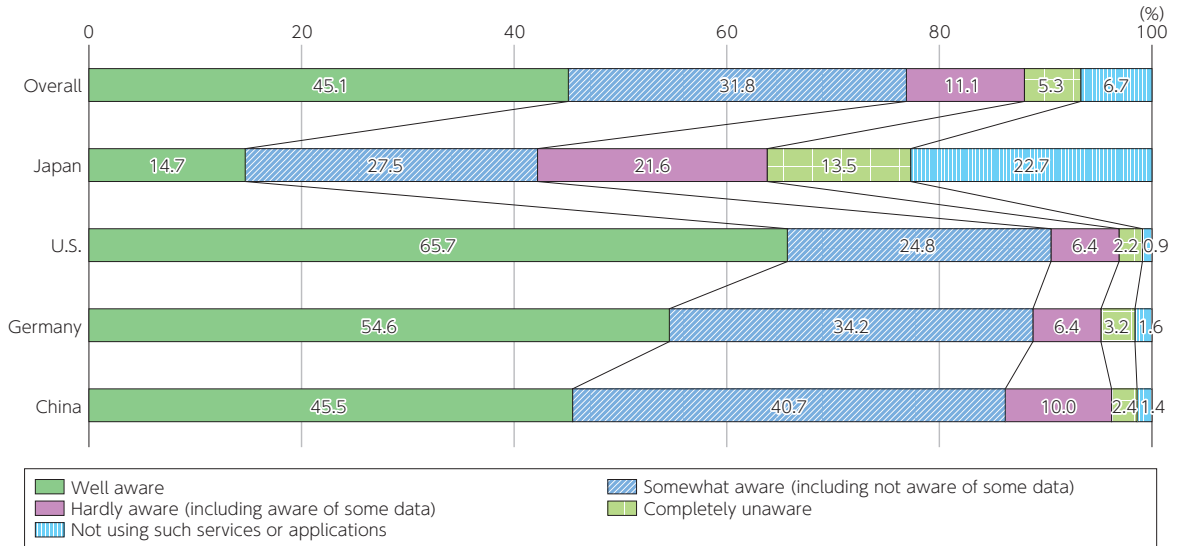(Data collection)

Next, when asked whether or not they were aware they were providing their personal data to platform providers when using these kinds of services and applications, the U.S. had the highest percentage of respondents who answered that they were aware (the sum of "Well aware" and "Somewhat aware") at 90.5%. In Japan the percentage was 42.2% **(Figure 2-2-3-3)**.

Looking at the presence or absence of anxiety, Ger-

many had the highest number of respondents who answered that they felt concerned (the sum of "Very concerned" and "Somewhat concerned") at 66.5%. In Japan the percentage was 58.4% **(Figure 2-2-3-4)**.

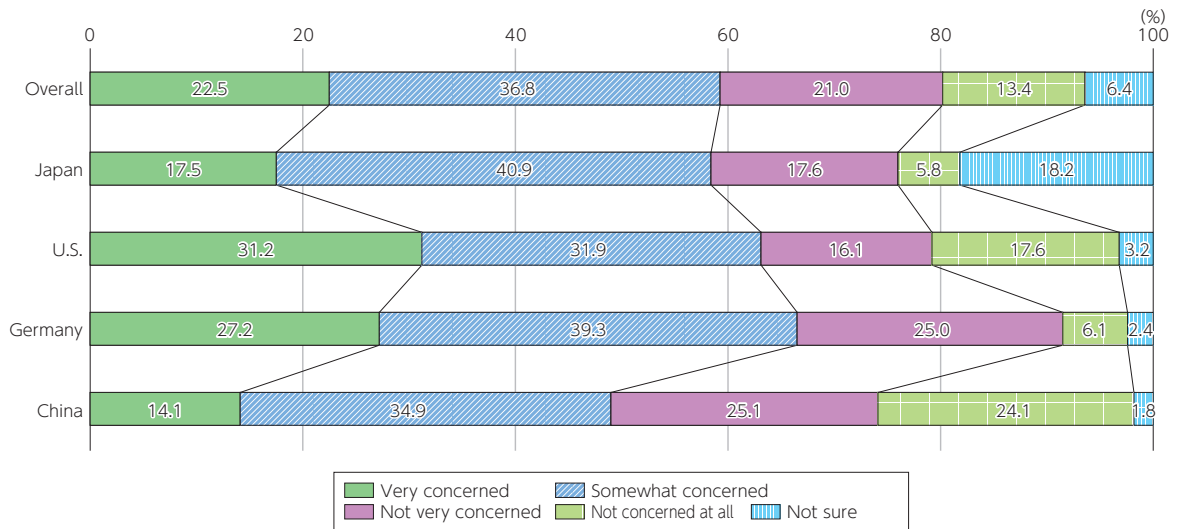In all four countries, more than 50% said they felt concerned even when they were not aware they were providing personal data.

Figure 2-2-3-3   Awareness regarding the provision of personal data

	Well aware	Somewhat aware (including not aware of some data)	Hardly aware (including aware of some data)	Completely unaware	Not using such services or applications
Overall	45.1	31.8	11.1	5.3	6.7
Japan	14.7	27.5	21.6	13.5	22.7
U.S.	65.7	24.8	6.4	2.2	0.9
Germany	54.6	34.2	6.4	3.2	1.6
China	45.5	40.7	10.0	2.4	1.4

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

Figure 2-2-3-4   Concerns over the provision of personal data

	Very concerned	Somewhat concerned	Not very concerned	Not concerned at all	Not sure
Overall	22.5	36.8	21.0	13.4	6.4
Japan	17.5	40.9	17.6	5.8	18.2
U.S.	31.2	31.9	16.1	17.6	3.2
Germany	27.2	39.3	25.0	6.1	2.4
China	14.1	34.9	25.1	24.1	1.8

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

When asked to prioritize the most important aspects of providing personal data to platform providers, "Organization/company collecting data ensures sufficient security" was the highest in all four countries. Looking at the countries individually, in Japan, the most common responses were "Organization/company collecting data

ensures sufficient security" (67.2%), "How obtained data is used" (49.7%), and "Appropriate methods of handling data" (48.0%). In the U.S. and Germany, "Obtain appropriate consent to provide data" was the second highest **(Figure 2-2-3-5)**.

Figure 2-2-3-5　Points to consider when providing personal data

Legend:
- Obtain appropriate consent to provide data
- Types and items of data provided
- How obtained data is used
- Organization/company collecting data ensures sufficient security
- Appropriate methods of handling data
- Organization/company to which data is provided
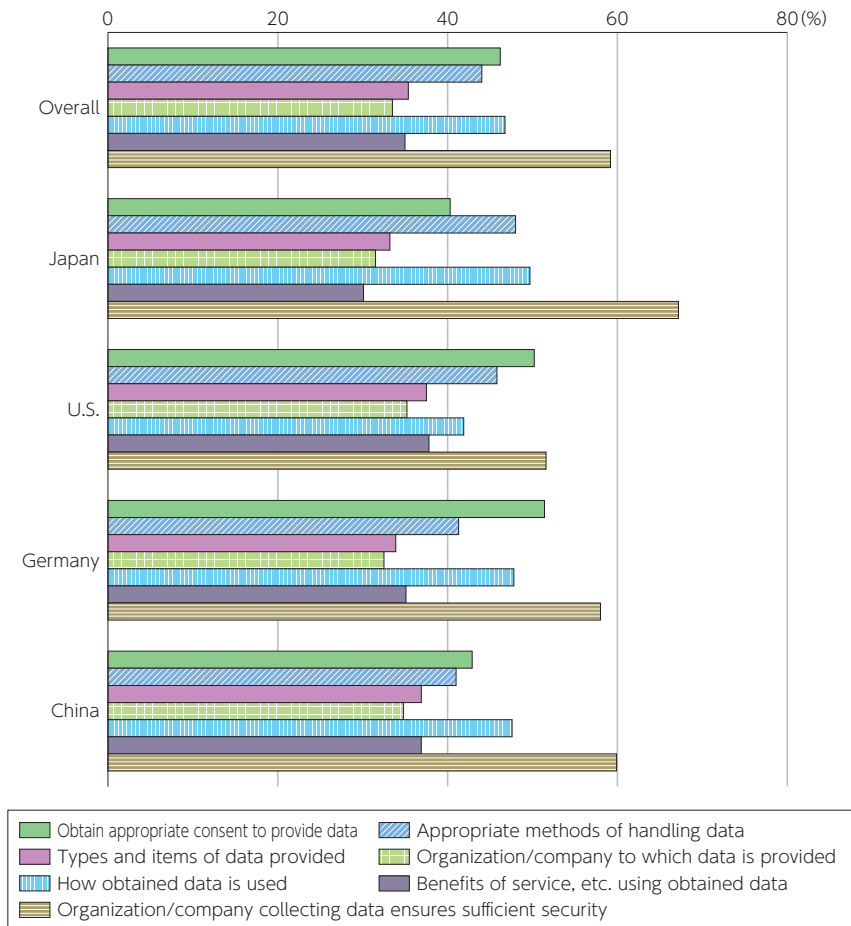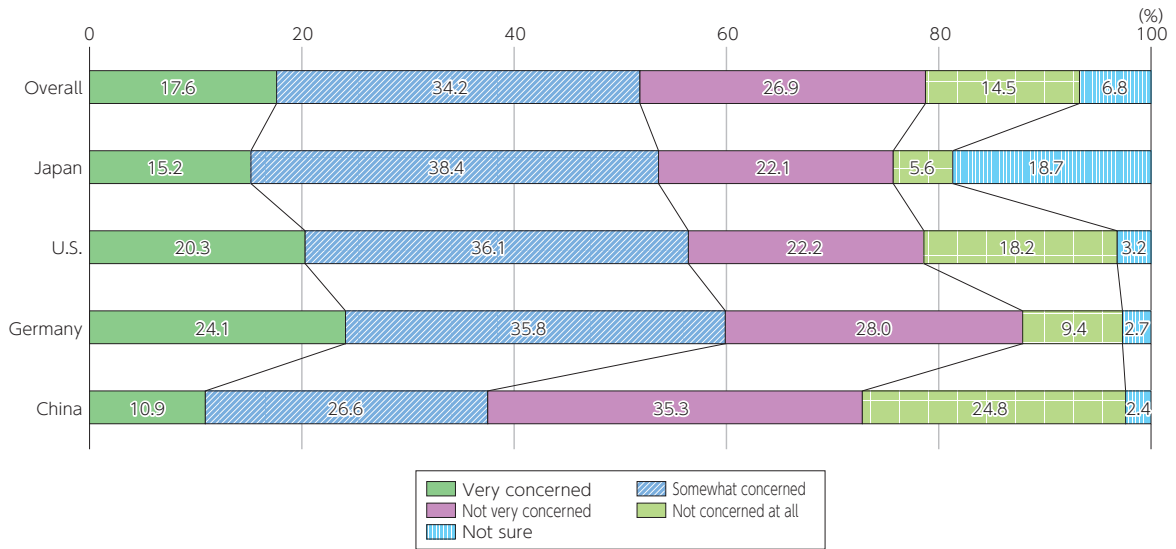- Benefits of service, etc. using obtained data

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

In addition, when asked how they felt about seeing personalized (optimized) search results and advertisements associated with their use of such services, the percentage of respondents who answered that they feel concerned (the sum of "Very concerned" and "Somewhat concerned") exceeded 50% in all three countries except China, at 37.5% **(Figure 2-2-3-6)**.

When asked whether the presentation of user-optimized advertisements had an impact on their use of the services and applications pro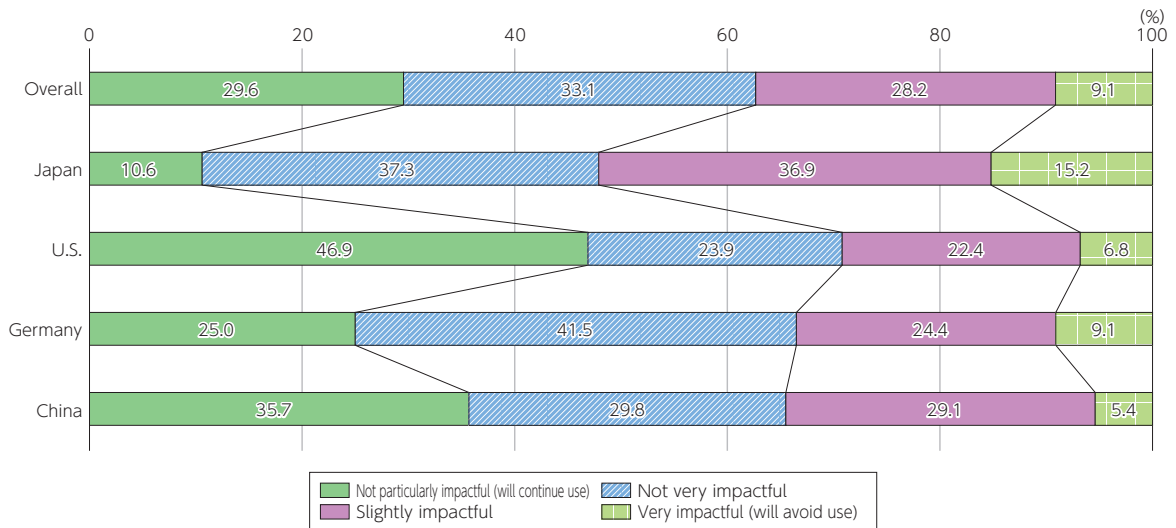vided by major platform providers, approximately the same percentage of respondents in Japan that answered it was impactful (the sum of "Slightly impactful" and "Very impactful") also answered that it was not impactful (the sum of "Not particularly impactful" and "Not very impactful"). In the other three countries, 60 to 70% of respondents answered that it was not impactful **(Figure 2-2-3-7)**.

Figure 2-2-3-6   Concerns over the display of personalized search results and advertisements, etc.

	Very concerned	Somewhat concerned	Not very concerned	Not concerned at all	Not sure
Overall	17.6	34.2	26.9	14.5	6.8
Japan	15.2	38.4	22.1	5.6	18.7
U.S.	20.3	36.1	22.2	18.2	3.2
Germany	24.1	35.8	28.0	9.4	2.7
China	10.9	26.6	35.3	24.8	2.4

Legend: Very concerned / Somewhat concerned / Not very concerned / Not concerned at all / Not sure

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

Figure 2-2-3-7   Impact of the display of personalized advertising on usage

	Not particularly impactful (will continue use)	Not very impactful	Slightly impactful	Very impactful (will avoid use)
Overall	29.6	33.1	28.2	9.1
Japan	10.6	37.3	36.9	15.2
U.S.	46.9	23.9	22.4	6.8
Germany	25.0	41.5	24.4	9.1
China	35.7	29.8	29.1	5.4

Legend: Not particularly impactful (will continue use) / Not very impactful / Slightly impactful / Very impactful (will avoid use)

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

As platform providers provide a variety of services necessary for people's daily lives, they are now acquiring and accumulating more sensitive data. Widespread profiling of such data to provide recommendations has improved convenience for users, but it has also increased the likelihood that users can be unwittingly influenced by the results. In order to eliminate concerns about the handling of personal data and enable users to use individually optimized digital services with peace of mind, it is important to eliminate situations where users cannot see how data is collected and utilized and ensure data is handled appropriately.

(3) Initiatives by countries to ensure the transparency and appropriateness of data distribution and utilization

As part of the development of laws for the protection of personal information, each country is regulating and responding to privacy violations caused by the collection and analysis of digital data. In addition to regulations that impose penalties in the event of violations, other means also exist, such as users having the right to request that their information is deleted and a framework by which users can check the details of how their data is analyzed by platform providers.

In addition to legislation protecting personal information, some countries impose obligations on business operators, including platform providers, regarding the proper handling of user information.

a   Japan

In Japan, the Act on the Protection of Personal Information was revised in 2020, and it came into full force in April 2022. In order to protect the rights and interests of individuals, the 2020 amendment of the act stipulates that individuals can request the suspension or erasure of their personal data when their rights or legitimate inter-

ests are likely to be harmed, and it allows individuals to request disclosure of records provided by third parties concerning the transfer of personal data. In addition, under the opt-out provision,[14] the scope of personal data that can be provided to third parties is limited, and (1) personal data that has been illegally obtained and (2) personal data provided under the opt-out provision are excluded. In addition, although it does not fall under the category of personal data at the source, regarding the provision of information to a third party that is considered to become personal data for the recipient, the recipient is required to confirm that the consent of the individual has been obtained.[15]

In June 2023, the Act Partially Amending the Tele-

communications Business Act (Act No. 70 of 2022) came into force. The act requires telecom operators that provide telecommunications services that have a significant impact on the interests of users to submit regulations on the handling of specified user information and publish their information handling policies, etc. In addition, when such an operator transmits information about users to external parties from the user's device, it is obligated to provide an opportunity for confirmation by doing the following: (1) notify the user in advance or placing the information in a state so that the user can easily check it (notification and publication), (2) obtain the user's consent in advance (obtaining consent), or (3) take opt-out measures (opt-out).

b　The U.S.

In the U.S., there is currently no comprehensive federal law on the protection of personal information, and states have different laws and regulations. In January 2020, California enacted the California Consumer Privacy Act (CCPA), the nation's first comprehensive privacy law. The law grants consumers eight privacy rights, including the right to request that their personal information be deleted.

Also, in November of the same year, the California Privacy Rights Act (CPRA), which builds on the CCPA, was passed. It made it mandatory to establish opt-out measures for cross-site tracking using third party cookies, etc. Since the enactment of the CCPA, other states, in-

cluding Virginia and Colorado, have started to adopt laws modeled on the CCPA.[16]

Following on from this, in June 2022, a draft of the American Data Privacy and Protection Act (ADPPA) was published. The legislation would give consumers the right to access, modify, and delete their own data held by business operators, and it would prohibit business operators from collecting and using data for purposes other than those that fall under the 17 items specified in the act. If the act becomes law, it is expected to become the first comprehensive privacy protection law at the federal level.

c　The EU

In the EU, the General Data Protection Regulation (GDPR) came into force on May 25, 2018. This regulation grants individuals various rights, including the right to request the deletion of data, the right to object to data profiling, and the right to data portability.[17] The establishment of such rights is expected to ensure the protection of personal data, promote competition by preventing personal data from being locked away, create innovation from the use of personal data, and improve user convenience by promoting sharing of personal data under the control of users. Business operators are required to obtain an individual's explicit consent to collect and use personal data and to implement appropriate security measures for the risks associated with data management and processing. Violations of the GDPR can

result in fines of up to 4% of the violating business's global annual revenue (€20 million if the figure is below €20 million).[18]

In addition, the Digital Service Act (DSA),[19] which aims to define online safety and fundamental rights, stipulates that platform providers have an obligation to protect users in accordance with the size of the business operator. In addition to ensuring transparency in online advertising (the obligation to indicate that an advertisement is an advertisement and the advertiser and the main parameters used in the decision to display the advertisement) and obtaining consent for targeted advertising, very large platform providers[20] have additional obligations regarding transparency in online advertising and recommendation systems.

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[14] It is a system that allows personal data to be provided to a third party without the consent of the person after the items of personal data to be provided are made public under the premise that use of the data will be subsequently discontinued if the individual requests that.

[15] https://www.ppc.go.jp/files/pdf/200612_gaiyou.pdf

[16] For example, in July 2021, Colorado passed the Colorado Privacy Act, which gives consumers the right to access, correct, or delete personal data collected by target business operators and the right to refuse not only the selling of but also the collection or use of personal data (opt-out) while also requiring target business operators to protect personal data and disclose clear, understandable, and transparent information to consumers about how they use the data.　https://www.jetro.go.jp/biznews/2021/07/509ba52fe4ead2e9.html

[17] (1) The right to receive personal data that an individual has provided to a business operator, etc. in a form that is easy for the individual to reuse, and (2) the right to transfer personal data directly to another business operator, etc. if it is technically feasible to do so

[18] In Europe, there have been 1,591 cases of GDPR-related fines from when the GDPR came into force up to the end of February 2023, with the fines totaling €2.7 billion. The most common reasons for punishment were "Insufficient legal basis for data processing" at 32% followed by "Violation of general data processing principles" and "Insufficient technical or organizational measures to ensure information security." These top three reasons accounted for nearly 75% of the total.

[19] The effective date of the Digital Services Act is February 17, 2024, but some provisions were brought forward and became effective as of November 16, 2022.

[20] Those designated by the European Commission (including search engines) with an average of 45 million or more monthly active users in the EU

d China

In September 2021, China enacted the Data Security Law, which clearly defines the concept of data, establishes basic systems, such as data classification and grading protection, risk assessment, monitoring and early warning, and emergency responses. It also defines the obligations to be fulfilled when performing data handling activities.[21]

Furthermore, in November 2021, the Personal Information Protection Law, the first basic law regarding the protection of personal information in China, was enacted. The law stipulates obligations regarding collecting, processing, and transferring personal information for the handlers of personal information, the rights of individuals with respect to the handling of their personal information, and discriminatory pricing using algorithms and other means by internet platform providers regarding personal information.[22,23]

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[21] https://www.pwc.com/jp/ja/services/digital-trust/privacy/china-security.html
[22] With regard to the Data Security Law and the Personal Information Protection Law, etc., there are many provisions in which the definitions of terms used in the provisions, specific issues, such as various evaluations and examinations, and the scope of regulations are unclear, and issues are still being pointed out from the perspective of transparency and predictability.
[23] https://www.jetro.go.jp/biznews/2021/08/68d3caa207694e4e.html

Section 3 Spreading Disinformation and Misinformation on the Internet

With the spread of various digital services, such as social media and video streaming and posting websites, all parties have become distributors of information, and vast amounts of information and data are distributed on the Internet, making it easy for anyone to obtain it. This section reviews what is happening on the Internet in relation to information and data distribution in the context of this information explosion, and it analyzes the responses of each country.

1. The current status

(1) The spread of the attention economy

In a society overloaded with information, as the attention or time we can afford becomes scarce compared to the growing volume of information, it gains economic value (the attention market).[1] This economic model is commonly referred to as the attention economy. Platform providers use data to predict what users will respond to most strongly in order to capture as much attention as possible for as long as possible, and the rise of platform providers has led to a growing attention economy on the Internet.

With a vast amount of information circulating on the Internet, extreme titles and content and non-factual articles created solely based speculation are generated on platforms in order to attract more attention and clicks from users, resulting in the attention economy being structured in a way that encourages the spread of disinformation and misinformation and flaming on the Internet.[2]

(2) Filter bubbles and echo chambers

People have a psychological trait called confirmation bias, which is a tendency for people to see what they want to see and believe what they want to believe. Platform operators combine and analyze (profile) collected data, such as the click history of individual users, and preferentially distribute information that users may be interested in, such as content recommendations and targeted advertisements. The algorithmic functions used by such platform operators enable users to obtain the information they desire from the vast amount of information and data on the Internet.

However, by continuing to receive information distributed by algorithmic functions, users tend to only gain information related to their own interests. This is called a "filter bubble" surrounded by a film of information. Many thoughts and opinions similar to their own are gathered inside this bubble, and opposing thoughts and opinions are eliminated (filtered out), making it difficult to notice the existence of such thoughts and opinions.

In addition, communication on social media and other websites that gather users with similar interests results in what is called an "echo chamber," where opinions similar to those a user has expressed are sent to them, resulting in specific opinions and ideas being amplified. By repeatedly hearing similar opinions, people tend to believe that they are correct and cannot be mistaken.

It has been pointed out that group polarization is occurring on the Internet due to filter bubbles and echo chambers.[3] People with extreme views and ideas tend to be unable to accept others who have different ideas and refuse to have discussions with them. Bias in opinions and ideas on the Internet caused by filter bubbles and echo chambers can lead to social divisions and endanger democracy.[4]

(3) The distribution of illegal and harmful information

The number of consultations received by the Illegal and Harmful Information Consultation Center (Illegal Harmful Hotline), which is operated by the Ministry of Internal Affairs and Communications, continues to remain high, with 5,745 consultations in fiscal 2022.

In 2022, the human rights bodies of the Ministry of Justice started remedial procedures on 1,721 cases of information-related human rights violations on the Internet and completed the handling of 1,600 cases of human rights violations, with the numbers of both continuing to remain high.

According to a questionnaire survey[5] conducted on social media users, about half (50.9%) of respondents said they had seen hurtful posts on the Internet (slander) **(Figure 2-3-1-1)**. In addition, 8% of people who used social media in the past year said they had been the victim of hurtful posts (slander).

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[1] "How to Face the Digital Space: Realizing Informational Health" by Fujio Toriumi and Tatsuhiko Yamamoto (Nikkei Premium Series)
[2] Joint proposal by Fujio Toriumi and Tatsuhiko Yamamoto, "Toward a Wholesome Platform for Speech - Digital Diet Statement Ver. 1.0"
[3] Cass R. Sunstein (2001) "Is the Internet the Enemy of Democracy?" Sunstein points out that group polarization occurs on the Internet since many individuals and groups make various choices on it that trap them in self-created echo chambers, where they repeatedly encounter radical opinions that they will come to believe if a large number of people support those opinions.
[4] Joint proposal by Fujio Toriumi and Tatsuhiko Yamamoto, "Toward a Sound Speech Platform - Digital Diet Statement Ver. 1.0"
[5] Material 2 for the 40th session of the MIC Platform Service Study Group, "Questionnaire survey on the distribution of illegal and harmful information on the Internet" by Mitsubishi Research Institute

Figure 2-3-1-1　Questionnaire survey of social media users (personal experience)

Have seen posts about slander, etc.	Service _where_ seen

Q　Have you <u>seen</u> the following kinds of posts on the Internet? Please answer with either "I have seen" or "I have not seen" for each. (SA)
(Excluding cases where you were the subject of the post.)

"Posts that hurt others (slander)"

I have seen

I have not seen

49.1

50.9

(n＝1,641)

*The number of respondents who said they used social media or similar services in the past year was extracted and counted.

Q　If you answered "I have seen" for the previous question, which service were you using? (MA)

"Posts that hurt others (slander)"

0　10　20　30　40　50　60　(%)

Twitter	55.5
Facebook	7.7
Instagram	13.5
YouTube	29.9
Google Maps	4.8
Yahoo! comments (Answers)	14.5
Yahoo! comments (News)	32.4
Yahoo! comments (Finance)	4.4
LINE （OpenChat、VOOM)	3.1
LINE BLOG、livedoor Blog	2.3
Other blog	0.8
TikTok	7.2
2channel	14.2
5channel	15.0
Bakusai	5.7
Other live streaming app	0.8
Other	2.0

(n＝836)

(Source) MIC Platform Service Study Group (40th meeting) - Material 2

(4) The spreading of disinformation and misinformation

In recent years, the chance of coming into contact with fake news and disinformation (hereinafter referred to as disinformation and misinformation) on the Internet has increased worldwide. After the COVID-19 pandemic started in 2020, disinformation and misinformation that included false rumors and conspiracy theories regarding the infectious disease flooded the Internet, prompting the World Health Organization (WHO) to call the phenomenon an infodemic[6] and warn the world.

According to the OECD, more than half of people living in Europe said they had been exposed to untrue or doubtful information or content on an internet news site or social media in 2021. Of those, 26% said they checked the veracity of online information.[7]

The problem of disinformation and misinformation spreading on the Internet is also growing in Japan. In a

survey conducted by the Ministry of Internal Affairs and Communications in March 2022,[8] about 30% of people in Japan reported being exposed to disinformation at least once a week (the sum of "Every day or almost every day" and "At least once a week"). Regarding the media services where people saw disinformation, the highest was "Social media," which alone exceeded 50% of the total, followed by "Television" and "News distribution through portal sites and social media."

With platform services, such as social media, even ordinary users can easily transmit (write) information, so disinformation and misinformation tends to spread easily, and this is thought to be one of the reasons why people often encounter disinformation and misinformation on social media.

Figure (related data) Media services in which disinformation was seen
Source: MIC "Fiscal 2021 Survey on Awareness of Disinformation in Japan and Other Countries"
URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00027
(Data collection)

With the spread of the attention economy, much disinformation and misinformation is created to earn advertising revenue, and it is spread and amplified by bots. For example, in the 2016 U.S. presidential election, students in the Republic of North Macedonia spread a large amount of disinformation and misinformation to earn advertising revenue. In Japan too, there was a case of a website distributing xenophobic disinformation and misinformation under the guise of a news site, and the creator said

in an interview that his aim was to earn revenue.[9]

In recent years, there have also been cases of intentional and unintentional spreading of fake images and videos created using deepfakes **(Figure 2-3-1-2)**. It has already become possible for anyone to easily create a fake image by simply entering a few words, and there are indications that deepfake technology is spreading.[10]

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[6] Infodemic is a term coined by combining "information" and "pandemic" to describe the rapid spread of rumors of unknown authenticity and disinformation that affect society.
[7] OECD: https://www.oecd-ilibrary.org/docserver/07c3eb90-en.pdf?expires=1675066821&id=id&accname=guest&checksum=4A71EF2A7DBE 53A8437167C071FEAFD4
[8] MIC "Fiscal 2021 Survey on Disinformation Awareness in Japan and Other Countries"
[9] Presentation material of Shinichi Yamaguchi, Associate Professor, Center for Global Communications (GLOCOM), International University of Japan at the 14th session of the Ministry of Internal Affairs General Policy Committee
[10] https://www.soumu.go.jp/main_content/000867454.pdf

Figure 2-3-1-2   Recent deepfake cases

Year	Area	Details
2021	U.S.	A mother was arrested for allegedly using deepfake technology to create obscene images and videos of her daughter's cheerleading teammates in order to get them removed from the team.
	Europe	European MPs conducted video conference calls with Russian MPs unaware that they were watching deepfakes.
2022	Global	A video of President Zelensky talking about surrendering to Russia was posted on YouTube.
	Japan	Stable Diffusion was used to create a hoax image of flooding in Shizuoka Prefecture caused by a typhoon, which was posted on Twitter.
	U.S.	The image generation AI called NovelAI Diffusion used images from the website Danbooru that may be reproducing other people's copyrighted works without permission for AI learning.
	UK	Pornographic videos of women campaigning against non-consensual deepfake pornography were created and published on Twitter.
2023	U.S.	A political activist created a video of President Biden announcing the start of World War III. The creator explained that it was created with AI, but many people shared the video without explanation.
	U.S.	The founder of Bellingcat used Midjourney to create and publish a fake image of former President Trump being arrested that went viral on Twitte.

(Source) Prepared based on various websites

The distribution and spread of disinformation and misinformation on the Internet makes it difficult for users to accurately understand and make appropriate decisions that are based on diverse sources of information, so there is a risk that users will not be able to use digital services with confidence and trust. It has also been pointed out that the distribution of disinformation and misinformation may lead to social divisions and consequently to crises in democratic societies.[11]

2. Consumer awareness of the characteristics of social media and other platform services

While the use of platform services, such as social media, has become common, their characteristics have exacerbated issues, such as the spread of slander, etc. on platforms, the spread of disinformation and misinformation, and the uneven distribution of information due to filter bubbles and echo chambers.

The Ministry of Internal Affairs and Communications conducted a questionnaire survey[12] of consumers in Japan, the U.S., Germany, and China in order to understand the actual state of their usage behavior and the characteristics of platform services, such as social media.

First, we asked people what they do when they want to get the latest news online. In all of the countries covered, the results from highest to lowest were: "See the information recommended to me by news sites and apps," "See information on social media," and "See information displayed at the top of search results" **(Figure 2-3-2-1)**. In Japan, the majority of respondents focused on "See the information recommended to me by news sites and apps," and the percentage of respondents who answered "Compare information from multiple sources" was lower than in other countries. Looking at Japan by age group, the percentage of respondents who answered "Compare information from multiple sources" increased with age.

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[11] MIC "Second Summary of the Platform Service Study Group" (August 2022)
[12] Web survey of people living in Japan, the U.S., Germany, and China; age (20s, 30s, 40s, 50s, 60s, or older); sex (male and female); number of collected responses: 4,000 (Japan 1,000, the U.S. 1,000, Germany 1,000, and China 1,000); implemented in February 2023

Figure 2-3-2-1　What to do when you want the latest news online (Japan, U.S., Germany and China)
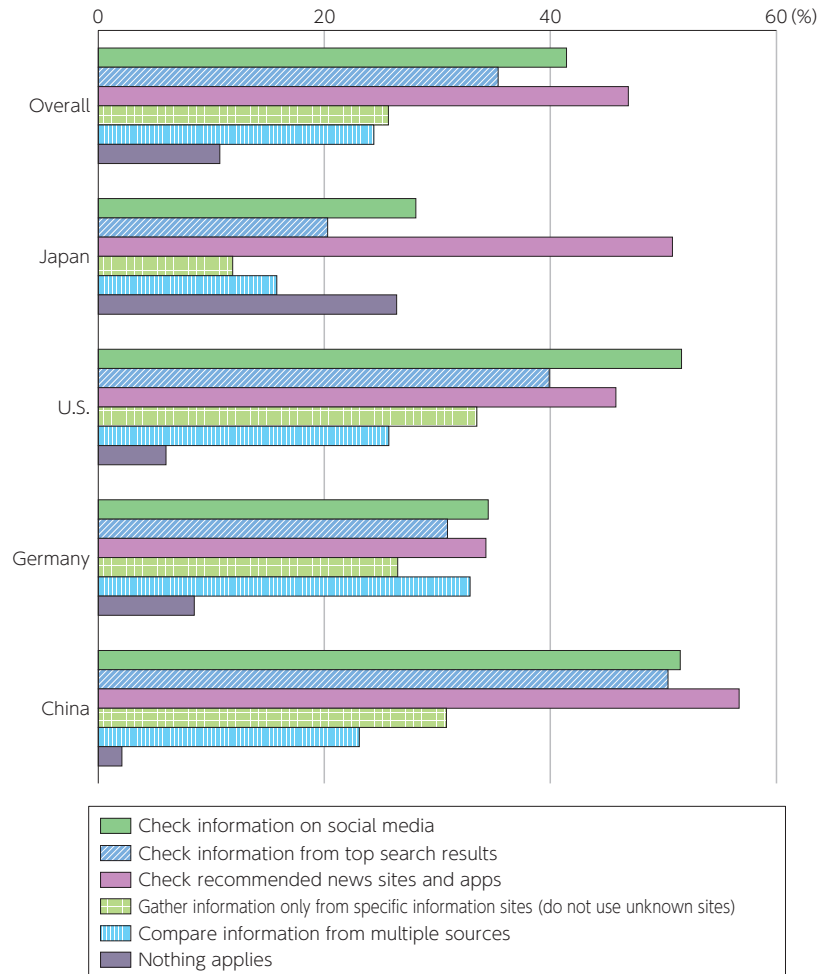
(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

The questionnaire survey also asked questions regarding the characteristics of platform services, such as social media.
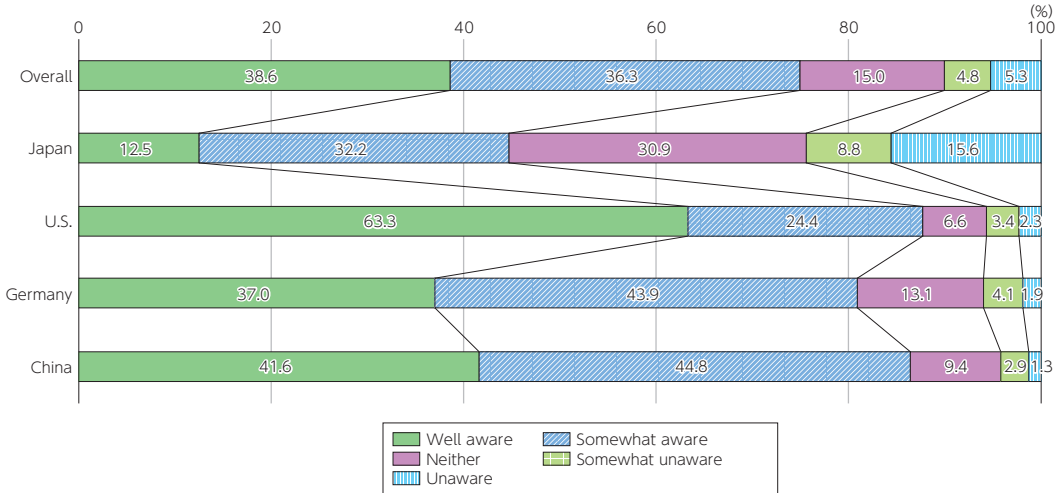
When asked whether they were aware that information displayed in search results and on social media is optimized (personalized) for the users, the percentage of respondents in Japan who answered they were aware (the sum of "Well aware" and "More or less aware") was lower (44.7%) than in the other surveyed countries (80% to 90%) **(Figure 2-3-2-2)**.

In Japan, when asked about the possibility that the accounts and content recommended on platform services, such as social media, are accounts and content that the service providers want the user to see, 38.1% of respon-

dents in Japan answered that they were aware (the sum of "Well aware" and "More or less aware"), which is lower than in the other surveyed countries **(Figure 2-3-2-3)**.

In addition, when asked about the likelihood of information that is close to their own opinions and way of thinking being displayed on social media, etc., 38.1% of respondents in Japan answered that they were aware (the sum of "Well aware" and "More or le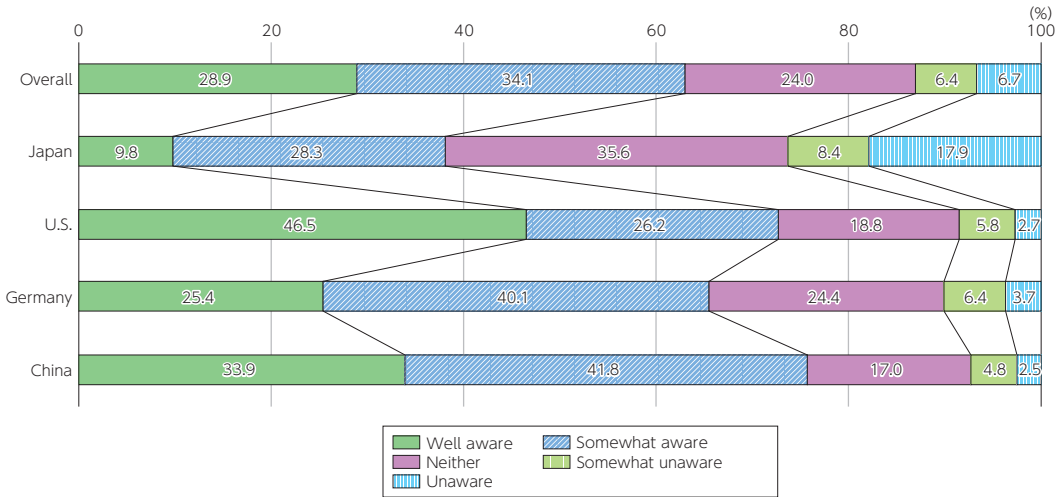ss aware"), which is lower than in the other three countries, where it was 70 to 80%. Looking at Japan by age group, those in their 50s and 60s or older were less likely than other generations to answer that they were aware **(Figure 2-3-2-4)**.

Figure 2-3-2-2　Awareness of whether or not the information displayed in search results, social media, etc. is personalized

(%)

	Well aware	Somewhat aware	Neither	Somewhat unaware	Unaware
Overall	38.6	36.3	15.0	4.8	5.3
Japan	12.5	32.2	30.9	8.8	15.6
U.S.	63.3	24.4	6.6	3.4	2.3
Germany	37.0	43.9	13.1	4.1	1.9
China	41.6	44.8	9.4	2.9	1.3

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

Figure 2-3-2-3　Awareness of whether or not the service provider is presenting you with accounts or content they want you to see

(%)

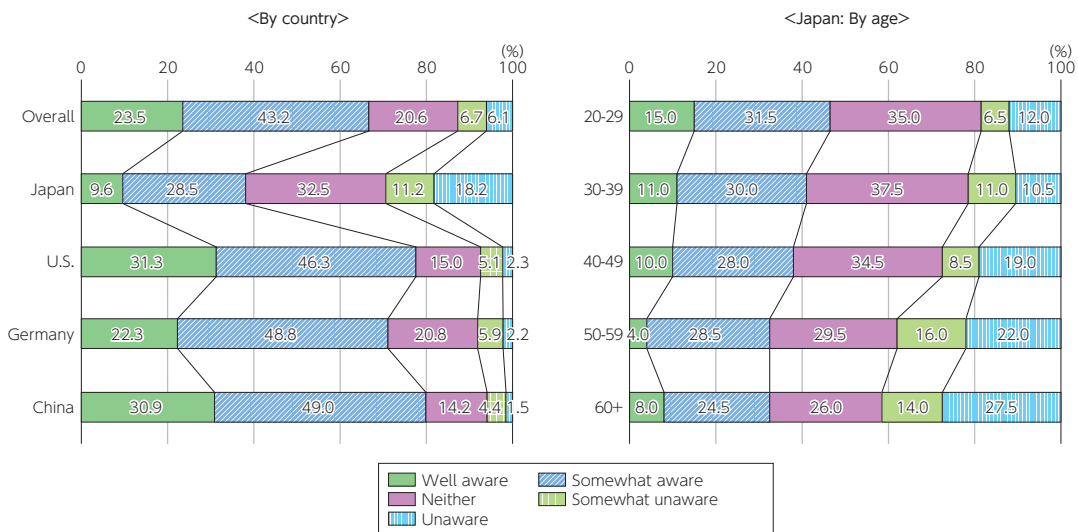|	Well aware	Somewhat aware	Neither	Somewhat unaware	Unaware
Overall	28.9	34.1	24.0	6.4	6.7
Japan	9.8	28.3	35.6	8.4	17.9
U.S.	46.5	26.2	18.8	5.8	2.7
Germany	25.4	40.1	24.4	6.4	3.7
China	33.9	41.8	17.0	4.8	2.5

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"

Figure 2-3-2-4　Awareness of the tendency for opinions and information close to your own views to be displayed in social media, etc.

<By country>

(%)

	Well aware	Somewhat aware	Neither	Somewhat unaware	Unaware
Overall	23.5	43.2	20.6	6.7	6.1
Japan	9.6	28.5	32.5	11.2	18.2
U.S.	31.3	46.3	15.0	5.1	2.3
Germany	22.3	48.8	20.8	5.9	2.2
China	30.9	49.0	14.2	4.4	1.5

<Japan: By age>

(%)

	Well aware	Somewhat aware	Neither	Somewhat unaware	Unaware
20-29	15.0	31.5	35.0	6.5	12.0
30-39	11.0	30.0	37.5	11.0	10.5
40-49	10.0	28.0	34.5	8.5	19.0
50-59	4.0	28.5	29.5	16.0	22.0
60+	8.0	24.5	26.0	14.0	27.5

(Source) MIC (2023) "Survey Research on the Advancement of ICT Infrastructure and Distribution of Digital Data and Information"
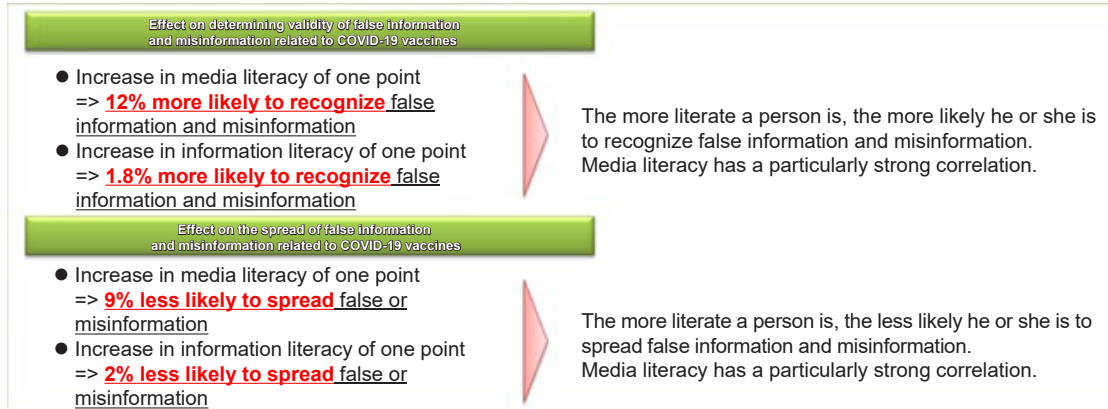
3. Digital literacy

Improving digital literacy is very important in order to prevent being misled by illegal and harmful information or disinformation and misinformation and to prevent the spread of such information.

A field study on disinformation and misinformation in Japan[13] found that the higher the media literacy of an individual, the more likely they would recognize disinformation and misinformation and the less likely they were to spread disinformation and misinformation **(Figure 2-3-3-1)**.

Figure 2-3-3-1   Regression analysis of media literacy and information literacy and the behavior of judging and spreading disinformation and misinformation

Effect on determining validity of false information and misinformation related to COVID-19 vaccines

- Increase in media literacy of one point => **12% more likely to recognize** false information and misinformation
- Increase in information literacy of one point => **1.8% more likely to recognize** false information and misinformation

The more literate a person is, the more likely he or she is to recognize false information and misinformation.
Media literacy has a particularly strong correlation.

Effect on the spread of false information and misinformation related to COVID-19 vaccines

- Increase in media literacy of one point => **9% less likely to spread** false or misinformation
- Increase in information literacy of one point => **2% less likely to spread** false or misinformation

The more literate a person is, the less likely he or she is to spread false information and misinformation.
Media literacy has a particularly strong correlation.

(Source) Innovation Nippon Report (April 2022) "Understanding the Reality of Disinformation and Misinformation in Japan and Examining Social Countermeasures — Empirical Analysis of Disinformation and Misinformation Regarding Politics and Coronavirus Vaccines, etc."

Currently, various stakeholders in Japan, including the national government and private companies, have been engaged in activities to promote digital literacy, particularly for young people **(Figure 2-3-3-2)**. For example, as part of its awareness-raising activities about the issue of slander on social media, the Ministry of Internal Affairs and Communications, in collaboration with the Ministry of Justice and related organizations, set up a special website called "#NoHeartNoSNS (If it doesn't have any heart, it isn't social media!)[14]" to help people who experience problems during exchanges on social media. In June 2022, the Ministry of Internal Affairs and Communications with the participation of experts, developed and published an educational seminar for raising awareness regarding disinformation and misinformation titled "Facing the Internet: How to avoid being deceived by disinformation and misinformation."[15]

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[13] Center for Global Communications (GLOCOM), International University of Japan "Innovation Nippon Report - Understanding the Reality of Disinformation and Misinformation in Japan and Examining Social Countermeasures"
[14] https://no-heart-no-sns.smaj.or.jp/
[15] https://www.soumu.go.jp/use_the_internet_wisely/special/nisegojouhou/

Figure 2-3-3-2　Initiatives for improving digital literacy in Japan

Entity	Example	Details
Government (MIC, etc.)	Collection of Internet problems	•Case summaries of various problems that occurred on the Internet
	Educational website "Use the Internet wisely! Guide to Using the Internet Safely and Securely"	•An educational site for all generations regarding safe and secure Internet use. Posted "Slander on Social Media, etc." as a special feature
	Educational material for raising awareness about disinformation and misinformation "Facing the Internet: How to avoid being deceived by disinformation and misinformation"	•Developed and published educational materials and guidelines for instructors in fiscal 2021 created with the aim of contributing to comprehensively promoting media information literacy
	Spring Anshin Net - Simultaneous Action for the New Semester	•Awareness-raising activities conducted intensively in line with the new semester and enrollment period.
Private rganizations and companies, etc.	Yahoo! Internet Common Sense Test, Yahoo! News Checkup	•Conducted the Internet Common Sense Skills Mock Exam in which one learns basic knowledge good to have when using the Internet and how to handle common Internet problems •Provided Yahoo! News Checkup to prevent readers being misled by uncertain information
	LINE MIRAI Foundation - Online visiting classes	•Carried out online visiting classes that provided information ethics training for children and parents at schools and local governments, etc. nationwide
	Google: First Media Literacy Course	•Online training to develop the ability to independently examine and use information
	Meta: Digital Classroom for All	•Provided visiting classes at schools, etc., online classes, and content on Instagram that anyone can learn from in order to help users acquire the skills required in the digital world and to build a global community of responsible digital citizens
	ByteDance	•Provided visiting classes at schools, etc. and awareness-raising seminars for parents and children •Raised awareness on safety and security together with video production experience
	Foundation for Multimedia Communications (FMMC) - e-Net Caravan	•Free on-site lectures held nationwide in school settings, etc. for students, parents/guardians, and teachers, etc.

(Source) Prepared by MIC based on various published materials

In the EU and the U.S., training and classes are also offered by a variety of organizations to improve the digital literacy of individuals. Teaching and training methods have been devised to educate the participants, such as text-based classes, workshops in which participants learn from each other by sharing their experiences, online self-study, and gamification in which students learn necessary knowledge and skills through game experiences **(Figure 2-3-3-3)**.

Figure 2-3-3-3　Precedents of media information literacy education in Europe and the U.S.

Entity	Case name	Details
State, international organization, etc.	EU: Spot and fight disinformation	Students learn about the risks of disinformation and misinformation and how to protect themselves through example exercises and group discussions, etc. Designed to be implemented within the school classroom framework
	UNESCO: Media and information literate citizens: think critically, click wisely!	Lectures in which one learns media information literacy, distinguishing disinformation and misinformation, reading advertisements and various media, and the structure of communication on platforms. etc.
	CISA: Resilience Series Graphic Novels	Graphic novels in which one learns about the risks of disinformation and misinformation through fictional stories inspired by the real world
Platform providers	Google: Be Internet Awesome	Learn the five principles of becoming a digital citizen (e.g., Share with Care) in an online game
	Meta: Get Digital!	Literacy programs customized for youth, educators and parents/guardians. Learn how to use digital tools
Academic research institutions	Washington State University, Check Please! Starter Course	Online course for learning how to research sources, evaluate highly specialized information, and find reliable and similar information

(Source) MIC (2022) "Report on the Survey on the Current Status and Issues of Measures for Improving Media Information Literacy"
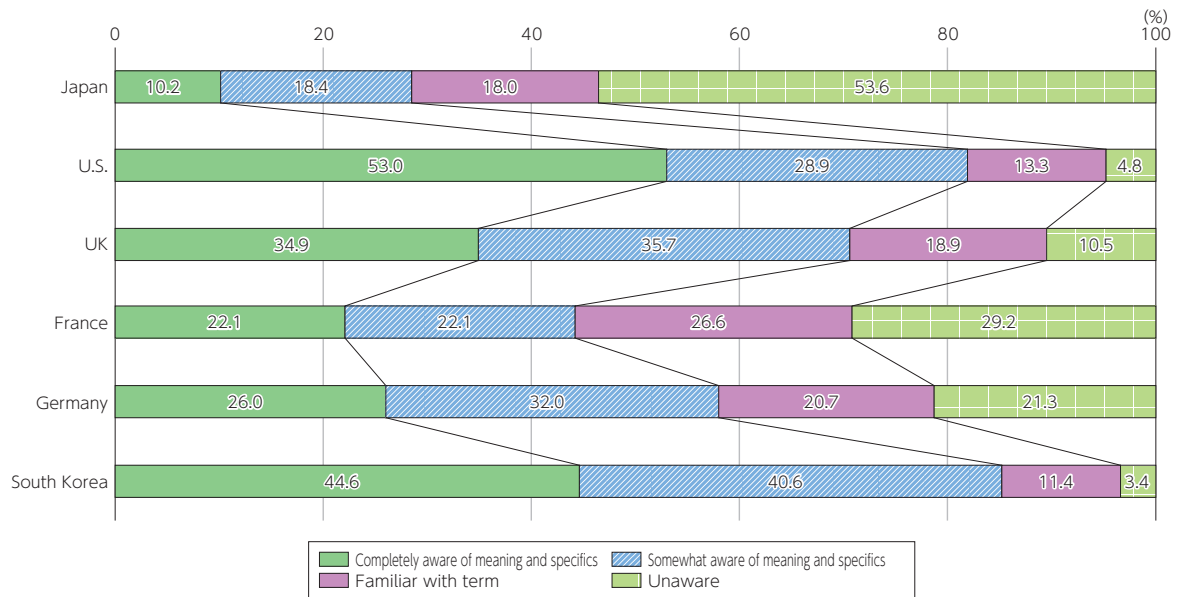
4. The promotion of fact checking

In order to counter disinformation and misinformation on the Internet, it is important to promote fact checking, an activity for verifying the authenticity of information.

When a questionnaire survey was conducted in February 2022 on the awareness of fact checking in each country,[16] the percentage of respondents who answered they were aware of fact checking (the sum of "Aware of the meaning and specifics," "Somewhat aware of the meaning and specifics," and "Heard of the term") was lowest in Japan (46.5%) **(Figure 2-3-4-1)**. Although awareness of fact checking has been increasing in Japan since the previous survey (three periods), it is still low compared to other countries.

Figure 2-3-4-1 Level of awareness of fact-checking

Country	Completely aware of meaning and specifics	Somewhat aware of meaning and specifics	Familiar with term	Unaware
Japan	10.2	18.4	18.0	53.6
U.S.	53.0	28.9	13.3	4.8
UK	34.9	35.7	18.9	10.5
France	22.1	22.1	26.6	29.2
Germany	26.0	32.0	20.7	21.3
South Korea	44.6	40.6	11.4	3.4

(Source) MIC "Fiscal 2021 Survey on Disinformation Awareness in Japan and Other Countries"

Europe and the U.S. have taken the lead in fact-checking initiatives, and non-profit organizations are leading these initiatives. The activities of fact-checking organizations are mainly to check the authenticity of news and information distributed by news media and platform providers and to detect disinformation. Some organizations in cooperation with platform providers develop tools for fact checking, cooperate and give advice regarding disinformation measures, and carry out activities to improve media literacy.

Some Asian countries and regions, such as South Korea and Taiwan, are also undertaking activities to promote fact checking **(Figure 2-3-4-2)**.

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[16] MIC "Fiscal 2021 Survey on Disinformation Awareness in Japan and Other Countries"

Figure 2-3-4-2　Activities of fact-checking organizations, etc. in other countries

Name and location of the organization	Overview, etc.
Name and location of the organization	• The Poynter Institute is a media research and professional development organization. IFCN is an internal organization • Partnerships with Google, Facebook, Tiktok and others to support the work of the world's leading fact-checking organizations. • Establishes standards for fact-checking organizations and implements certification. Signatory organizations carry out activities while presenting their certification marks. • Signatory fact-checking organizations collaborate to fact-check issues of international concern, including COVID-19 and the Ukraine crisis.
Poynter Institute IFCN (U.S.)	• Runs a website called Politifact that examines the veracity of statements made by politicians. Transcribes and evaluates statements for verification on a six-point scale called the Truth-O-Meter in addition to making their own evaluation comments.
Full Fact (United Kingdom)	• Established to publicize fact-checking results and suggest ways to reduce misinformation • Fact-checking of high-interest issues in the UK
Seoul National University (SNU) Fact-Check Center (Korea)	• Organization affiliated with the Seoul National University's Institute of Communication Research • Results of fact-checking conducted by mass media and online media in Korea are summarized and published on the center's website, SNU FactCheck. • Fact-checked articles published on the center's website, in conjunction with the major portal site NAVER, are also published on NAVER's Fact-Check page.
Taiwan Fact-Check Center	• Taiwan's first fact-checking organization and center established in 2018 provides educational content on its website to enable ordinary users to determine the authenticity of information on their own.

(Source) Prepared by MIC based on various published materials

In comparison, fact-checking activities in Japan have been described as limited. One reason for this is that in Japan, the mass media, which systematically compiles and distributes information in newspapers and broadcasts, is more functional than in other countries, and the public has not strongly demanded the need for a fact-checking organization because there are sufficient information sources for the public to judge information.

However, a variety of information, including information of uncertain authenticity, can now reach Japan instantly from overseas via the Internet, so the need to promote fact checking of online information is rapidly increasing in Japan. In response, initiatives are progressing in Japan too, such as the FactCheck Initiative Japan (FIJ), a non-profit organization that promotes fact checking, which has established the Fact Check Forum as a gathering place for those experiencing disinformation and misinformation, and the Safer Internet Association (SIA), which has established the Japan Fact-check Center (JFC) with the aim of becoming a signatory to international fact-checking organizations.

5. Promotion of R&D

As fake videos and disinformation and misinformation using deepfakes become a global problem, various initiatives, such as the development of technology to detect fake videos using AI, are underway in countries around the world, including Japan.

(1) Research institutions, etc.

In Japan, the National Institute of Information (NII) has developed SYNTHETIQ VISION, which automatically determines the authenticity of fake images generated by AI. SYNTHETIQ VISION performs automatic identification based on a large amount of data using a method that does not require any human analysis, etc. It has learned videos of varying image quality, enabling it to make judgments with a certain degree of reliability even when the image quality has been degraded by media processing, such as by compression or down conversion.[17] In January 2023, a private company announced that it would commercialize this program as a deepfake video detection service for celebrities, etc. This is the first practical application in Japan for the automatic verification of fake facial videos.

Overseas, research and development of technologies for detecting fake images and deepfakes are also underway with government support. In the U.S., for example, the Defense Advanced Research Projects Agency (DARPA) has been working on a project called Media Forensic (MediFor)[18] since 2015 and Semantic Forensic (SemaFor) since 2021 with the aim of developing technology that can automatically verify the authenticity of images and videos. SemaFor is a program that aims to further enhance the fake detection technology cultivated by MediFor to clarify the credibility of information sources and to ascertain whether the intent of modifications is malicious. In addition to universities, companies,

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[17] NII press release material https://www.nii.ac.jp/news/release/2023/0113.html
[18] https://www.darpa.mil/program/media-forensics

such as Google, are also participating in the program.

(2) Companies, etc.

Platform providers and other private companies are also developing technologies and tools for detecting deepfake videos.

In September 2019, for example, Google announced an open-source database containing 3,000 videos generated by artificial intelligence (AI) using various published algorithms as part of an effort to promote the development of deepfake detection tools.

In addition, the Partnership on AI,[19] a non-profit organization established by GAFAM and involving 103 organizations and companies in 16 countries, held the Deepfake Detection Challenge (DFDC), an open competition for deepfake detection technology, in collaboration with universities from December 2019 to May 2020, and 2,114 teams from around the world participated.

In September 2020, Microsoft also released a tool called Microsoft Video Authenticator, which analyzes videos and images and displays the probability of manipulation as well as confidence scores[20] **(Figure 2-3-5-1)**. In October 2020, McAfee launched the McAfee Deepfakes Lab in an effort to determine whether videos attributed to candidates in the run-up to the U.S. presidential election were deepfakes.[21] Deepfakes Lab uses its own tools, which combine data science expertise with computer vision and deep learning techniques for deciphering hidden patterns to detect synthesized video elements that play an important role in authenticating original media files.

Figure 2-3-5-1　An example of a confidence score using Microsoft Video Authenticator

* The trustworthiness of the video is shown in real time. The red box indicates the deepfaked part.

(Source) Microsoft "New Steps to Combat Misinformation"[22]

Private companies in Japan are also conducting research studies on disinformation and misinformation. For example, Spectee Inc. provides services to government agencies and companies that analyze social media and other data to visualize and predict information when a disaster occurs. In providing this service, natural language analysis and image analysis, etc. are performed on social media data using AI that has undergone learning based on past disinformation. Disinformation, such as exaggerated expressions and misunderstandings, are classified into patterns in an effort to identify disinformation and understand its spread.

In January 2023, the Originator Profile Collaborative Innovation Partnership (OP CIP)[23] was established in cooperation with media and advertising companies. Originator Profile (OP) technology is a technology that makes it easy to identify high-quality articles and media that have been third party certified by adding information about web content creators and advertisers, etc. in a verifiable format. Specifically, it is assumed that basic information and information that contributes to the distributor's trustworthiness will be displayed on the user's web browser. And as a third-party organization, the Originator Profile Collaborative Innovation Partnership will certify this information. At present, OP technology is in the development and operational testing stage, but in the future it will be proposed to the standardization organization (W3C) with the aim of popularizing it as a global standard.

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[19] https://partnershiponai.org/
[20] https://news.microsoft.com/ja-jp/2020/09/07/200907-disinformation-deepfakes-newsguard-video-authenticator/
[21] https://kyodonewsprwire.jp/prwfile/release/M105029/202010195909/_prw_PR1fl_3mAEcG3w.pdf
[22] https://news.microsoft.com/ja-jp/2020/09/07/200907-disinformation-deepfakes-newsguard-video-authenticator/
[23] As of March 24, 2023, 20 companies and organizations are participating. https://originator-profile.org/ja-JP/news/press-release_20230324/

6. Institutional responses in each country

(1) Japan

The Act on the Limitation of Liability for Damages of Specified Telecommunications Service Providers and the Right to Demand Disclosure of Identification Information of the Senders (Act No. 137 of 2001) clarifies the requirements for limiting the liability of providers, etc. for damages, and it provides the right to request disclosure of the distributor's information from providers in the case of infringement of rights due to the distribution of information on the Internet. Amid the growing seriousness of rights violations caused by slander on the Internet, etc., an amendment was implemented to establish a new court procedure (non-contentious case procedure) for the disclosure of distributors' information in order to provide relief to victims more smoothly. It came into effect in October 2022.

(2) The EU

The Digital Services Act (DSA) stipulates the following user protections: the terms of use requirements, the handling of illegal content or content that violates the terms of use, and obligations regarding online advertising, including political advertising for intermediary service providers,[24] such as online platforms, according to the size of the business operator. It calls for tougher action by very large online platforms and online search engines[25] and for them to take stricter action in response to the serious social risks they pose by disseminating illegal and harmful content, including disinformation. For example, it requires companies to conduct risk analysis, assessment and risk mitigation measures related to the spread of illegal content through their services and its negative impact on fundamental rights, such as human rights and freedom of expression, and to provide at least one non-profiling-based option when using a recommender system (an algorithm that determines what users see). Violations of this requirement can result in a penalty equivalent to up to 6% of total revenue in the previous fiscal year.

(3) The U.K.

In March 2022, the Department for Digital, Culture, Media and Sport (DCMS) introduced the Online Safety Bill in Parliament, which states that rather than relying on self-regulation by platform providers and other online companies, the government will regulate them, and Ofcom will monitor whether the regulations are followed. According to the UK Government's Guide to the Online Safety Bill[26] published in December 2022, the bill requires online platform providers to remove illegal content (e.g., fraud and terrorism) and restrict access to age-inappropriate content that is harmful to children (e.g., pornography and slander).[27]

(4) Germany

In October 2017, the Network Enforcement Act came into force, making it mandatory for social media platforms with over two million registered users in Germany to publish transparency reports every six months that include the number of reported violations, the number of deletions, and efforts to prevent illegal postings, etc. In April 2021, the revised Network Enforcement Act came into force, making it mandatory for social media platforms to not only delete posts on certain serious matters but also to report the content of posts that meet the criminal constitution requirements and the IP addresses of to the posters to the investigative authorities. In June 2021, the act was amended to include video-sharing platforms and provide opportunities for objections and review decisions on content removal or prevention of access.

(5) The U.S.

Article 230 of the Communications Decency Act, passed in 1996, states that providers (1) are not liable in principle for information transmitted by third parties, and (2) are not liable for actions such as the deletion of harmful content (measures taken in good faith and voluntarily to restrict access), thus granting providers broad immunity. Regarding legal exemption provisions of this act, there have been discussions about making providers liable for the distribution of disinformation under certain requirements, and a draft Act has been submitted, but no amendments have been made as of April 2023.

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[24] The DSA classifies providers of intermediary services (e.g., ISPs), hosting services, online platforms (online marketplaces, app stores, social media, etc.), and very large online platforms.

[25] Those who are designated by the European Commission as having an average of 45 million or more monthly active users in the EU

[26] https://www.gov.uk/guidance/a-guide-to-the-online-safety-bill#a-guide-to-the-online-safety-bill

[27] The amended Online Safety Bill passed the House of Commons on January 17, 2023, and it is being considered by the House of Lords as of the end of March 2023.

7. The promotion of international cooperation

It is important to cooperate internationally to deal with the distribution of illegal harmful information, disinformation, and misinformation on the Internet.

At the Meeting of G7 Digital Ministers held in May 2022, discussions were held on eSafety, etc., including ensuring transparency and accountability of measures to deal with illegal and harmful information by businesses at the global, national, and regional levels for each relevant policy, and the results were adopted as a ministerial declaration.[28] In addition, the Resilient Democracies Statement,[29] which was adopted by the G7 in June of the same year, states that information manipulation and interference, including disinformation, will be countered.

Furthermore, the G7 Ministerial Declaration on Digital and Technology,[30] which was adopted at the G7 Digital and Tech Ministers' Meeting in Japan in April 2023, reaffirmed the importance of actions taken by a wide range of stakeholders, including social media platforms, civil society, the internet technology community and academia, to address online manipulation, interference, and disinformation while respecting human rights, particularly the right to freedom of expression.

International organizations are also discussing how to deal with disinformation, etc. For example, the Declaration on a Trusted, Sustainable and Inclusive Digital Future,[31] which was adopted at the OECD Ministerial Meeting on the Digital Economy held in December 2022, declared that it would advance measures to address the challenges of digitalization, including combating disinformation online.

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[28] G7 Digital Minister's Declaration (provisional translation) https://www.soumu.go.jp/main_content/000813435.pdf
[29] (Provisional translation) https://www.mofa.go.jp/mofaj/files/100364065.pdf
[30] (Provisional translation) https://www.soumu.go.jp/main_content/000879093.pdf
[31] (Provisional translation) https://www.soumu.go.jp/main_content/000850420.pdf