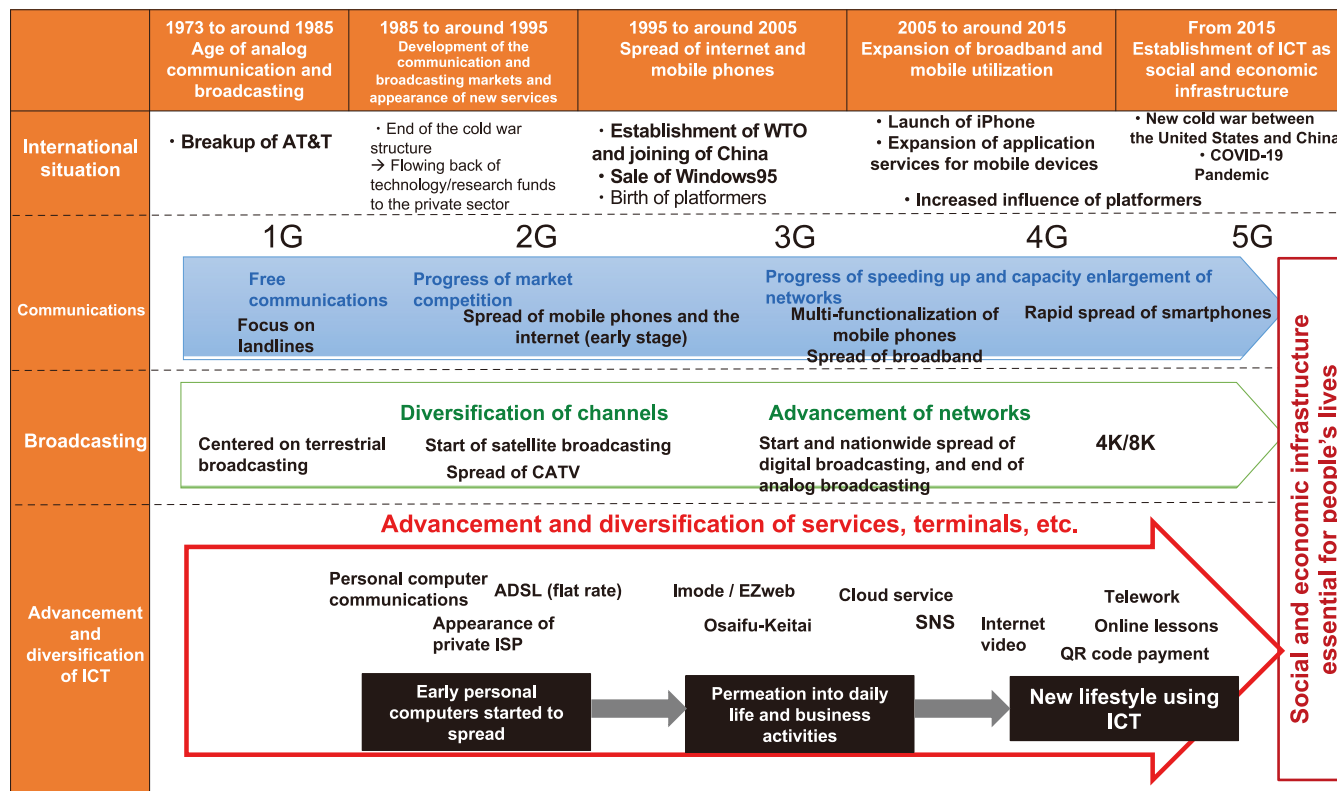


Chapter 1

Introduction

1. Trends in the information and communication field in the past 50 years (Figure 1-0-1-1 in White Paper)

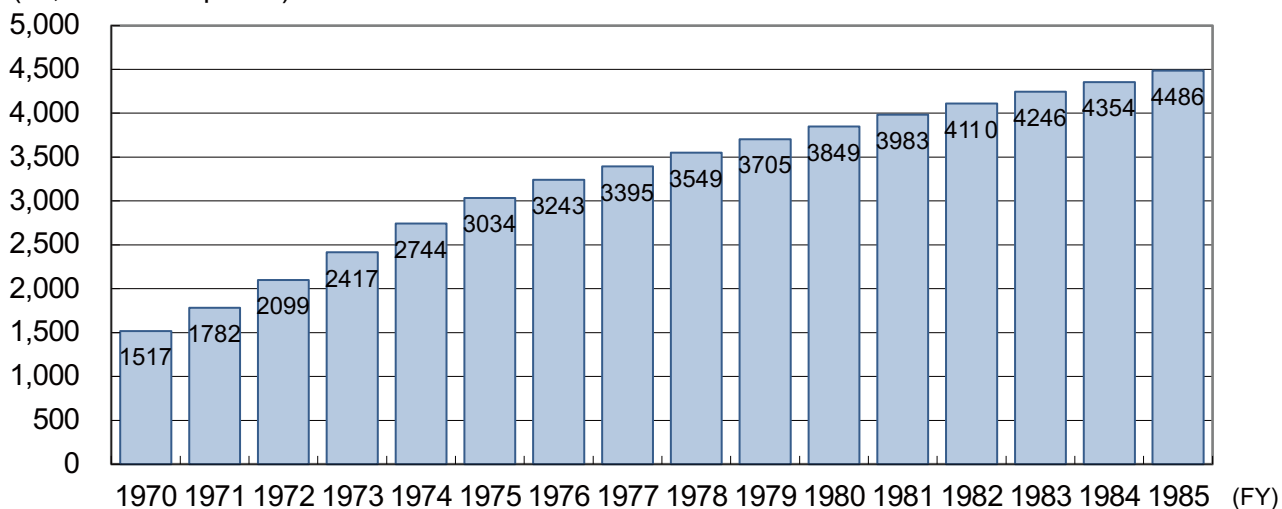


(Source) MIC (2022) "Research Study on Economic Security in Digital Society"

Section1

1. Transitions in the number of subscribers with subscription telephones (Figure 1-1-2-1 in White Paper)

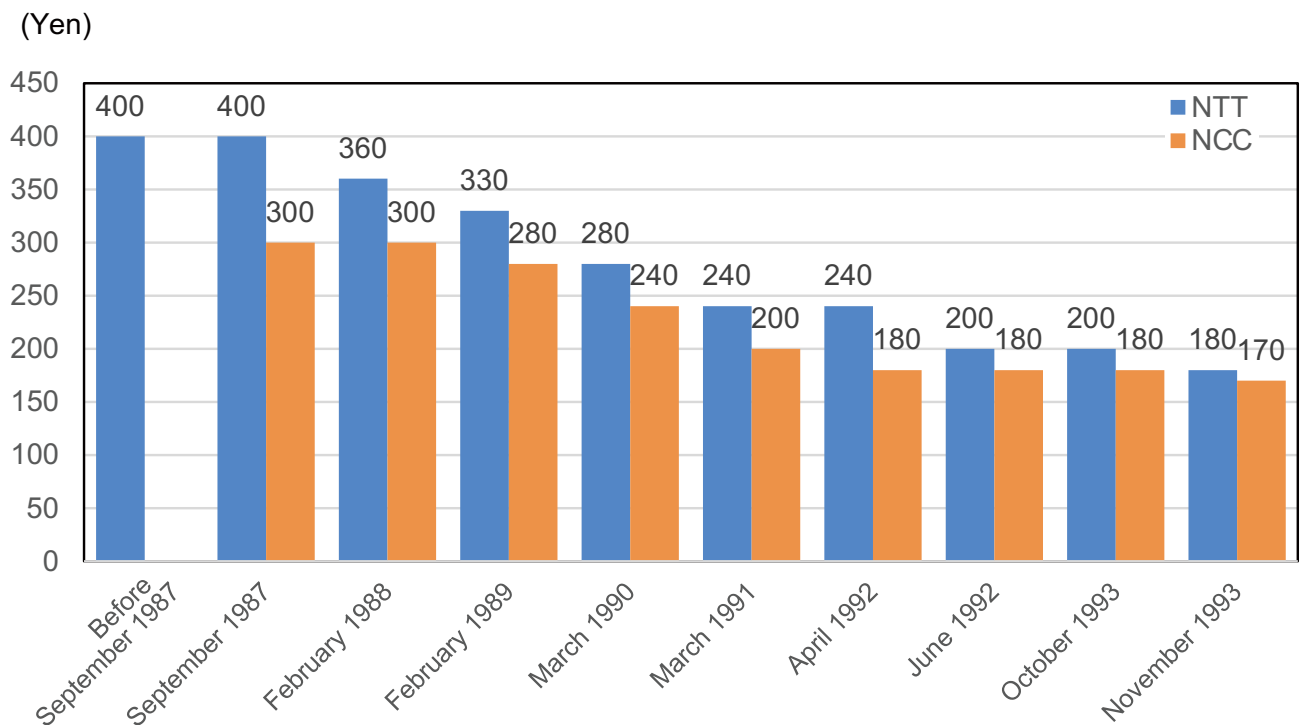
(10,000 subscriptions)



(Source) Prepared from History of the Nippon Telegraph and Telephone Public Corporation"

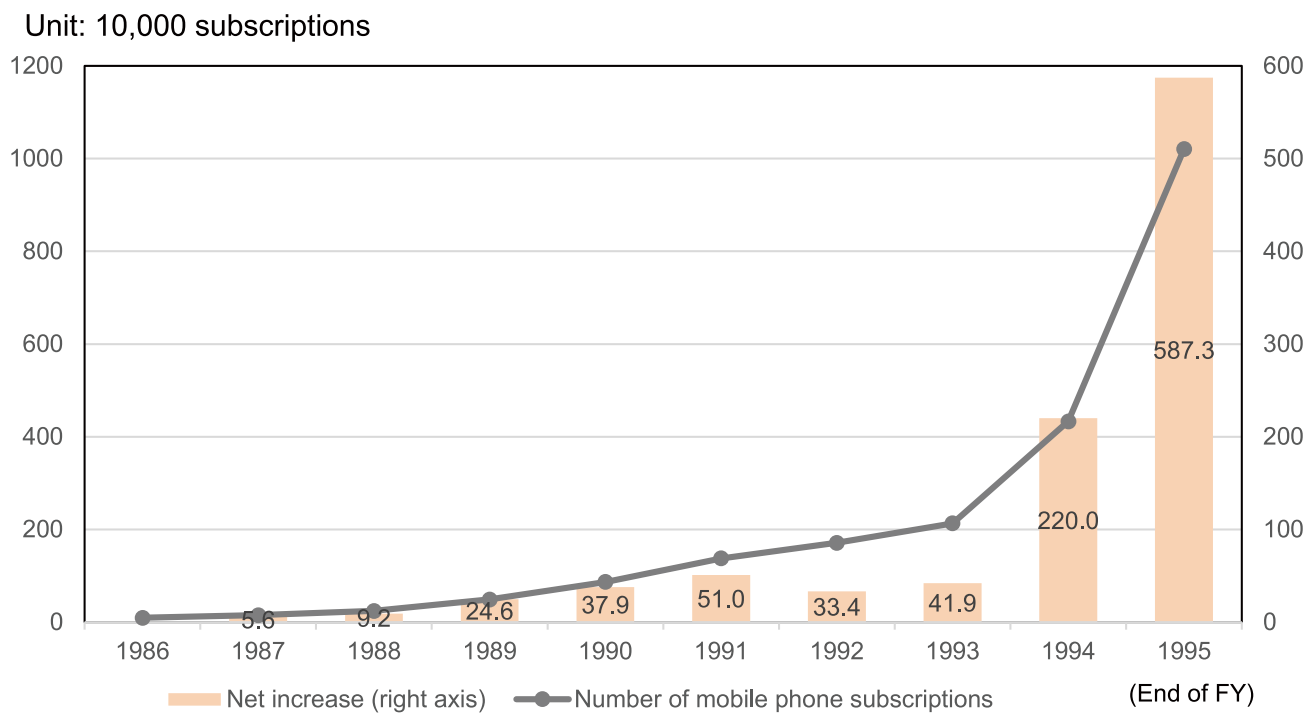
Section2

1. Transitions in charges for long distance telephone calls (Figure 1-2-2-1 in White Paper)



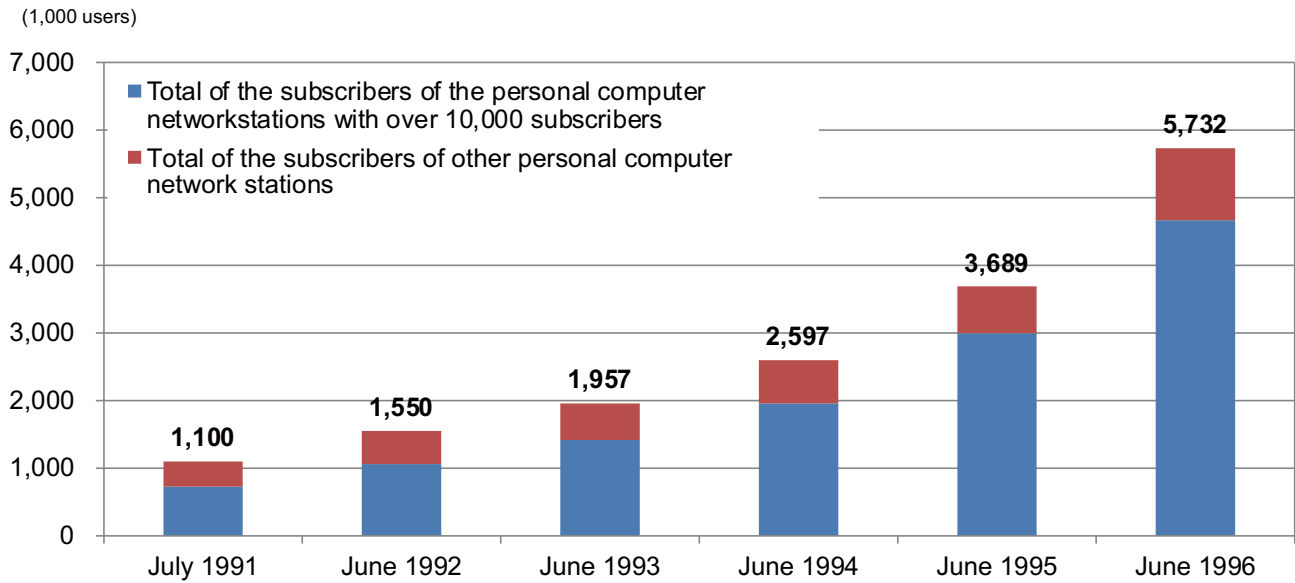
(Source) Prepared from NTT (1996) "10 years of NTT from 1985 to 1995: an overview of its history"

2. Transitions in the number of mobile phone subscribers (Figure 1-2-2-2 in White Paper)



(Source) Prepared from 1997 Communications White Paper

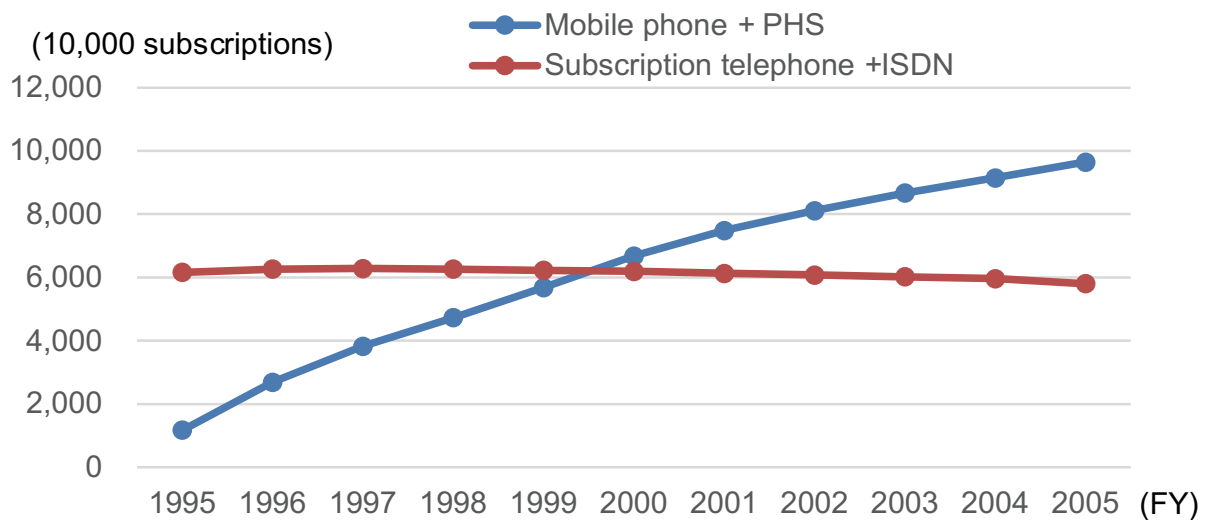
3. Changes in the number of users of personal computer communication (Figure 1-2-2-3 in White Paper)



(Source) Prepared from the 1997 Communications White Paper

Section3

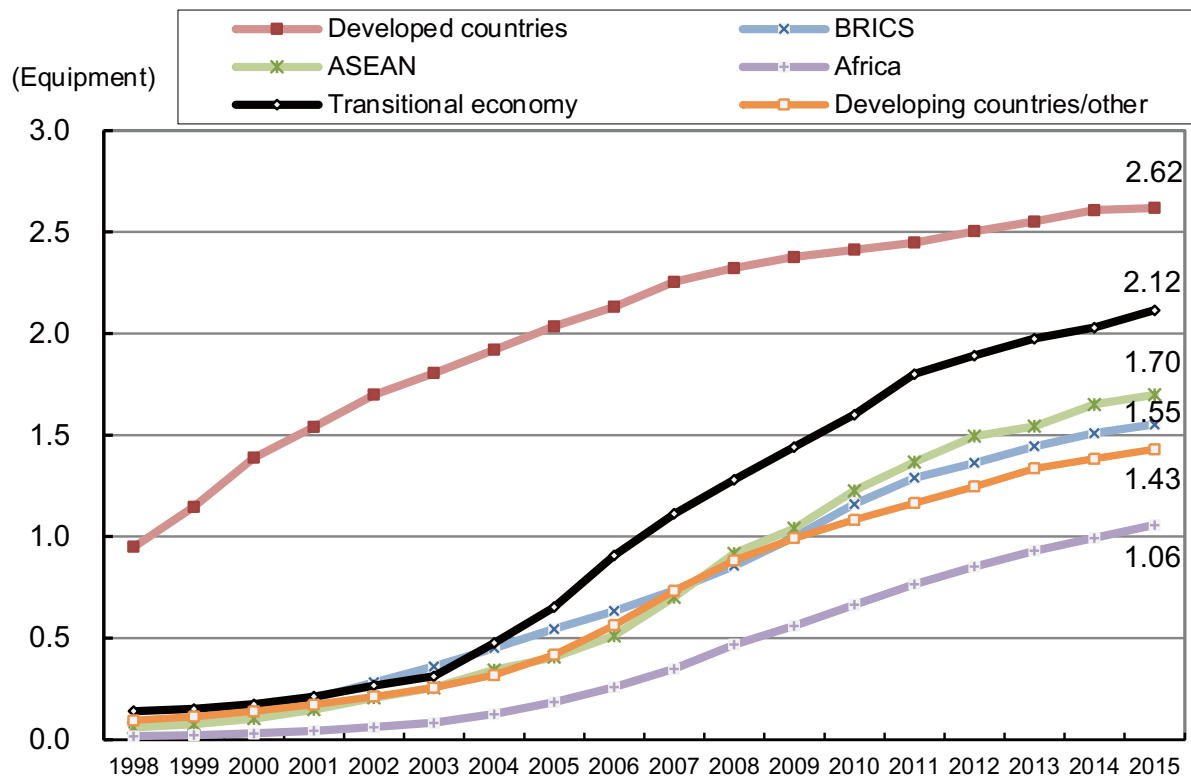
1. Number of subscribers of communication services (Figure 1-3-2-1 in White Paper)



(Source) MIC "Information & Communications Statistics Database"

Section4

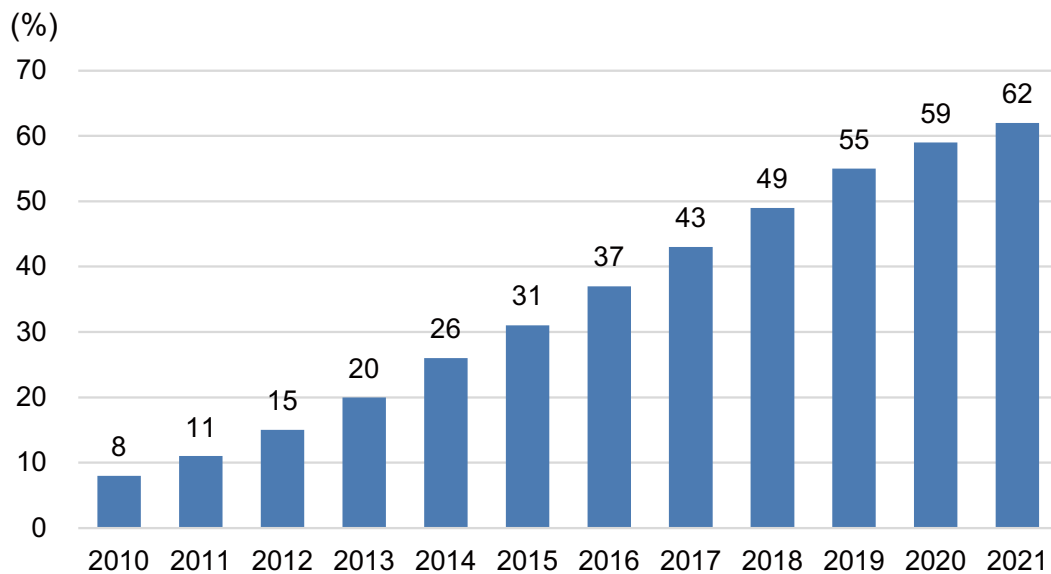
1. Changes in ICT equipment amount per capita by region (Figure 1-4-1-1 in White Paper)



* ICT equipment amount is the sum of the number of fixed landline telephone lines, mobile phone subscribers, fixed broadband internet connections, internet users and households owning computers divided by the population.

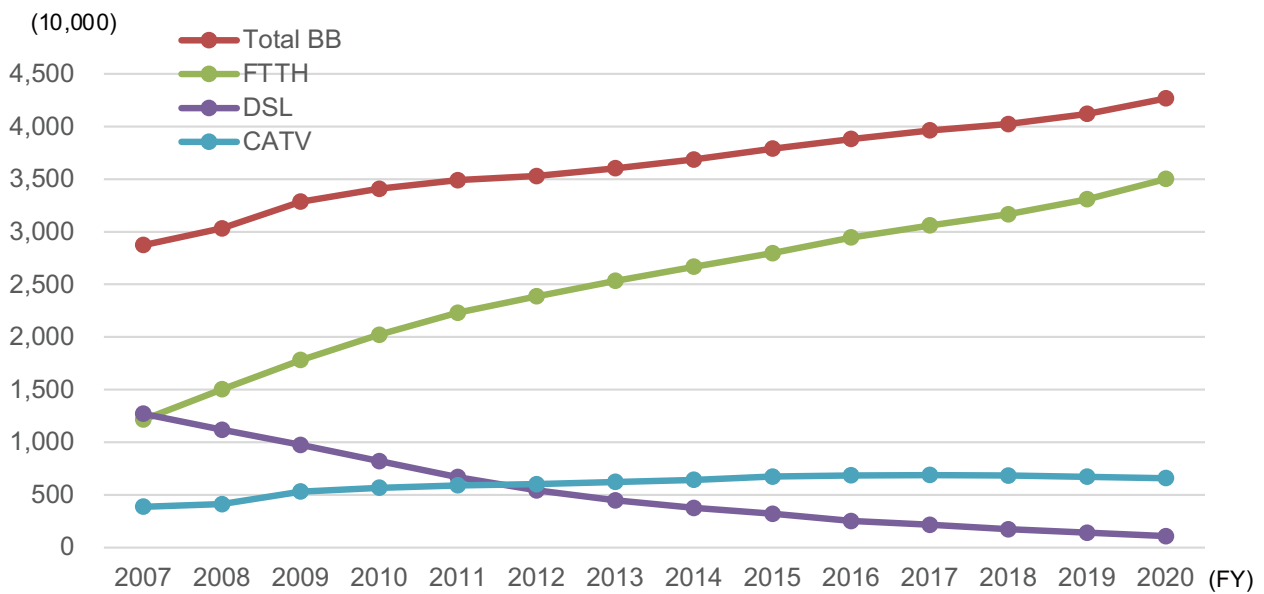
(Source) Noguchi et al. (2018)

2. Transitions in the spread of smartphones in the world (Figure 1-4-1-2 in White Paper)



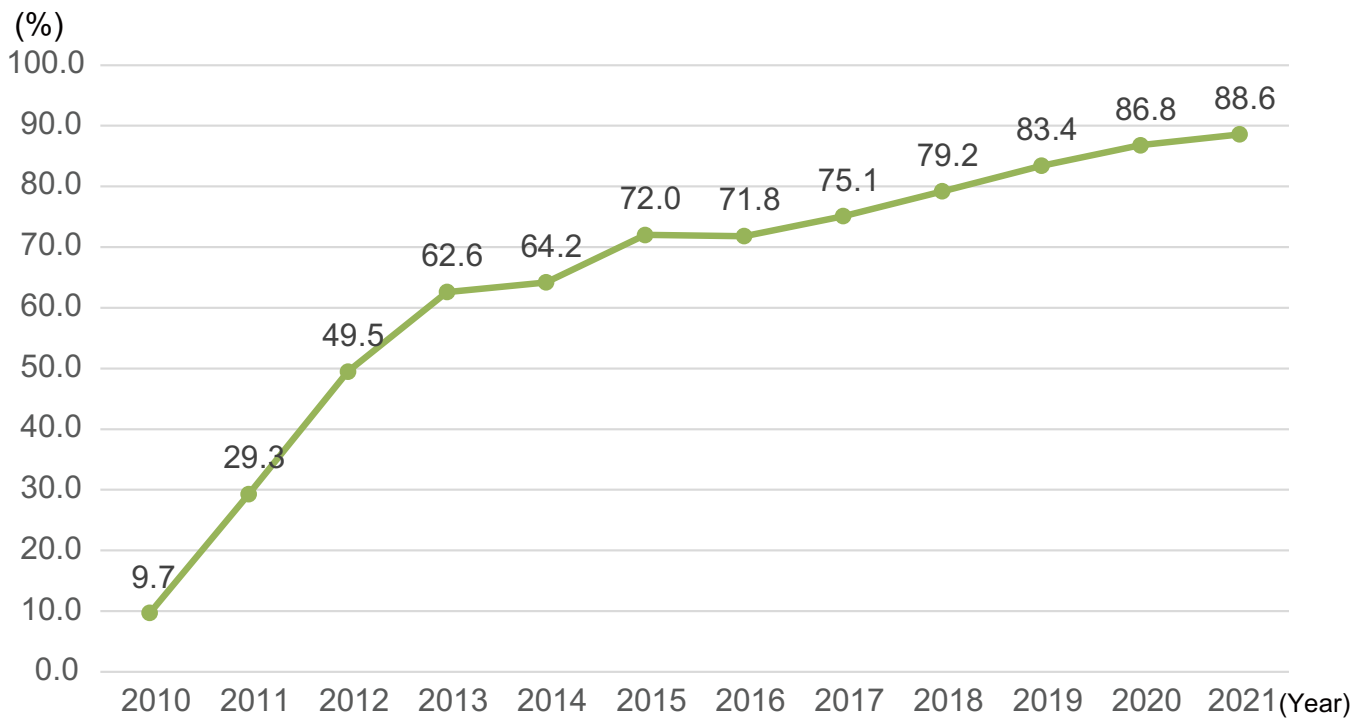
(Source) Prepared based on Statista

3. Changes in the number of fixed broadband subscriptions in Japan (Figure 1-4-2-1 in White Paper)



(Source) MIC "Information & Communications Statistics Database"

4. Changes in the ratio of households with smartphones (Figure 1-4-2-2 in White Paper)



(Source) Prepared from MIC "Communications Usage Trend Survey"

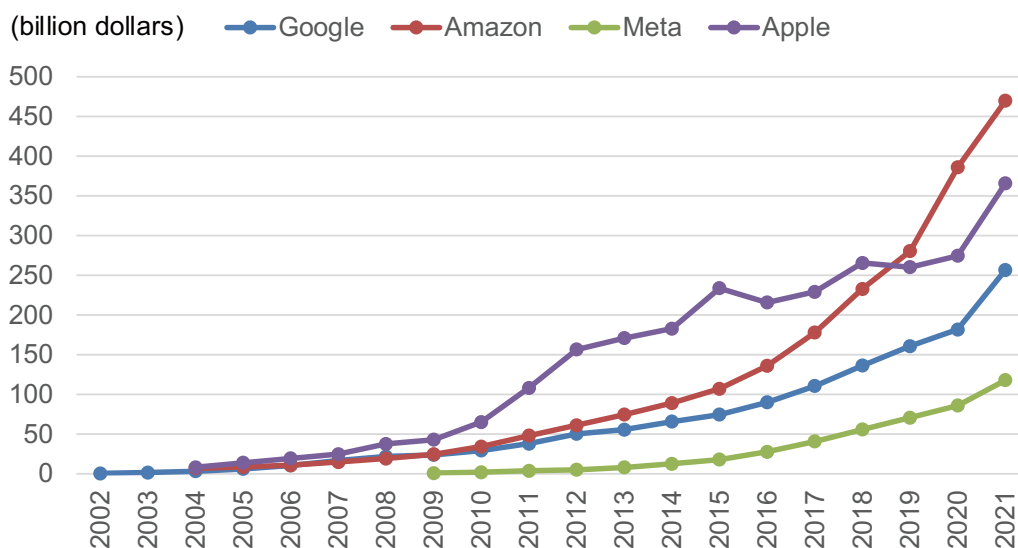
Section5

1. Trends in the initiatives for economic security in the United States and China (Figure 1-5-1-1 in White Paper)

Country	Trends of initiatives for economic security
The U.S.	<p>“The National Strategy for Critical and Emerging Technologies” was released in October 2020. Pillars of the strategy include promoting National Security Innovation and Industrial Base (NSIB) and to protect the country’s tech advantages in critical and emerging technologies in order to lead the world in these technologies.</p> <p>The strategy identifies 20 technology area priorities, which include: "Communication and Networking Technologies," "Quantum Information Science," "Semiconductors and Micro-electronics" and "Space Technologies." The 2021 Innovation and Competition Act that passed the Senate in June 2021 includes the Endless Frontier Act, the Strategic Competition Act, the Securing America’s Future Act (provisions related to the Committee on Homeland Security and Governmental Affairs of the Congress) and the Meeting the China Challenge Act.</p>
China	<p>U.S. sanctions against China (high-tech cold war) made China face the vulnerability of its own supply chains. Starting with Huawei in May 2019, one Chinese high tech company after another were placed on the trade restriction “Entity List”, which was designated by the U.S. Department of Commerce under the Export Administration Act, and became unable to procure American products.</p> <p>In order to overcome this weakness, the country announced a policy to upgrade industrial infrastructure, modernize industry chains and promote digitalization in “the 14th Five-year Plan.”</p>
Reference Japan	<p>The government held expert meetings for economic security legislation to discuss economic security legislation from technical viewpoints.</p> <p>A bill for ensuring security by integrally taking economic measures with the four pillars of “supply chain,” “critical infrastructure,” “public-private technical cooperation” and “patent non-disclosure” was submitted to the 2022 ordinary session of the Diet and enacted in May of the same year.</p>

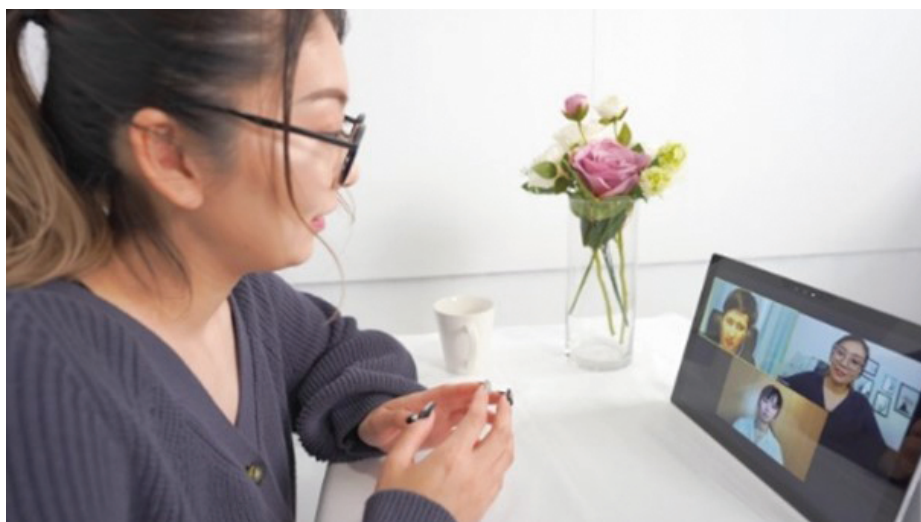
(Source) MIC (2022) "Survey Research on R&D on the Latest Information and Communications Technologies and Trends of Use of Digital Technologies in Japan and Abroad"

2. Changes in the sales of GAFA (Figure 1-5-1-2 in White Paper)



(Source) Prepared based on Statista data

4. Online meeting (Figure 1-5-2-2 in White Paper)



(Source) AC