- Even before the spread of the infectious disease, the EC (electronic commerce) market has been growing at an annual rate of about 8% (Figure 34). The EC penetration rate in Japan, which was about 40% at the onset of the current crisis, has been increasing significantly. It will reach the level achieved in the United States and Europe (80%) in a year if the current growth rate continues (Figure 35). The EC has been used by households headed by young and middle-aged persons in the past, but the contribution of households headed by middle-aged and older persons has increased significantly after the spread of the infectious disease (Figure 36). Although the EC growth among such households reflected spending not only by householders but also by other household members, elderly people sensitive to the infectious disease have made a shift to EC consumption, contributing to EC growth in July.

Figure 34 The scale of the EC market in Japan (BtoC market)

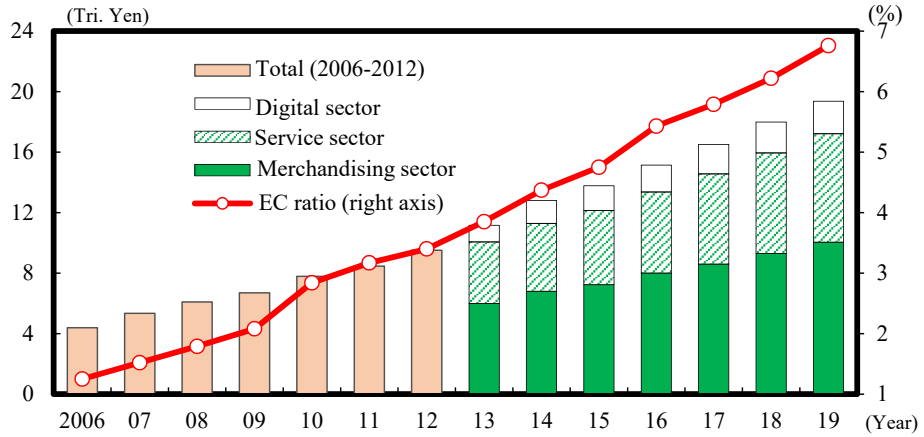


Figure35 Future estimation of EC penetration rate in Japan

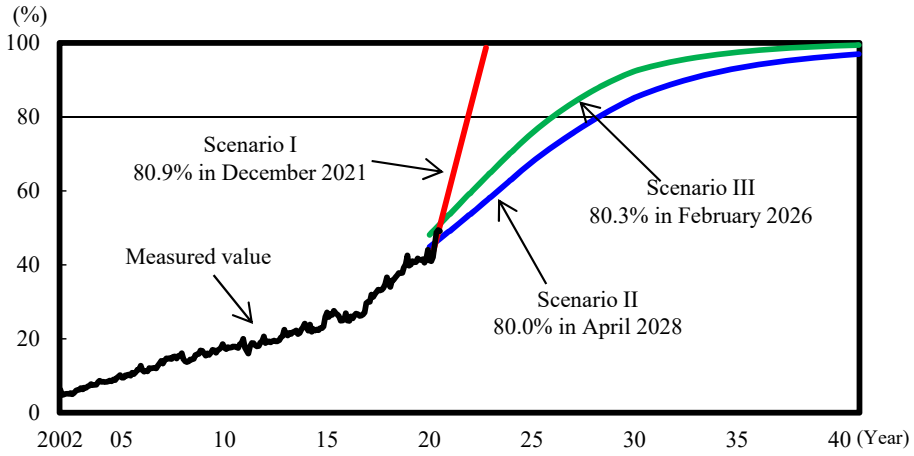
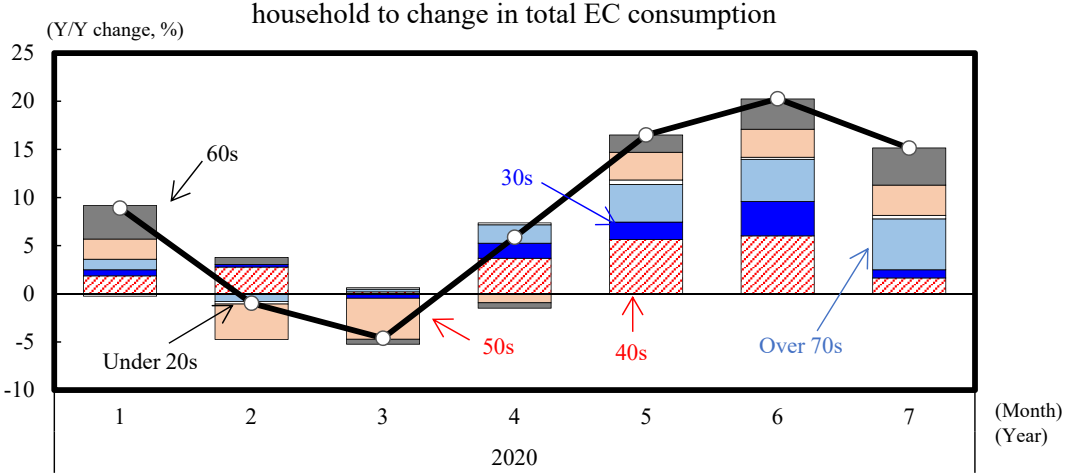


Figure 36 Contribution of households by age of head of household to change in total EC consumption



(Reference) Ratio of households by age of head of household and EC spending in the Survey of Household Economy (Average Jan.–Jul. 2020)

	Under 20s	30s	40s	50s	60s	Over 70s
Percentage of Household (%)	0.7	7.2	16.6	19.2	25.2	31.1
Amount of Spending on EC (yen)	18,137	23,211	22,385	20,714	13,681	6,661

(Sources) Figure 34: Compiled based on E-Commerce Market Survey, METI. Figure 35: Compiled based on Survey of Household Economy, MIC, and Population & Household Projection, National Institute of Population and Social Security Research. Estimates were made by five-year age bracket through linear regression for Scenario I and through the logistic curve (y=K(1+b×e^(cx))(K=100) for Scenarios II and III and multiplied by future age bracket shares based on the future estimated number of households to calculate the estimates. Figure 36: Compiled based on Survey of Household Economy, MIC.

- The need to invest in IT to save labor input has been pointed out in the context of structural labor shortages. Although they have been increasing, intangible assets including software remain at a lower level than those in other developed countries (Figures 37 and 38).
- According to the firm survey by the Cabinet Office, more than 60% of large companies have not yet invested in labor-saving measures in the production sites or sales points. While labor-saving investments in the back-office are relatively advanced, many small and medium-sized companies have not done so yet. Just under 60% of all companies have yet to do so, leaving a great margin for expansion in the future (Figure 39).

Figure 37 Investment in intangible assets in the private sector (stock)

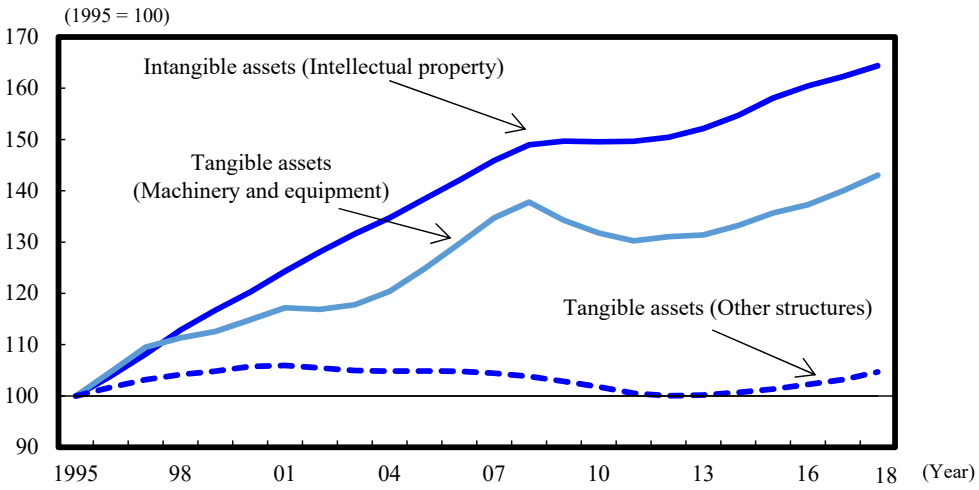


Figure 38 Comparison of intangible asset investments by country (stock)

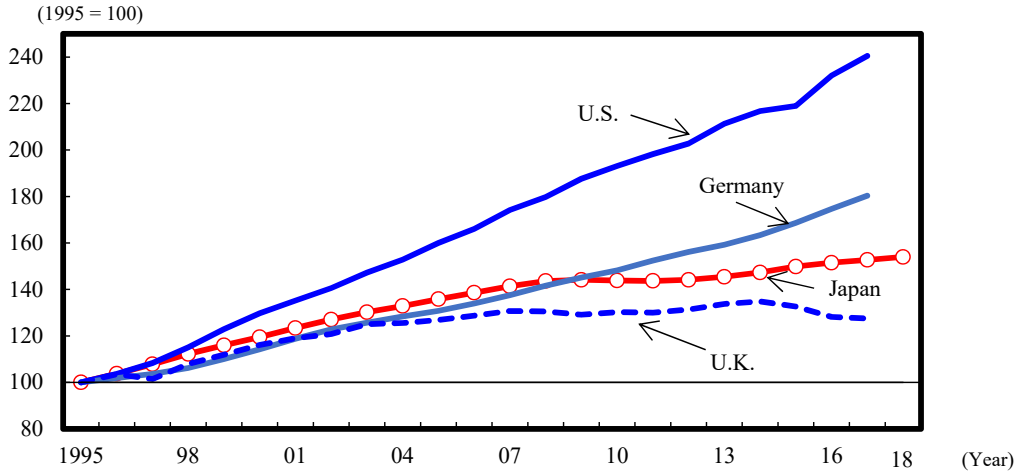
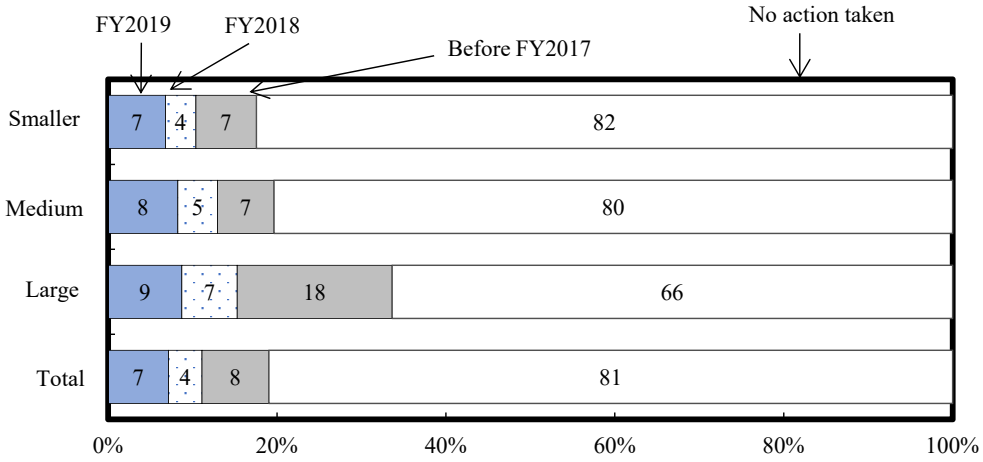
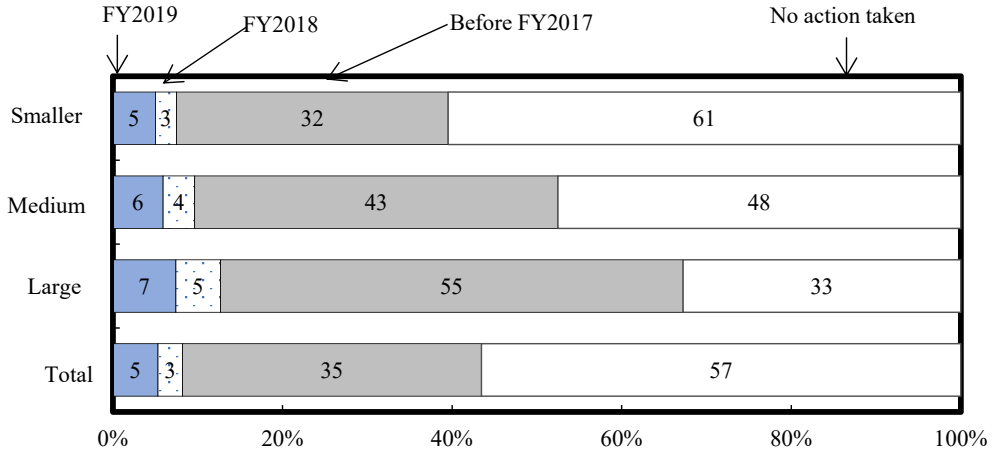


Figure 39 Start of labor-saving investment initiatives

(1) Production site



(2) Back-office

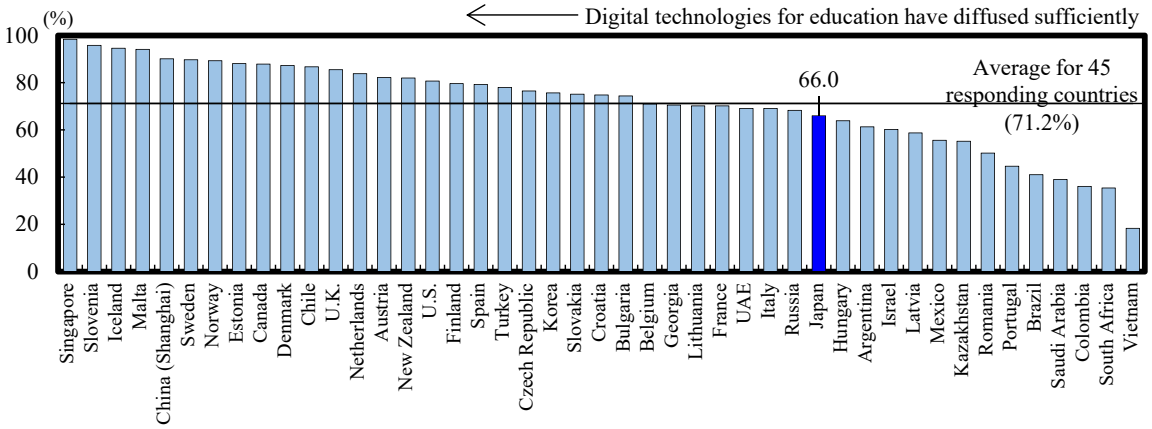


(Sources)
Figure 37: Compiled based on Annual Report on National Accounts, Cabinet Office. Figure 38: Compiled based on EU KLEMS. Figure 39: Compiled based on a firm survey on work style reform initiatives, Cabinet Office (February 2020).

- Infectious diseases have revealed a shortage of IT investment and a delay in the adoption of IT in education and public administration. Indeed, Japan ranks 32nd out of 45 countries in terms of the use of IT in education, and the lowest out of 30 countries in terms of administration according to the OECD survey (Figure 40).
- Further, skilled IT workers in Japan are concentrated in the IT industry (over 73%) compared to the case in the U.S. (35%). The relative number of skilled IT workers in other industries, especially in the public sector, is 13 times higher in the U.S. (10.7%) than in Japan (0.8%) (Figure 41). In order to achieve the "new normal," it is necessary to catch up with the adoption of IT by reallocation of human resources as well as boosting investment and human resource development.

Figure 40 IT development for education and administration

(1) IT development at schools (2018)



(2) Development of online administrative procedures (2018)

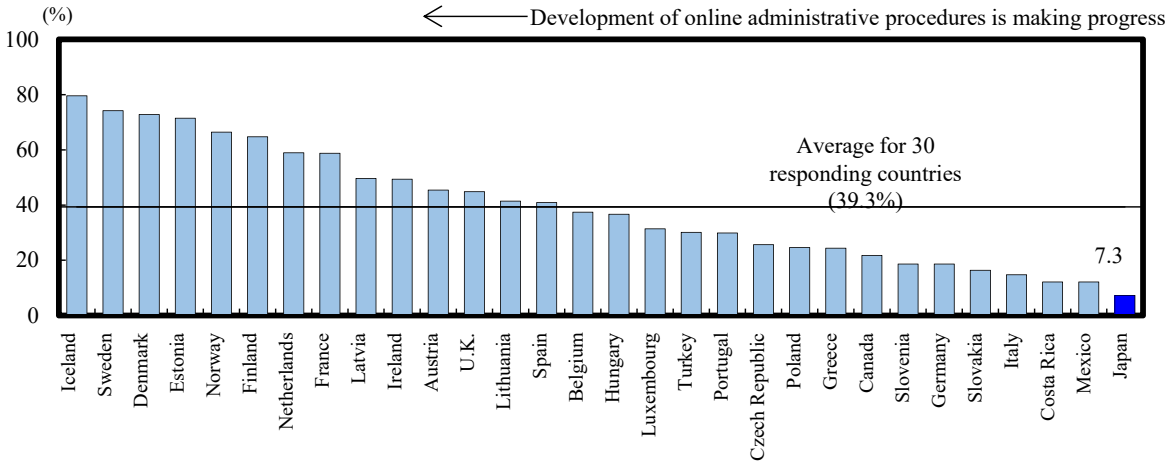
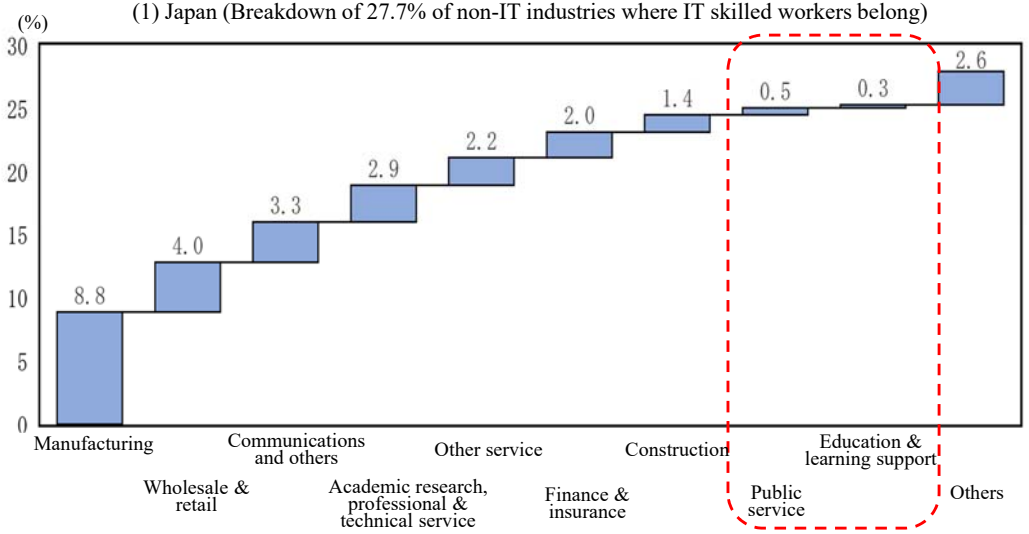
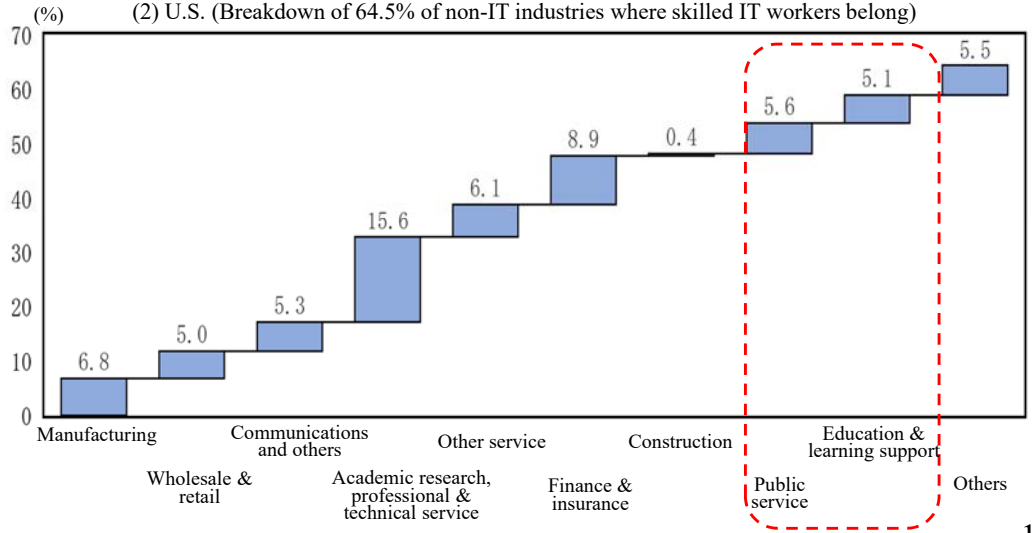


Figure 41 Breakdown of non-IT industries where skilled IT workers belong

(1) Japan (Breakdown of 27.7% of non-IT industries where IT skilled workers belong)



(2) U.S. (Breakdown of 64.5% of non-IT industries where skilled IT workers belong)



(Sources) Figure 40: Compiled based on OECD.stat.
Figure 41: Compiled based on Census 2015, MIC, Labor Force Survey, MHLW, and Bureau of Labor Statistics, U.S. Department of Labor. Estimates are based on the 2019 census for the United States and the 2015 census for Japan.