

Provisional translation by Cabinet Office

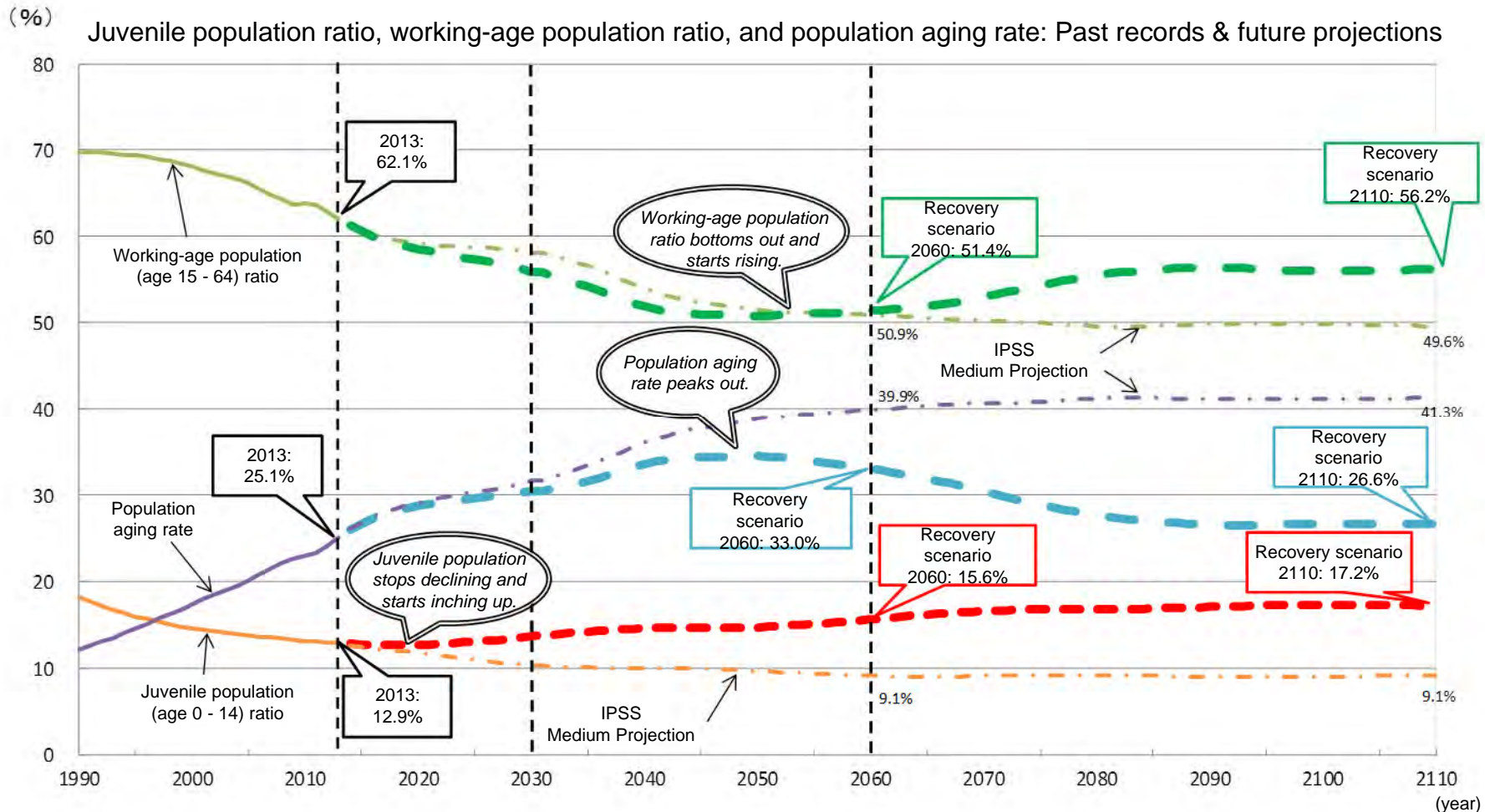
# Choice for the Future <Reference Materials>

November 14, 2014

Cabinet Office

# 1. Juvenile population ratio, working-age population ratio, and population aging rate: Future projection

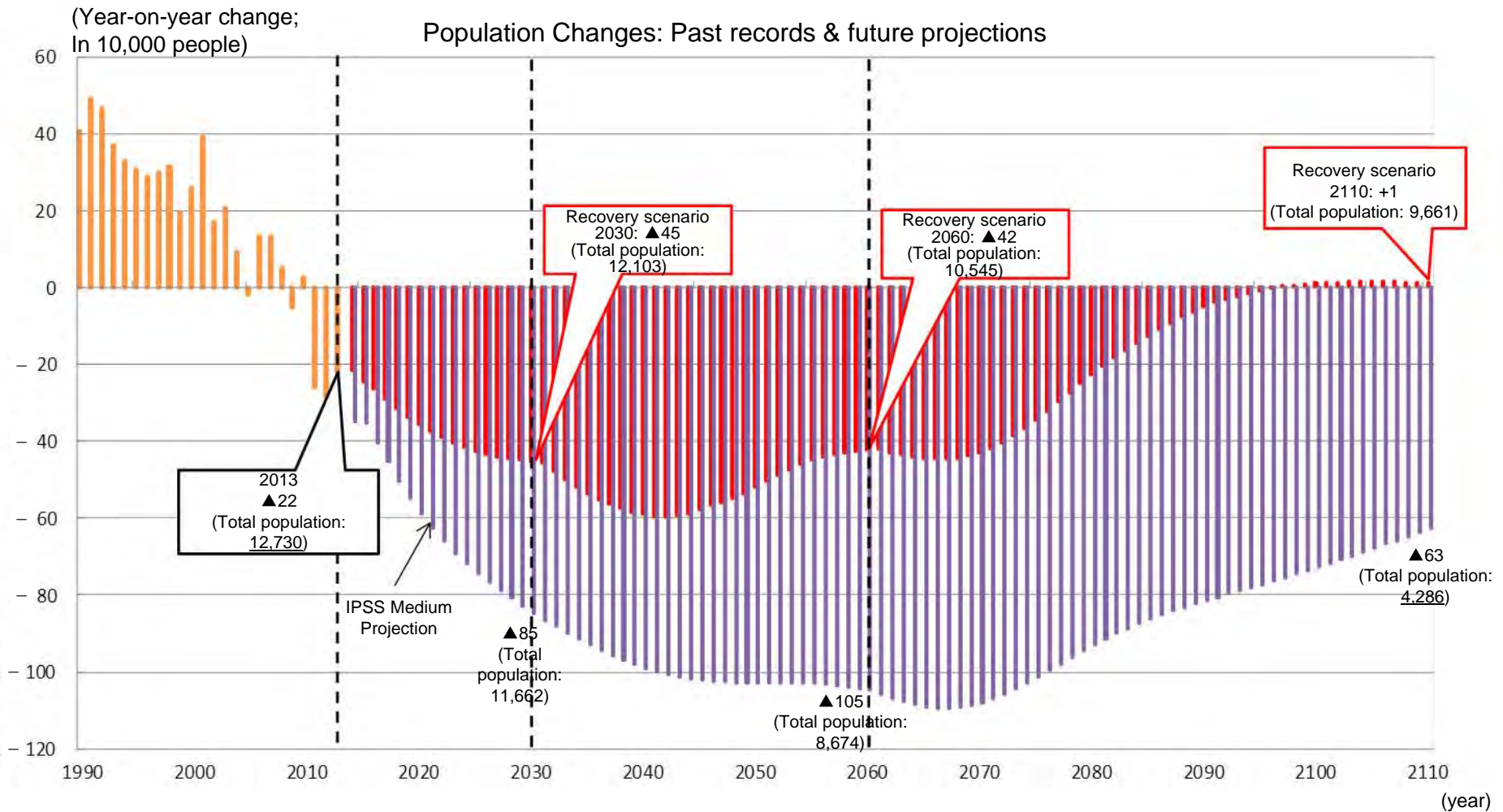
- ❑ With the current state of things going unchanged, the juvenile population ratio will fall to around 9 percent in 2060, while the population aging rate will rise to around 40 percent.
- ❑ With the total fertility rate recovering to 2.07 by 2030, (1) the juvenile population will stop declining in the early 2020s, (2) the population aging rate will peak out in the late 2040s, and (3) the working-age population ratio will start picking up in the early 2050s.



- (Notes)
1. Past records between 1990 and 2013 are adapted from MIAC "Population Census Report" and "Annual Report on Current Population Estimates" and MHLW "Vital Statistics."
  2. IPSS Medium Projection is adapted from the National Institute of Population and Social Security Research "Population Projection for Japan (January 2012)." The total fertility rate goes around 1.39 by 2014, before falling to 1.33 by 2024, and then going around 1.35.
  3. The birth rate recovery scenario uses the populations by sex in 2013 as benchmarks, assuming the total fertility rate rises to 2.07 in 2030 and then stays around that level. The survival ratios for and after 2013 are based on the assumption for the IPSS Medium Projection that the average life span rises to 84.19 and 90.93 for men and women, respectively, by 2060.

## 2. Future Projection of Population Decreases

- ❑ With the current state of things going unchanged, population will decrease by 0.6 million per year in the early 2020s, and by 1.0 million per year around 2040.
- ❑ With the total fertility rate recovering to 2.07 by 2030, the population decrease will bottom out around 2040 at 0.6 million annually, before the pace of decrease slows down. In the 2090s, population will stop declining.

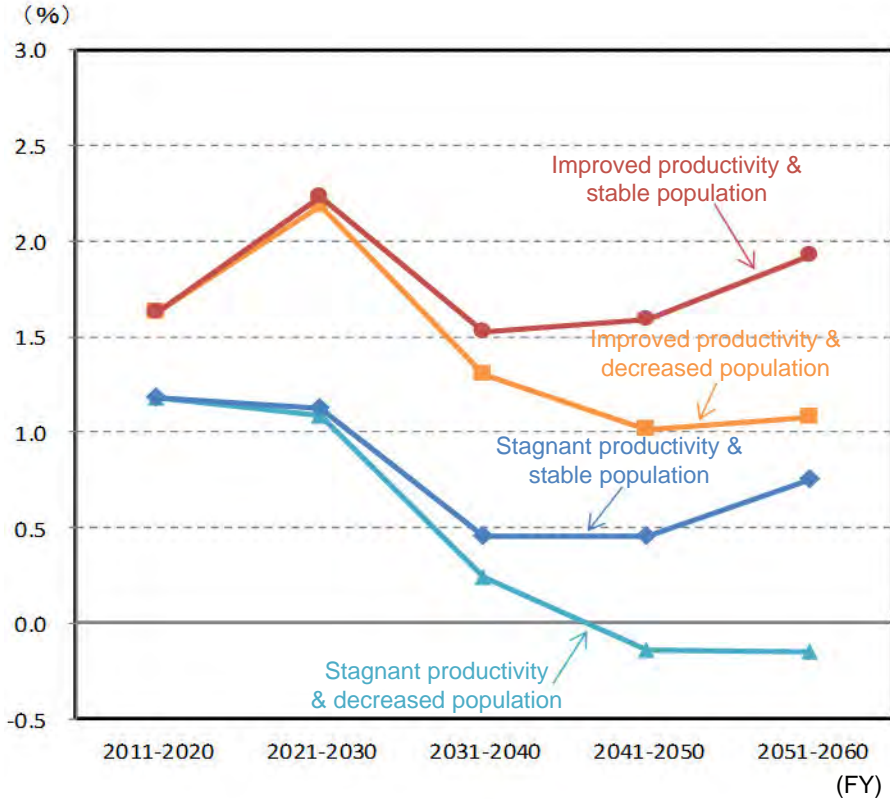


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# 3. Future projection of economic growth

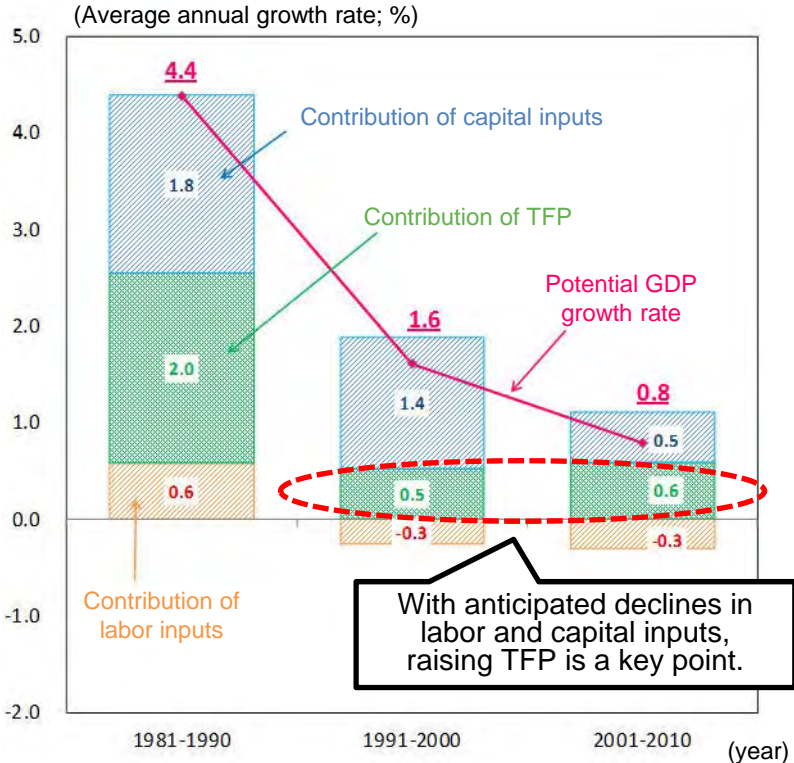
With success in stabilizing the population at 100 million and raising productivity to the highest level in the world, an additional two percentage points of economic growth (real GDP growth rate) are possible as compared with a scenario of decreased population and stagnant productivity.

Real GDP growth rate



(Note) Report of the Working Group on Growth and Development at the 13th meeting of the Committee for Japan's Future (November 14, 2014)

(Reference) Changes in Japan's potential growth rate



(Note) Adapted from reference figures on the Interim Report, "Choice for the Future," at the 7th meeting of the Committee for Japan's Future (May 13, 2014)

## 4. Future projections of the ratio of social security-related expenditure to nominal GDP, etc.

- With a stabilized population of about 100 million and enhanced productivity, steady improvement of living standards can be expected, such as real GDP per capita, which would reach almost the same level of the United States in the 2050s.
- In the scenario of a stabilized population size and improved productivity, the ratio of social security-related expenditure to nominal GDP shows gradual increases.

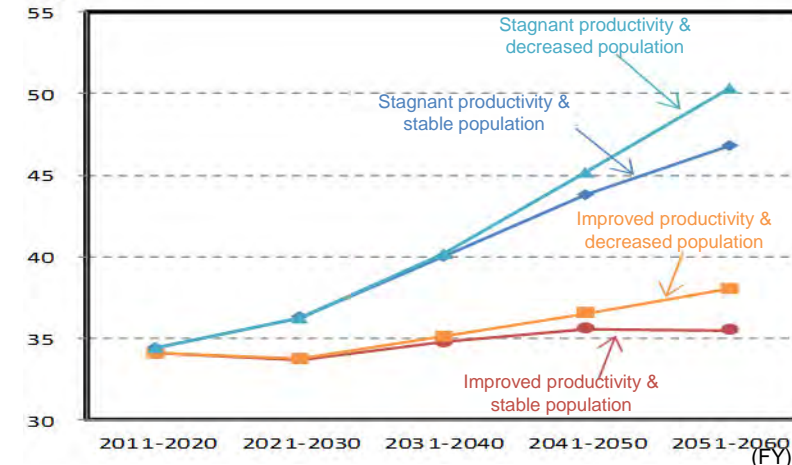
Real GDP per capita

(In 10,000 USD)

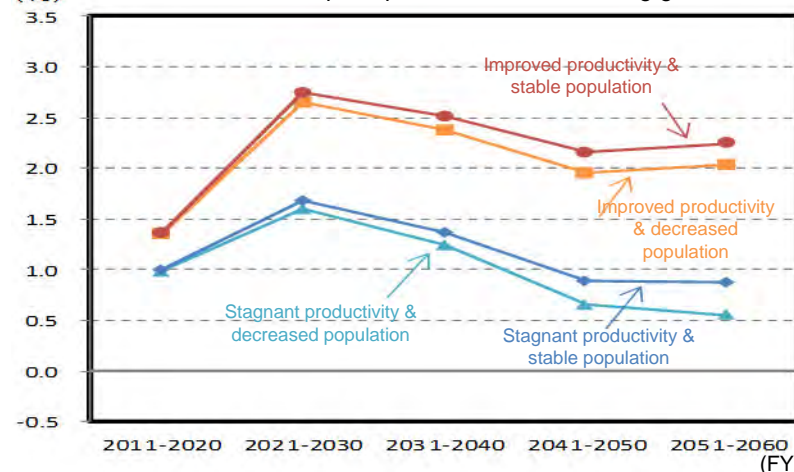
	2011-2020	2021-2030	2031-2040	2041-2050	2051-2060
USA	4.8	5.8	6.7	7.7	8.5
Japan (Improved productivity & stable population)	3.4	4.3	5.3	6.5	8.2
Japan (Stagnant productivity & decreased population)	3.3	3.9	4.5	5.0	5.4

(Notes) Future projections for USA are adapted from OECD (2014) "Economic Outlook." Conversion to USD is based on purchasing power parity as of 2005. Figures for Japan are fiscal year averages.

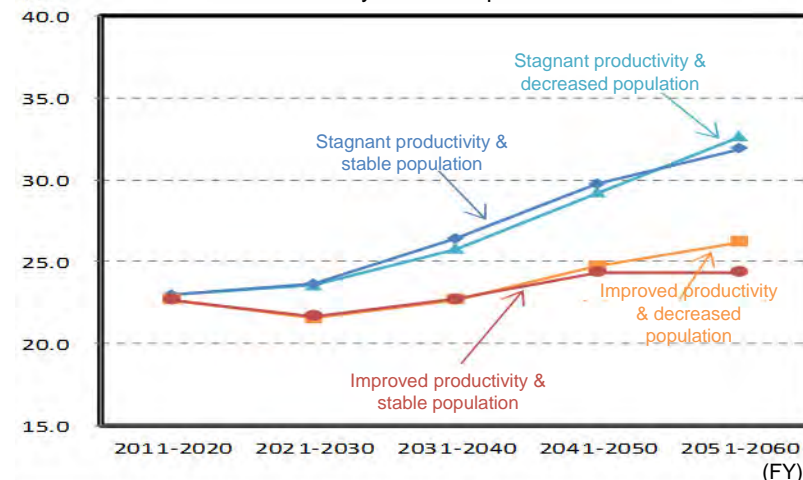
(%) Ratio of potential burden borne by households to support social security



(%) Growth of real consumption per household of working generations



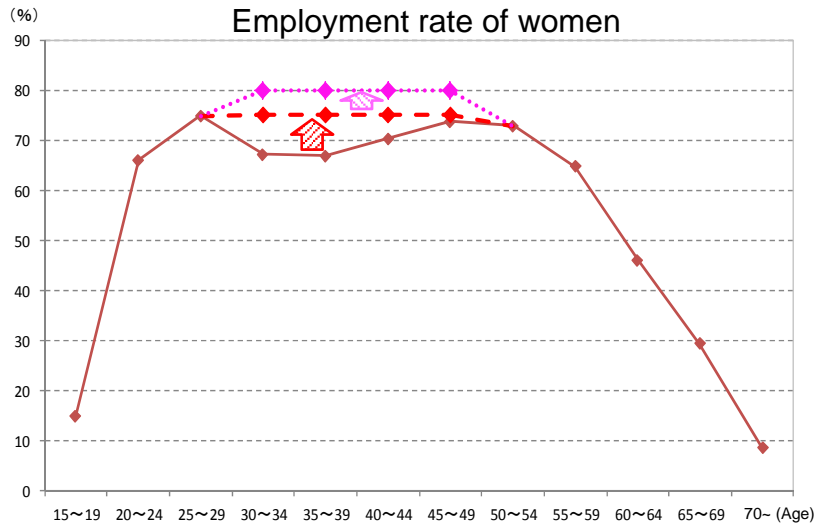
(%) Ratio of social security-related expenditure to nominal GDP



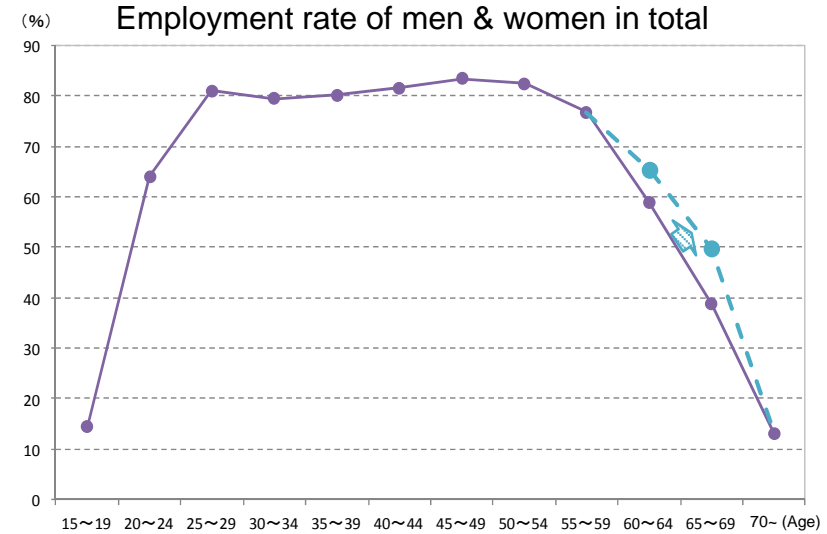
(Note) Report of the Working Group on Growth and Development at the 13th meeting of the Committee for Japan's Future (November 14, 2014)

# 5. Employment of women and elderly people

- In Japan, the employment rate of women forms an M-shaped curve, with a dip between their 30s and 40s. With success in eliminating the M-shaped curve, the employment rate of women in their 30s and 40s would rise around five percent (up 950,000 people). With a rise of the employment rate of those in their 30s and 40s to 80 percent, that of women in the age group goes up around 10 percent (up 1,810,000 people).
- When elderly people are allowed to work at any age, as long as they hope to, as part of effort to encourage them to have more active roles to play, the employment rate of those aged 65 and over would rise around three percent (up 960,000 people).

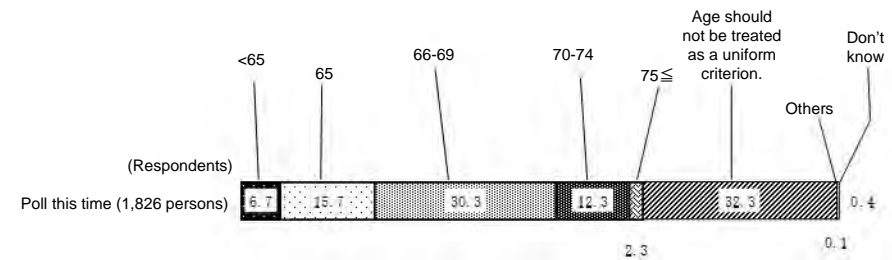


(Note) Adapted from MIAC "Labour Force Survey." The solid line represents figures for 2013.

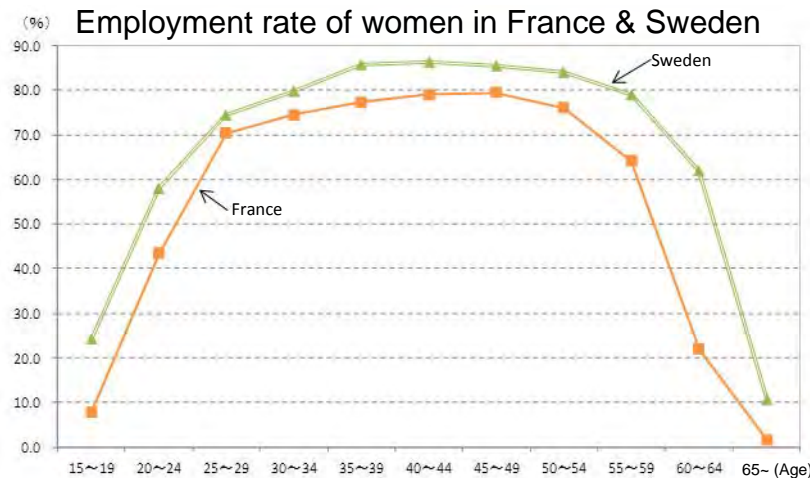


## Awareness of working age

- ◆ At the moment, the working-age, age groups of people assumed to be in some work, is generally set at the range from age 15 and less than 65. Until what age do you think people should desirably work?



(Note) Adapted from the Cabinet Office, "Opinion Poll on Future of Japan: Population, Economy, Society, Etc." (August 2014)

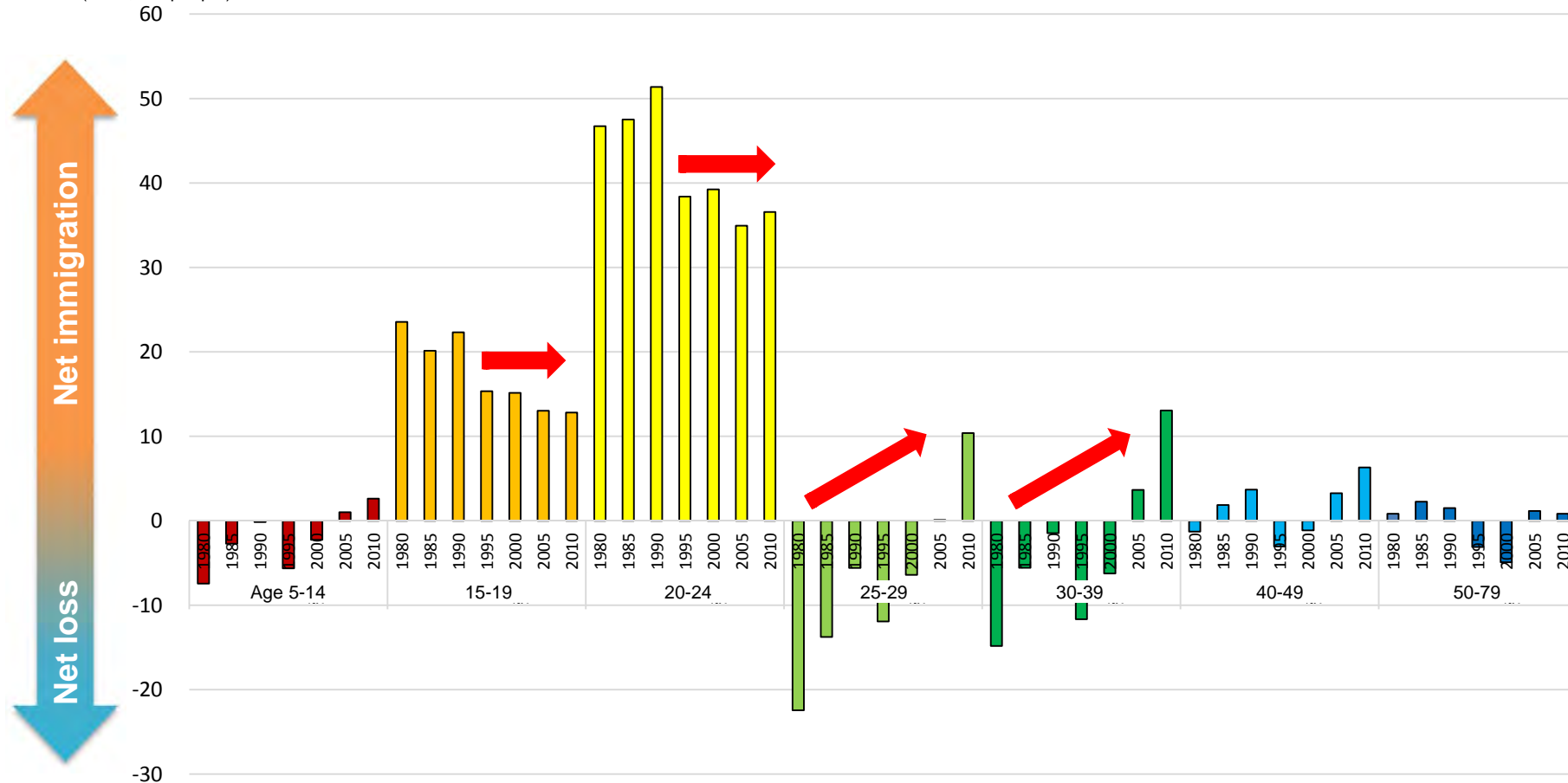


(Note) Adapted from OECD "Labour Force Statistics"

## 6. Changes in net immigration to, and net loss from, the Tokyo metropolitan area by age

- Net immigrations are especially large in the age group of 15 to 19, and that of 20 to 24 in the Tokyo metropolitan area. In the 1990s, net immigrations of the two groups showed slight declines, before leveling off.
- Among those in their late 20s and 30s, there have been net losses, while since the 2000s, there have been net immigrations.

(In 10,000 people)

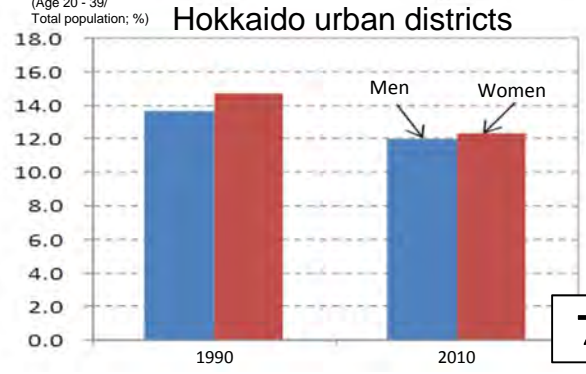
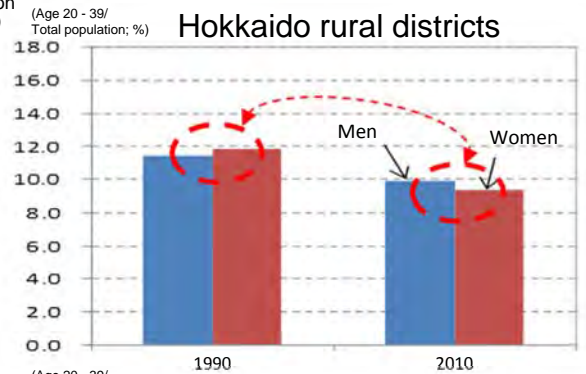
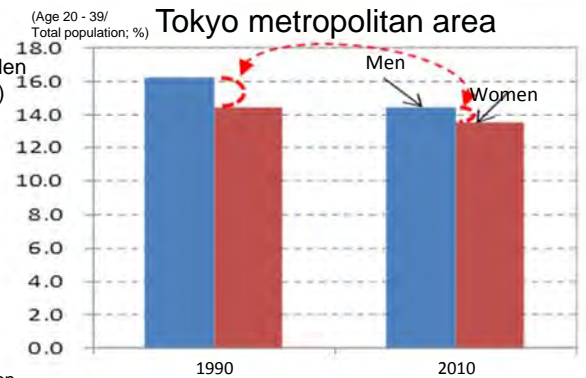
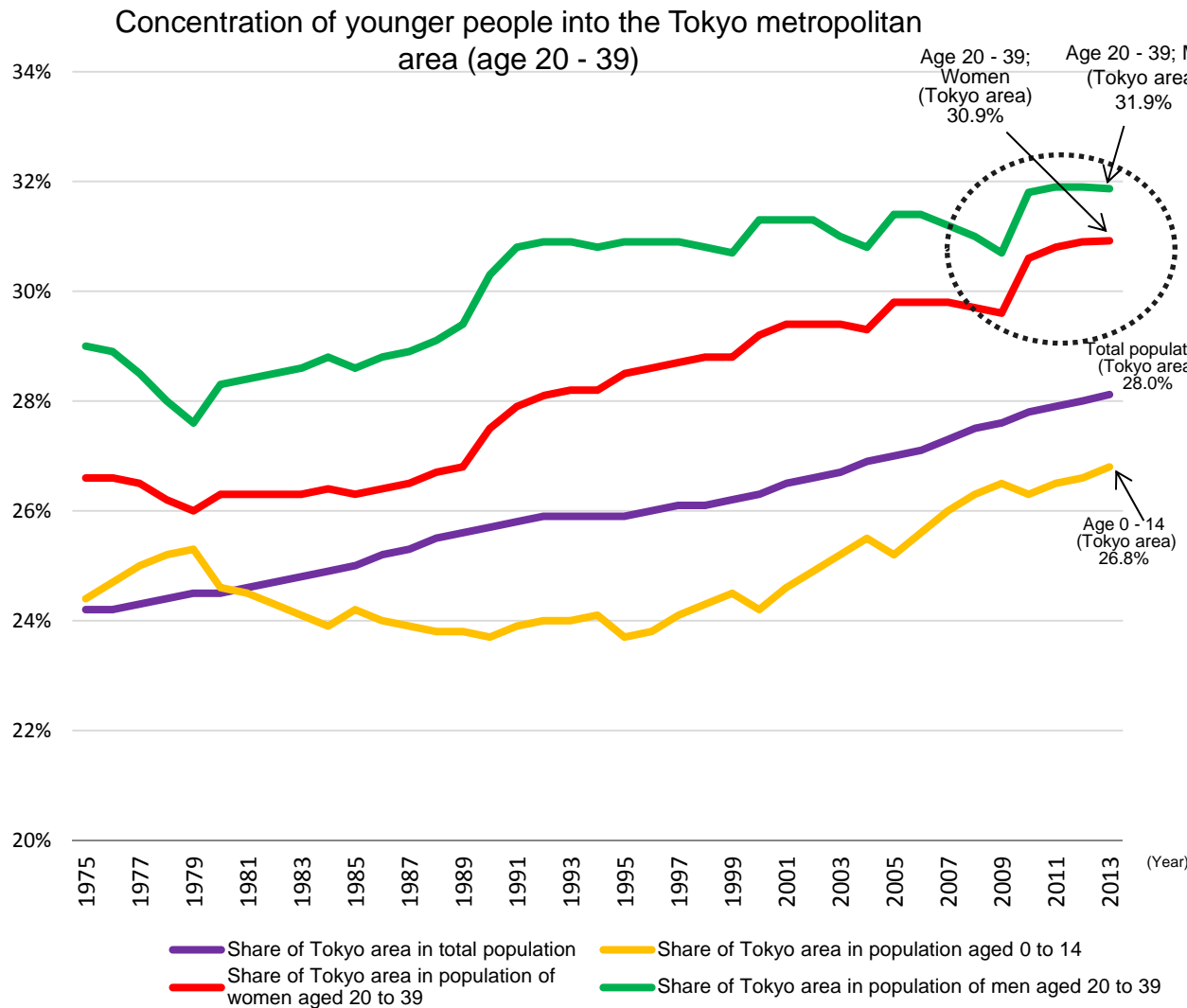


(Note) Net immigrations and net losses for each year are adapted from MIAC "Population Census Report." To calculate net immigration or net loss of a year, you first multiply the population in the year the preceding census was conducted by the survival rate to calculate expected population of the current year, which assumes no social mobility. Then you subtract it from the actual population from the current year's census.

(Note) Net immigration or net loss by age is estimated using the national census survival ratio method, which estimates survival ratio of an age based on population by age in the national census each year, on the assumption of a nationally uniform survival ratio for each age.

# 7. Net immigration to the Tokyo metropolitan area (changes by sex)

- Since the 1990s, net immigration to the Tokyo metropolitan area has been growing remarkably among women rather than among men.
- Taking Hokkaido as an example, the share of young women has shown a significant decline in the rural districts, suggesting that most of them bypassed the urban districts of the Prefecture, moving out directly to the Tokyo area.

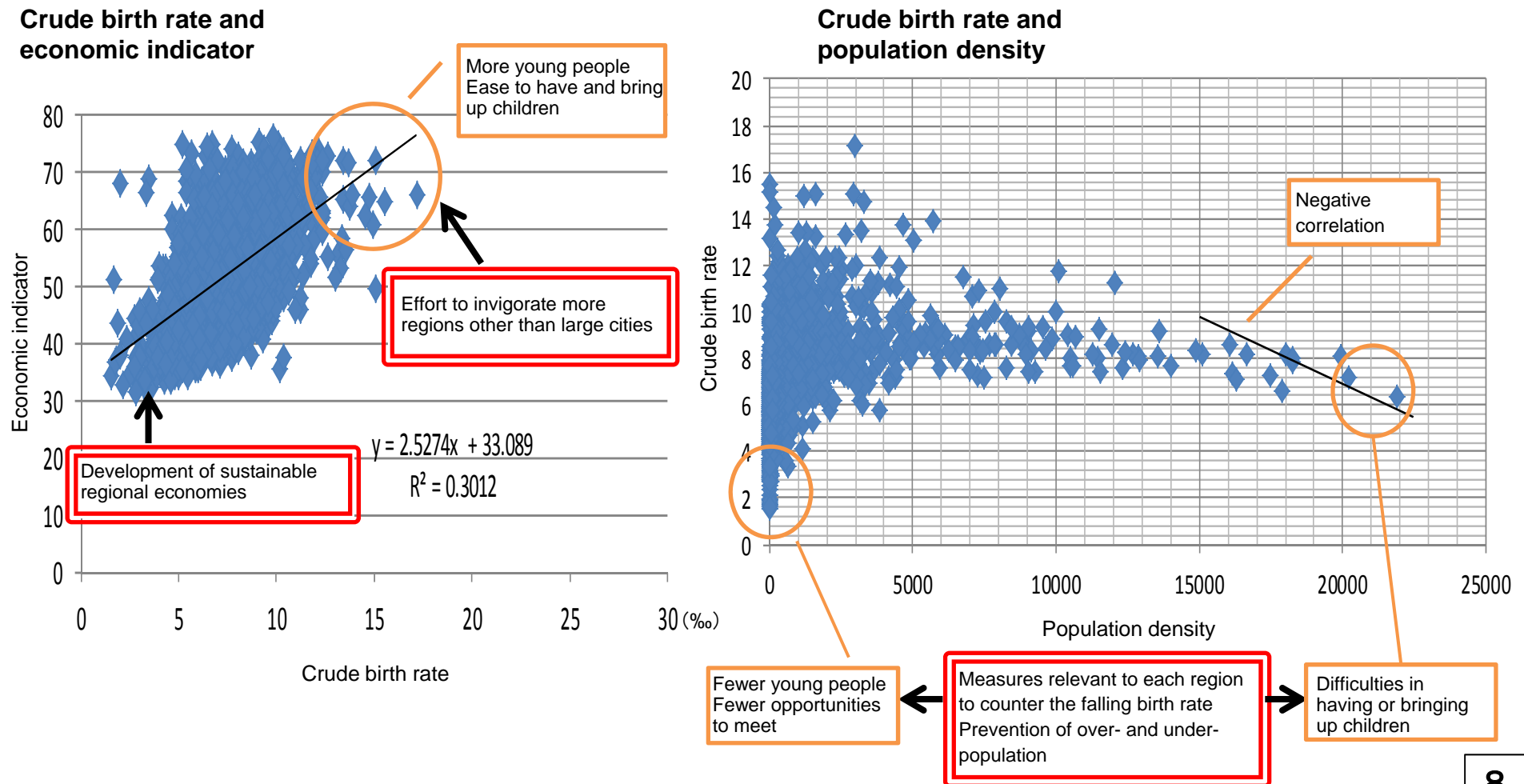


(Note) Adapted from MIAC "Population Census Report" and "Population Estimates."



## 8. Relationship between the birth rate and the sizes of economy and population

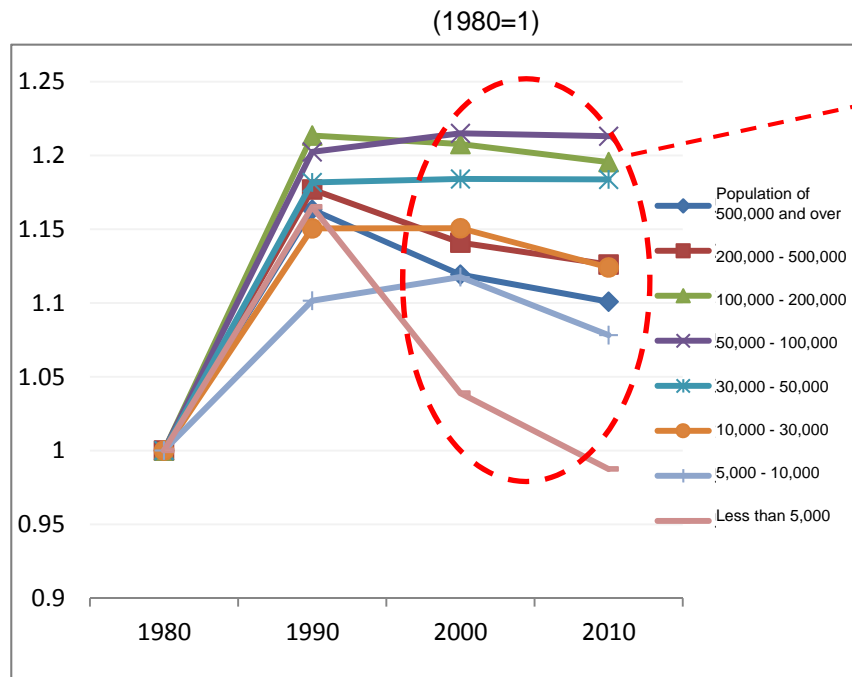
- ❑ The birthrate is correlated with economic indicators. In recent years, regions have seen growing differences in economic performance between them. Young people tend to move to places they can find a job, and have a family there.
- ❑ Challenges we should address to stem the rapid decline of population include (1) development of sustainable regional communities, (2) measures to counter the falling birth rate in a manner relevant to each region, and prevention of over- and under-population, and (3) efforts to invigorate more regions other than large cities.



# 9. Trend of the economic indicator by municipality

- Municipalities with a population of 50,000 to 100,000 have remained firm in economic indicator. Medium and large-scale cities, with populations of 200,000 to 500,000, and 500,000 or more, respectively, have been relatively weak.
- Small towns and villages, with populations of 10,000 or less, have been in tough economic conditions since 2000.

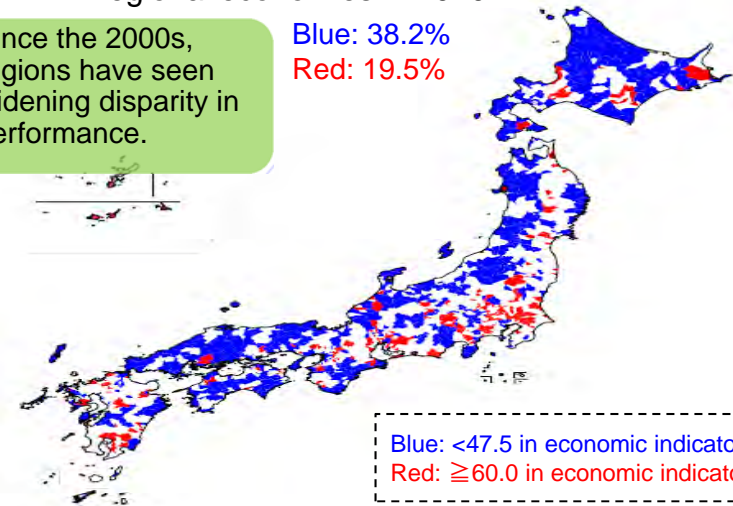
## ○ Changes in the average economic indicator by size of population



## ○ Regional economies in 2010

Since the 2000s, regions have seen widening disparity in performance.

Blue: 38.2%  
Red: 19.5%

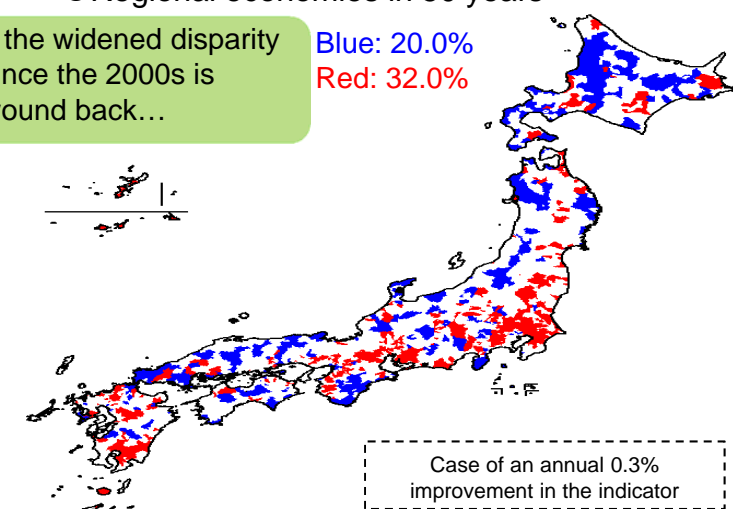


Blue: <47.5 in economic indicator  
Red: ≥60.0 in economic indicator

## ○ Regional economies in 50 years

If the widened disparity since the 2000s is wound back...

Blue: 20.0%  
Red: 32.0%



Case of an annual 0.3% improvement in the indicator

## ○ Growth of elements in the economic indicator (Figures for 2010, with 2000 set as benchmark (=100))

<Average of all municipalities>

	Industry	Retail	Commerce	Agriculture	Employees	Establishments	Income	Financial capability	Average
Indicator	93	96	106	91	99	94	84	114	-
Annual growth (%)	-0.7	-0.4	0.6	-0.9	-0.1	-0.6	-1.7	1.4	-0.3

(Note) Data of municipalities obtained from the Population Census, Census of Manufactures, and Census of Commerce, among others, for 1980, 1990, 2000, and 2010 are synthesized into an indicator to analyze changes over time and correlations. Regional economies are represented by the deviation value of a synthesis index calculated based on statistics of manufacturers, commerce, agriculture, and others. At a value of 50, a regional economy stands at the national average of the past 30 years.

\* "Regional economies in 50 years" represents a case of an annual 0.3% improvement in the economy. (The past 10 years saw an annual 0.3% decline.)