

Mizuho Economic Outlook & Analysis

Medium-term Economic Outlook and Japan's Demographic and Regional Issues
— The World in 2020 as Projected by Mizuho Research Institute —

October 2014

Mizuho Research Institute

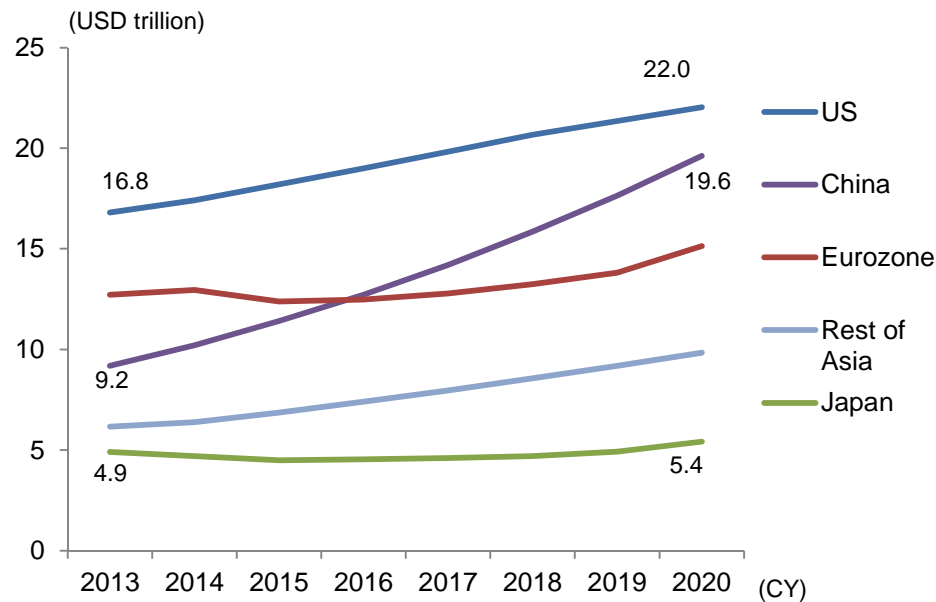
The World in 2020 as projected by Mizuho Research Institute

- In terms of economic size, China will gain a larger presence in 2020, while the weight of Japan's GDP in the world will fall below 5%.
- Global population growth will be led by Asia until 2020. From then onward, the center of population growth will shift to Africa. The Japanese population, having already peaked, will start shrinking at an accelerating pace by 2020.
- There are several risk factors before 2020, including those of a bubble economy, geopolitical turmoil, a sharp slowdown of the Chinese economy, and capital outflow from emerging economies due to US monetary tapering.
- Japan's GDP is expected to reach the government-targeted 600 trillion yen in 2020 due to the synergy of Abenomics and the Tokyo Olympics. Japan will maintain its current account surplus, but its trade balance will remain negative. The goal to bring the primary balance into the black by 2020 will be difficult to achieve.
- In 2020, US monetary policy will return to normal upon completing its monetary exit strategy. Japan and Europe will step forward on their monetary exit strategies. US long-term rates will fall short of 4%, and Japanese and European rates will fall short of 2%. Inflation in Japan, US and Europe will converge at around 2%.

The Chinese economy will gain a greater presence in 2020

- In terms of the weight in global GDP in 2020, China will rise closer to the US, which will still be the world's largest economy. On the other hand, the weights of the eurozone and Japan will fall.
- Japan's global presence will fall, given the stronger dollar to the yen and the relative weakness of Japan's economic growth.
 - Japan must seek ways to gain a greater presence in the world in measures other than the size of its economy.

[Projection of nominal GDP for major countries and regions]



Note: Rest of Asia includes NIEs, ASEAN5 and India.
 Sources: Made by Mizuho Research Institute (MHIRI) based upon data releases by IMF and respective countries and regions.

[Projection of GDP shares for 2020]

Calendar year (CY)	2020 (%)	
	2013	2020
US	22.7	20.1
China	12.4	17.9
Eurozone	17.2	13.8
Japan	6.6	4.9
ASEAN5	2.7	3.3
NIEs	3.1	2.9
India	2.5	2.8

Sources: Made by MHIRI based upon data releases by IMF and respective countries and regions.

The world population in 2020 will increase led by Asia and Africa, while Japan's population will shrink at a faster pace

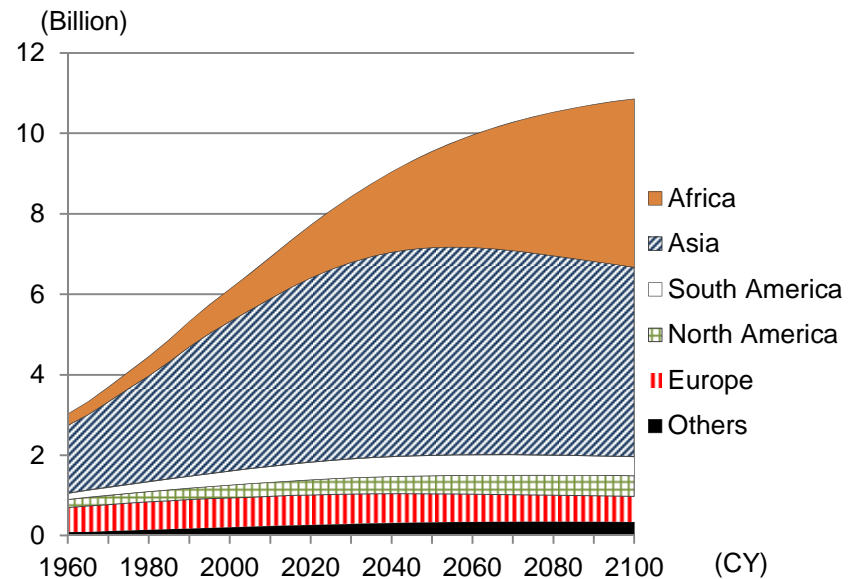
- World population growth will be led by Asia until 2020, to be overtaken by Africa thereafter.
 - In terms of contribution to the world economy, the BRICS will continue to lead growth in the medium term (until 2020).
 - From then on, Asia and Africa will possess long-term potential due to demographic trends.
 - While Japan's population has already peaked, the pace of decline will accelerate to 0.5% per annum in 2020.

[Population by region in 2020]

Calendar year (CY)	2010	2020
World	69.2	77.2
Asia	41.7	45.8
Africa	10.3	13.1
Europe	7.4	7.4
South America	3.9	4.3
North America	3.5	3.8
Others	2.4	2.7
Japan	1.3	1.2

(100 million)

[Projection of population change by region]



Sources: Made by MHRi based upon data releases by the United Nations.

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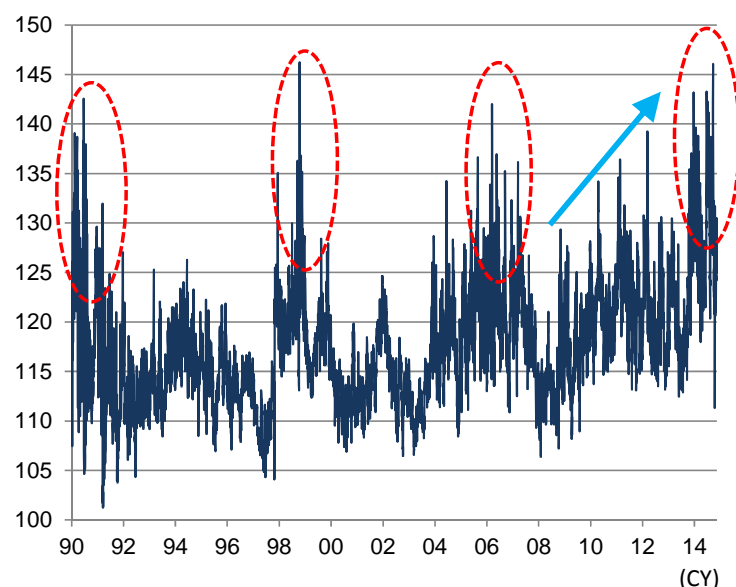
The world economy faces several risk factors up to 2020

○ While a mild recovery of the global economy is expected, there are risks of sharp market decline.

- As seen in the high levels of the Skew Index*, some risk indicators suggest the heightening likelihood of market corrections.
- Given risk factors that include the propensity for a bubble economy stemming from a prolonged liquidity glut, the rise of geopolitical risks, and the possibility of a sharp slowdown in Chinese economic growth, watch closely for global market volatilities and negative changes in the world economy.

* The Skew Index measures the risks of extreme events referred to as “Tail Risks” and “Black Swan Events” (random and extreme market downturns).

[Skew Index]



Note: The value of the Skew Index increases along with the “skewness” of the S&P500 options market.

Source: Made by MHRl based upon the Chicago Board Options Exchange (CBOE).

[Major risk factors and pending issues]

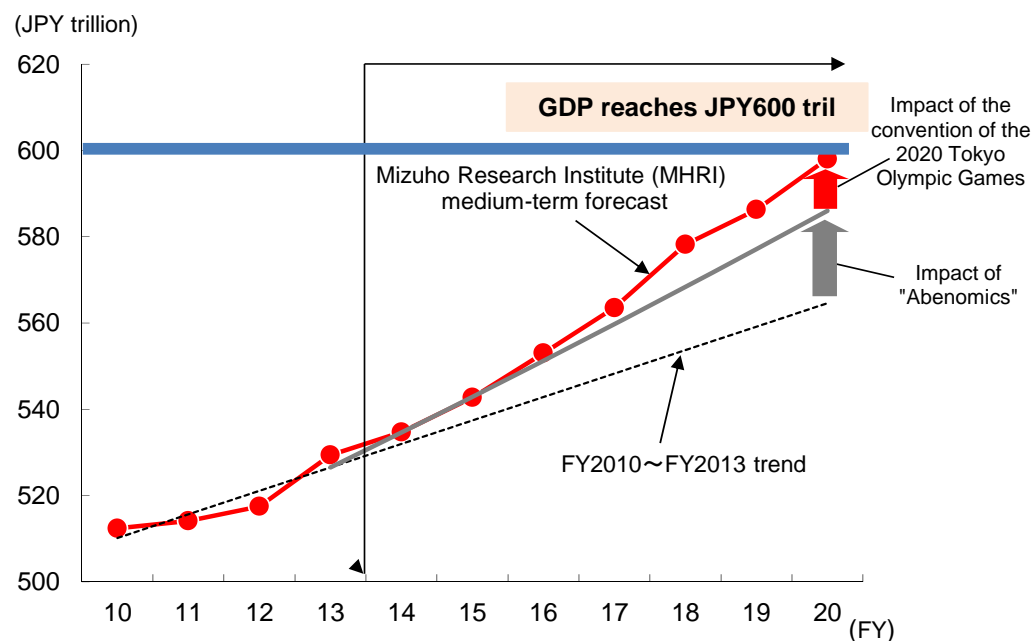
Major risks regarding the global economy
The risks of a bubble due to a prolonged liquidity glut
Geopolitical risks in areas such as the Middle East
China's sharp economic slowdown starting in the real estate market
Capital outflow from the emerging countries accompanying the US monetary exit policy
Weak economic growth and prolonged deflation in the countries of southern Europe
Pending issues
Japan's fiscal problem, full-fledged responses to the shrinking population

Source: Made by MHRl.

In 2020, Japan's GDP should reach the government target, driven by the synergy of Abenomics and the Tokyo Olympic games

- The 2020 Tokyo Olympics will push up real GDP by an annual average of +0.3% pt during the period from 2015 through 2020 (total additional growth of JPY36 trillion).
- With the synergy of Abenomics, the real GDP for FY2020 is expected to reach 600 trillion yen (meeting the government target).
- The “boost” to real GDP is based upon the average boost observed in the former host countries (ex South Korea, China and the UK).

[The impact of the 2020 Tokyo Olympic Games in boosting real GDP]

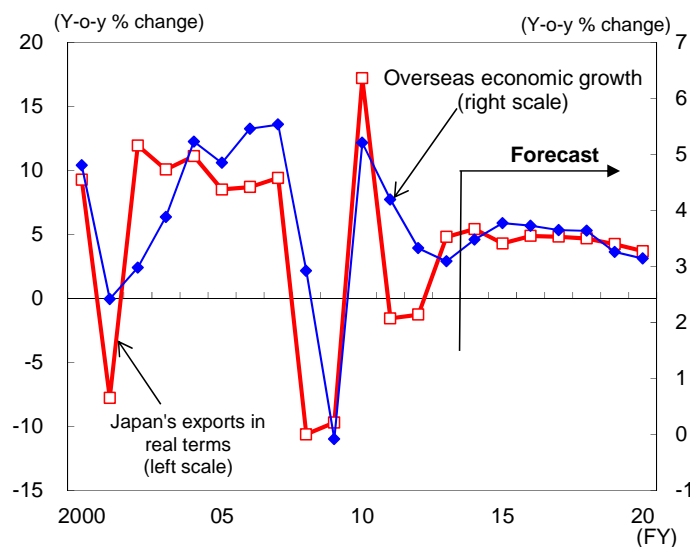


Source: Made by MHRI.

The current account balance for 2020 will remain in the black

- Even though exports will continue to grow at moderate rates, the pace will slow down from 2019 onward.
 - In the late 2010s, exports will grow at 4% to 5% p.a. due to a weaker yen and overseas economic expansion. From 2019 onward, even though the pace of export growth will weaken due to the slowdown of the US economy and a stronger yen, external demand will continue to contribute positively to Japan's economic growth.
 - The trade deficit will decrease, but remain in the red by close to 4 trillion yen in FY2020 owing to import growth on the back of steady domestic demand.
 - With moderate growth in the primary income surplus and decrease in the trade deficit, the current account surplus will recover to about 10 trillion yen in FY2020.

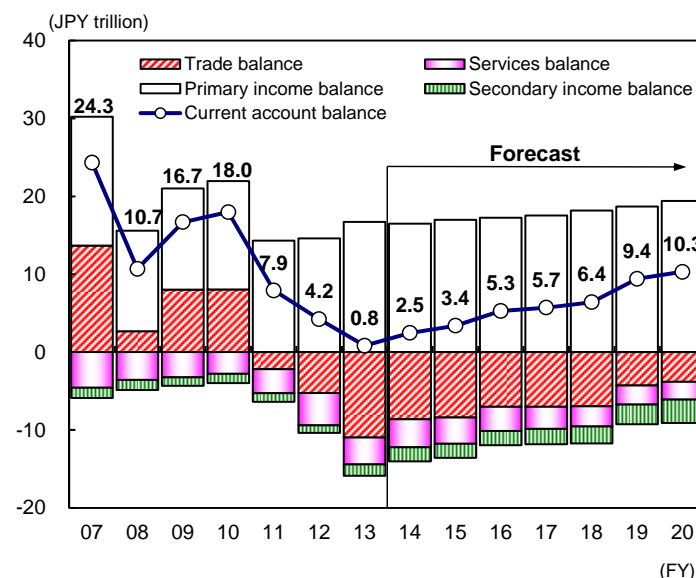
[Overseas economic growth and Japan's exports]



Note: Overseas economic growth represents world growth except Japan (CY). Weighted on the basis of the percentage share for GDP PPP in 2012.

Sources: Made by MHRI based upon data releases by Cabinet Office, IMF, and others.

[Outlook for the current account balance]



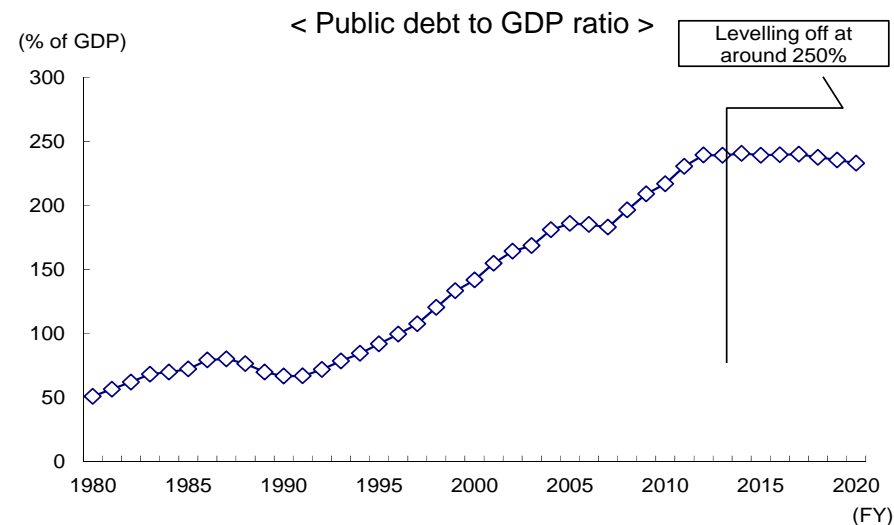
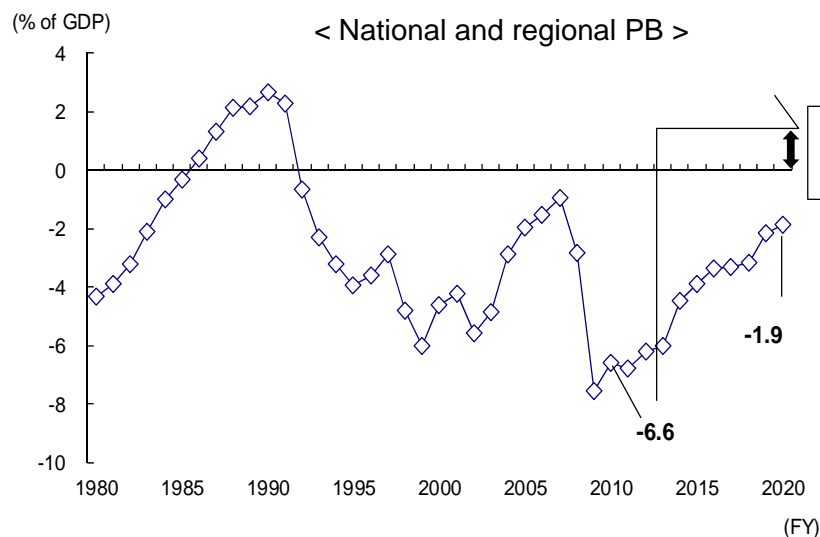
Note: The figures in the graph represent the current account surplus.

Sources: Made MHRI based upon Bank of Japan, *Balance of Payments Statistics*,

It will be difficult to achieve a positive primary balance

- Japan is unlikely to achieve a positive primary balance (“PB”) in FY 2020.
 - According to the medium-term outlook by Mizuho Research Institute, a fiscal deficit of 2% (roughly 11 trillion yen) will remain in FY 2020 even with a consumption tax hike in October 2015 (8% to 10%) and another hike in FY 2019 (10% to 12%).
 - The public debt to GDP ratio will stay flat at about 250%.
 - In order to bring the primary balance into the black solely through consumption tax increases, the tax rate will have to be raised to 15%.

[Medium-term estimates for the primary balance and public debt]



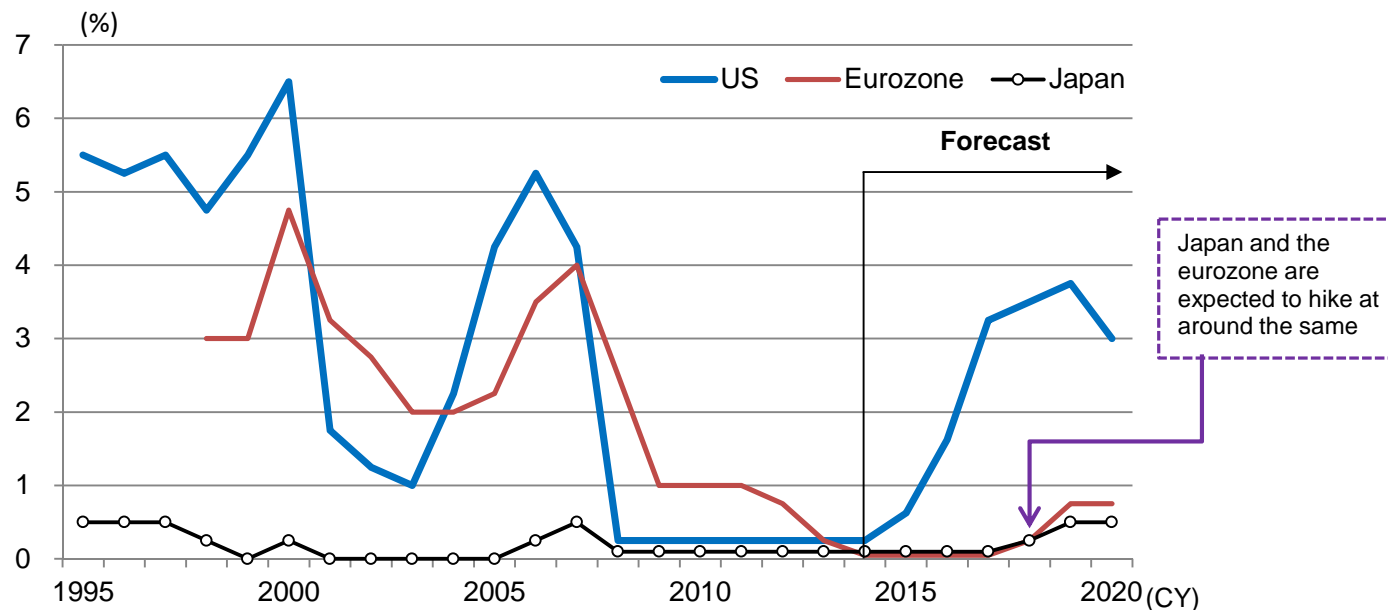
Notes:

1. PB is calculated taking into consideration the central and regional governments in the SNA (excl. social security funds). In the same way as computed by the government, items such transfers from the Fiscal Investment and Loan Program (FILP) special account are excluded.
 2. Policy assumptions are as follows.
 - Consumption tax rate: After the scheduled hike (by 2%) in October 2015, another hike (by 2%) in April 2019 is assumed. A reduced tax rate is assumed to be applied on food items starting in October 2015.
 - Corporate tax rate: Reduction by 2% in April 2015, April 2017 and April 2019. The effective tax rate in FY2020 will be level with that in Germany at 29.64%.
- Sources: Estimates by Mizuho Research Institute (MHRI).

By 2020, US monetary policy will return to normal upon completing its monetary exit strategy. Japan and Europe will start their own exit strategies

- The US will raise its interest rate in late 2015. While Japan and Europe is expected to raise rates around the same time, the pace of increase is expected to be slower than the past.
 - In consideration of recovery from a balance sheet adjustment, the pace of US rate hikes will be about half of what it used to be, most likely peaking at the 3%-level.
 - Japan and Europe will take a cautious stance in raising interest rates upon ensuring that there is no risk of reverting to a deflationary environment.
 - Japan's interest rate hike may not be the last in the series.

[Outlook for policy rates in Japan, US and Eurozone]

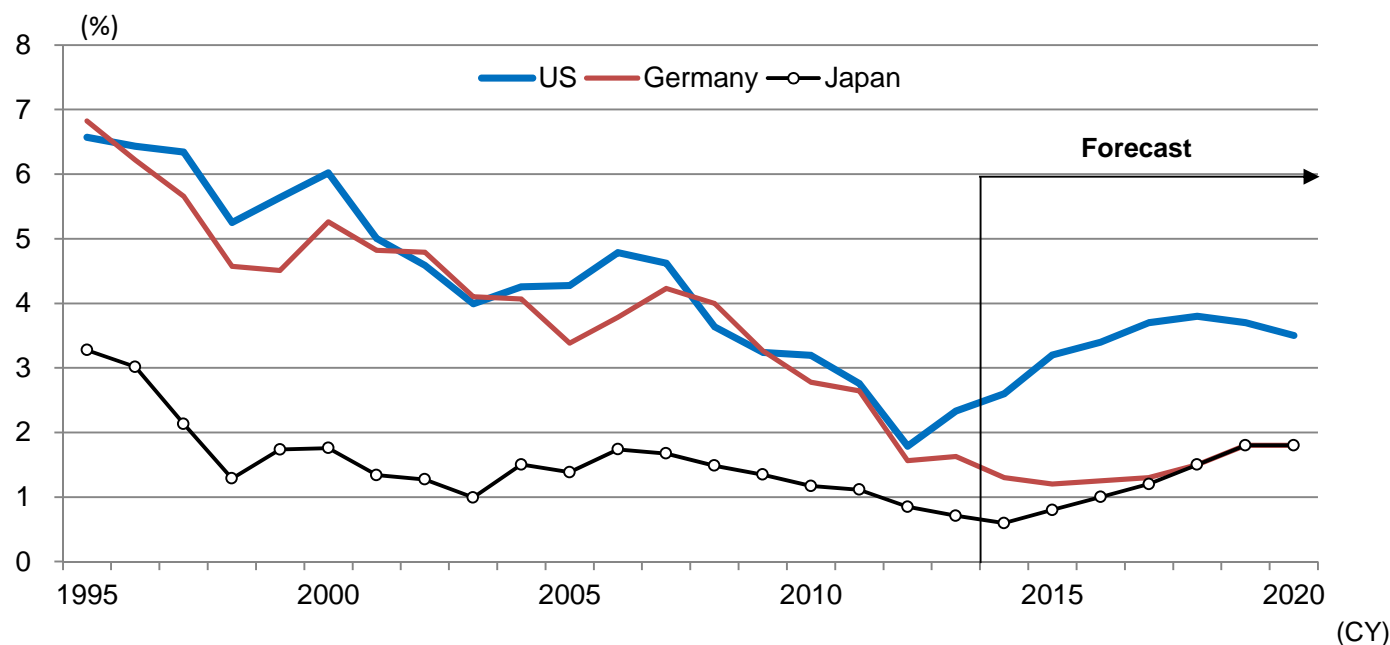


Sources: Made by MHRI based upon Bloomberg.

In 2020, long-term rates will fall short of 4% in the US, and short of 2% in Japan and Europe

- Reflecting the cautious stance of the respective central banks, the pace of rate increases in the US, Japan and Europe will be moderate.
- Given the expansion of central bank balance sheets, the purchase of government bonds using the liquidity glut is keeping the rise of interest rates subdued.
 - The rise of Germany's long-term interest will be slow, reflecting the decrease of the outstanding balance of German government bonds due to the ECB's reinforcement of monetary easing and improvement of fiscal balance.

[Outlook for long-term rates in Japan, US and Germany]



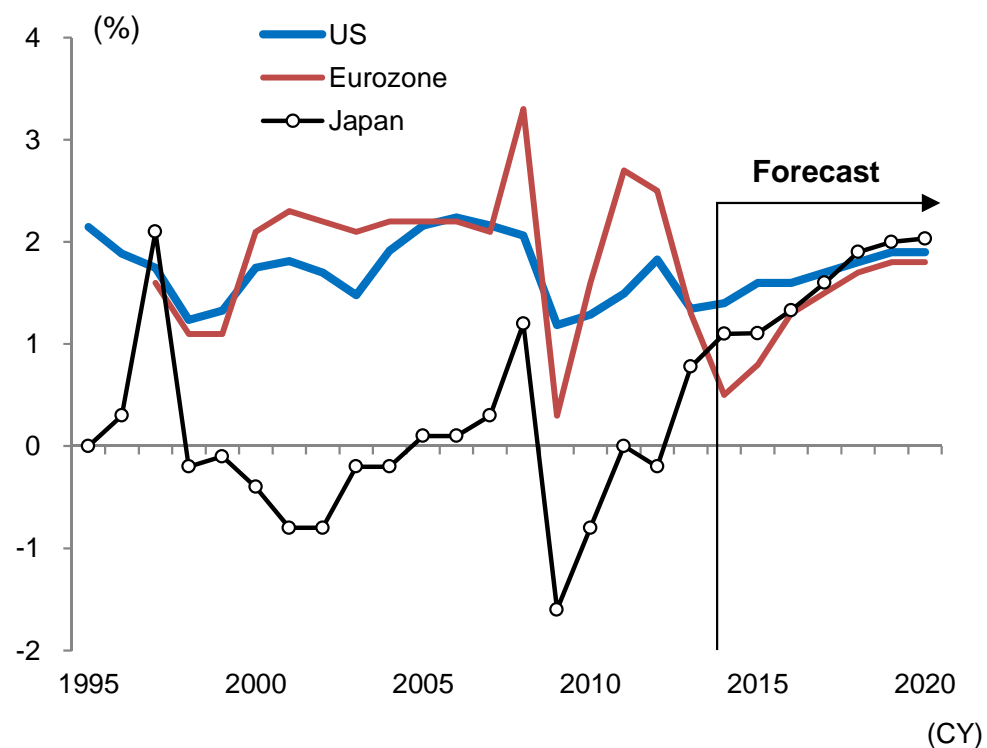
Note: Yields on the 10-year government bonds of the three countries
Sources: Made by MHRI based upon Bloomberg.

By 2020, price levels in Japan, US and Europe will converge at around 2%

○ Prices in Japan, US and Europe will rise gradually.

- On the back of accommodative monetary policies, consumer prices will converge at around 2% as targeted by the central banks.

[Outlook on prices (Japan, US, Eurozone)]



Notes: Price indices as watched by respective central banks.

Japan: year-on-year CPI (general, excluding fresh foods, discounting the effect of the consumption tax hike), US: year-on-year PCE deflator (general, excluding energy and foods),

Eurozone: year-on-year CPI (general). Estimates by Mizuho Research Institute

Sources: Made by MHRI based upon Ministry of Internal Affairs and Communications, US Department of Commerce, and Eurostat.

Growth rates will pick up in the second half of the 2010s, but run out of steam towards the end of the forecast period

[Outlook on the global economy (as of October 2014)]

(Y-o-y % change)

Calendar year	2012 (Actual)	2013 (Actual)	2014 (Forecast)	2015 (Forecast)	2016 (Forecast)	2017 (Forecast)	2018 (Forecast)	2019 (Forecast)	2020 (Forecast)
Global real GDP	3.1	3.2	3.4	3.7	3.6	3.6	3.6	3.2	3.0
Total of Japan, US, Eurozone, Asia	3.2	3.3	3.4	3.8	3.7	3.7	3.7	3.2	3.1
Japan, US, Eurozone	1.2	1.2	1.5	2.1	2.1	2.2	2.2	1.7	1.5
US	2.3	2.2	2.1	2.9	2.8	2.6	2.5	1.7	1.5
Eurozone	-0.6	-0.4	0.8	1.2	1.5	1.5	1.6	1.5	1.4
Japan	1.5	1.5	1.2	1.4	1.3	2.1	2.3	2.0	1.7
Asia	6.1	6.1	6.1	6.1	5.9	5.8	5.8	5.4	5.3
NIEs	2.0	2.8	3.4	3.4	3.2	3.1	3.0	2.2	2.1
ASEAN5	6.2	5.2	4.6	5.1	5.1	5.1	5.1	4.7	4.7
China	7.7	7.7	7.5	7.3	7.0	6.7	6.6	6.2	6.0
India	4.8	4.7	5.0	5.1	5.2	5.4	5.6	5.6	5.6
Japan (FY)	0.7	2.3	0.5	1.5	1.7	2.0	2.7	1.3	1.9

Notes: 1. The total of the forecast area is calculated upon the 2012 GDP share (PPP) by the IMF.

2. For Japan, the figures in the chart are based upon the assumption that consumption tax hikes would be implemented in October 2015 and April 2019 (raising the tax rate by 2% on each occasion) (assumptions as of October 2014).

Sources: Made by MHRI based upon releases by the IMF, HAVER Analytics, CEIC and statistics of the respective countries and areas.

Summary: Japan in 2020 and pending issues

<Japan in 2020>

- Growth achieved (GDP to reach the government-targeted JPY600 trillion)
 - Deflation dispelled (CPI to reach 2% target in 2019)
 - Current account balance to stay in the black
 - The 2020 Tokyo Olympic Games will be held
- But,
- Primary balance to stay in the red
 - Population to start decreasing at an accelerating rate in 2020 (roller-coaster plunge)

The period until 2020
is the last chance

The importance of acting
on measures in the grace
period until 2020

<Pending issues>

- Fiscal problem
- Growth strategy
- Portfolio rebalancing by financial institutions
- Fully-fledged responses to the shrinking population

 **The next section**

Current status, outlook, and issues for Japan's population and regional areas – summary

1. Medium- to long-term demographic trends

- Japan's population will decrease at a faster pace, with the possibility to fall below 50 million in 2100.
- The decline will be conspicuous in regional areas (regions other than the three metropolitan areas), with the Osaka area expected to follow the trend.
- The demographic decline will serve as a drag upon growth, both from the demand and supply sides. The impact will be felt in regional communities.

2. Status of regional areas and the limitation of conventional policy responses

- The major problem will be the outflow of young people, especially women. The provision of employment for highly educated women is needed.
- Neither public works, attraction of factories, revitalization measures for regional centers nor existing economic zones will be sufficient to regenerate regional communities.

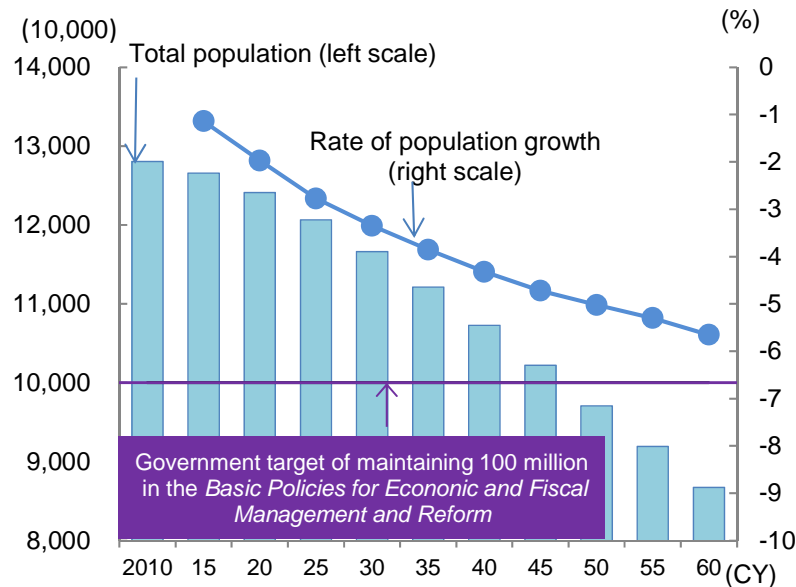
3. Direction of regional areas under demographic decline

- Placing emphasis upon the regeneration of regional areas, the reshuffled Abe administration established a “Headquarters for Overcoming Population Decline and Vitalizing Local Economy” and a minister in charge to deal with the issue
- However, given the ongoing demographic decline, conventional revitalization measures are unlikely to deliver significant results.
- The key is “two-city compactification” (centrally located residences, creation of megacities) drawing on the power of population centralization.

The Japanese population will fall below 50 million in 2100

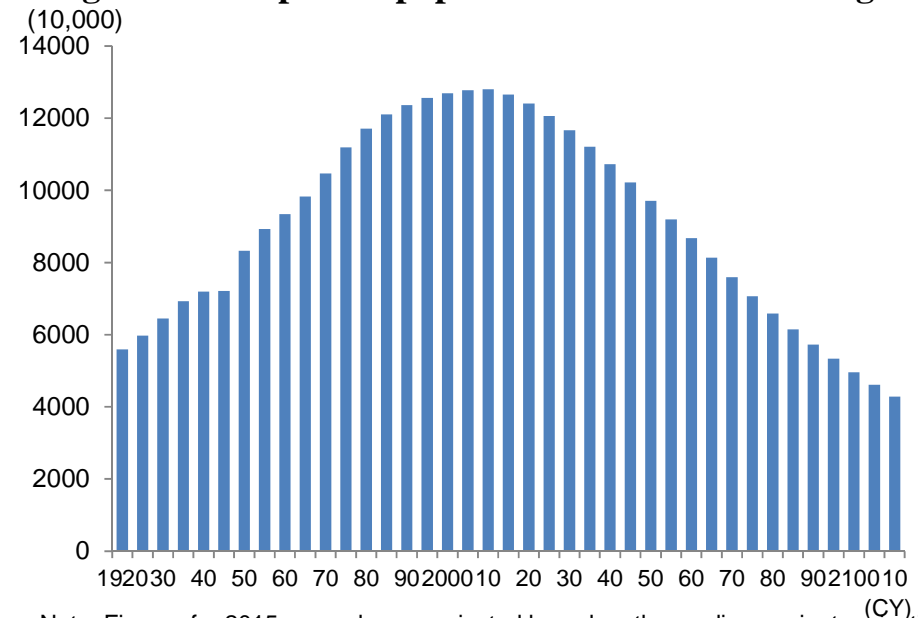
- Japan's population has entered a phase of population decline after peaking in 2008. From then onward, the pace of decline is accelerating.
- As of 2010, Japan was the 10th most populous country in the world. However, given the rapid decline, the population is expected to fall below 50 million in 2100. Not only will many of the developing nations in Asia and Africa outpace Japan in terms of demographic size, but so will the UK which is about half as large as Japan in area.
- From an ultra-long point of view, support toward highly educated women to balance family and work and the acceptance of immigrants are the keys to tackling the population problem.

[Projection of the Japanese population]



Source: Compiled by MHRI from *Population Projections for Japan* (January 2012) by the National Institute of Population and Social Security Research

[Changes in the Japanese population over the ultra-long term]



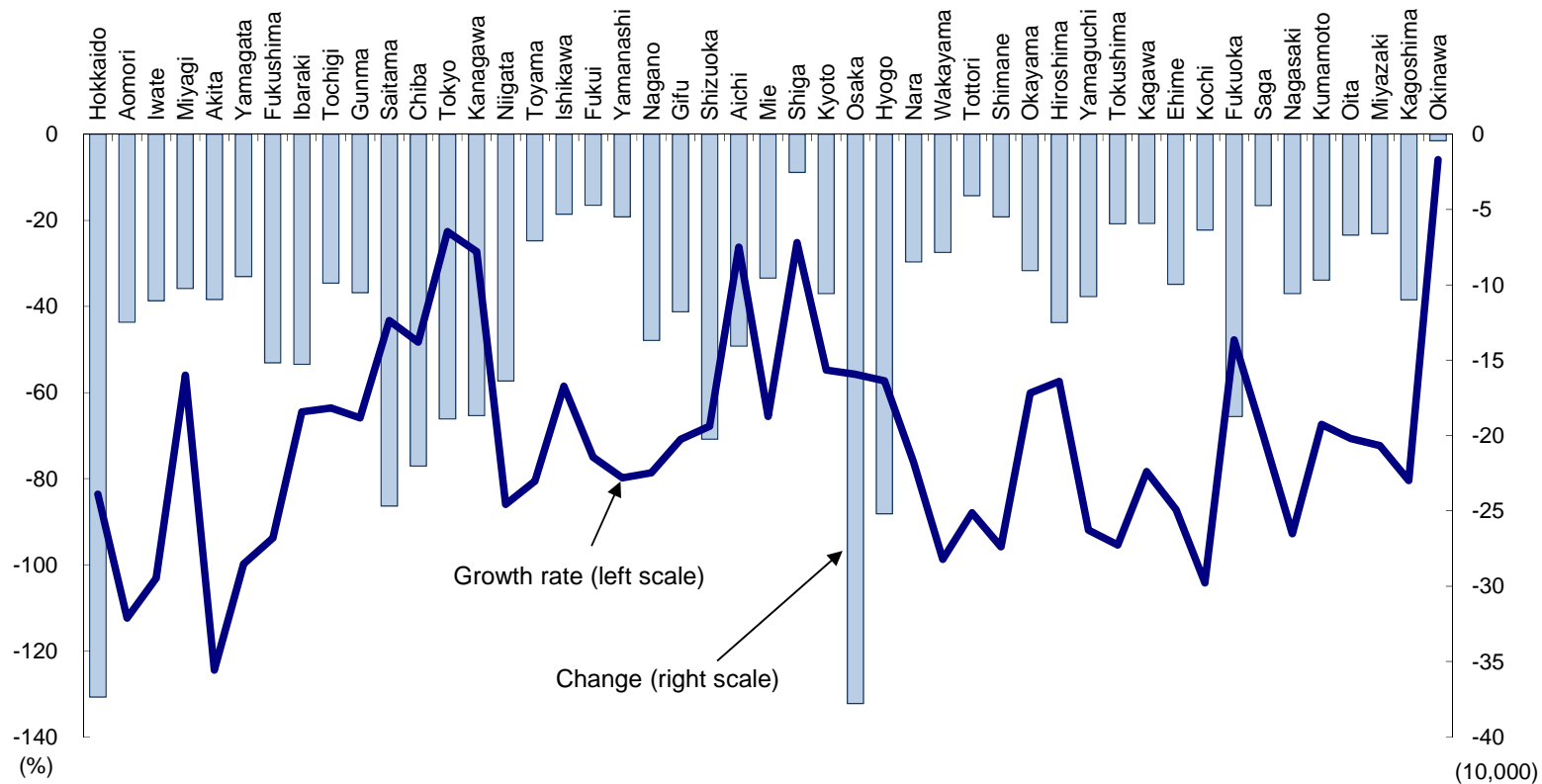
Note: Figures for 2015 onwards are projected based on the medium variant projection of the birth rate and death rate.

Source: Compiled by MHRI from historical *National Census* issues by the Ministry of Internal Affairs and Communications and from *Population Projections for Japan* (January 2012) by the National Institute of Population and Social Security Research

Significant demographic decline in regional areas and the Osaka area

- By 2020, prefectural populations will peak and start to decline, with the exception of Okinawa.
- The pace of decline will be particularly conspicuous in regions other than the three major metropolitan areas. Of the three major metropolitan areas, the Osaka area (Kyoto, Osaka and Hyogo Prefectures) will be subject to a significant demographic decline.

[Population growth rates and changes by prefecture (2010-2040)]

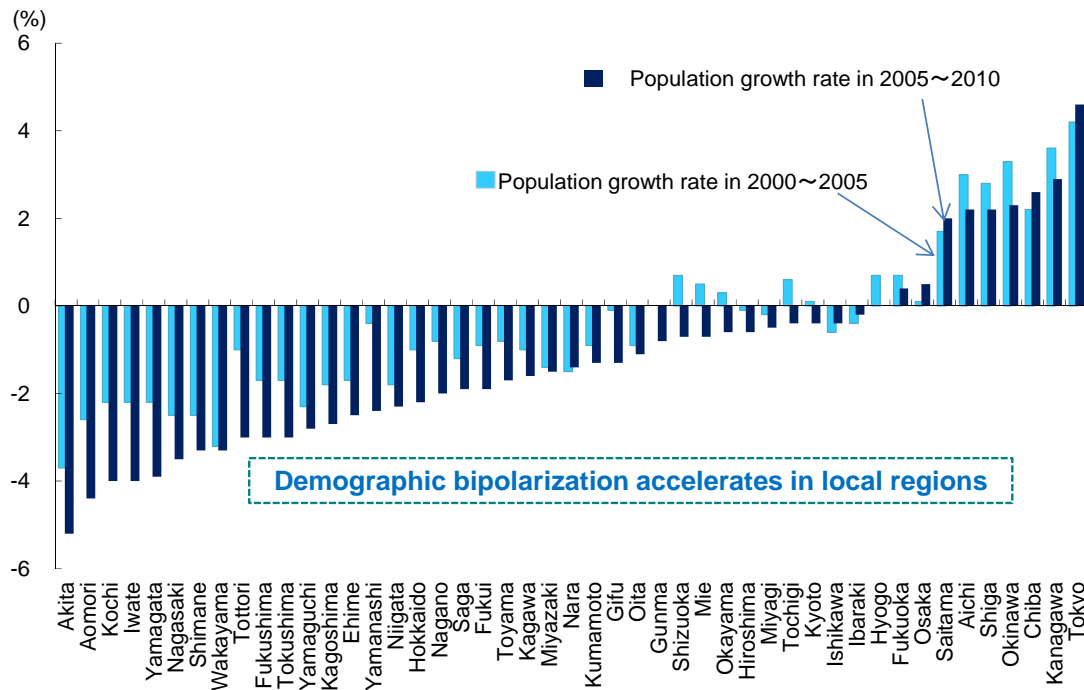


Source: Compiled by MHRI from *Population Projections by Prefecture (estimates as of March 2013)* by the National Institute of Population and Social Security Research.

Conspicuous polarization and population concentration in Tokyo

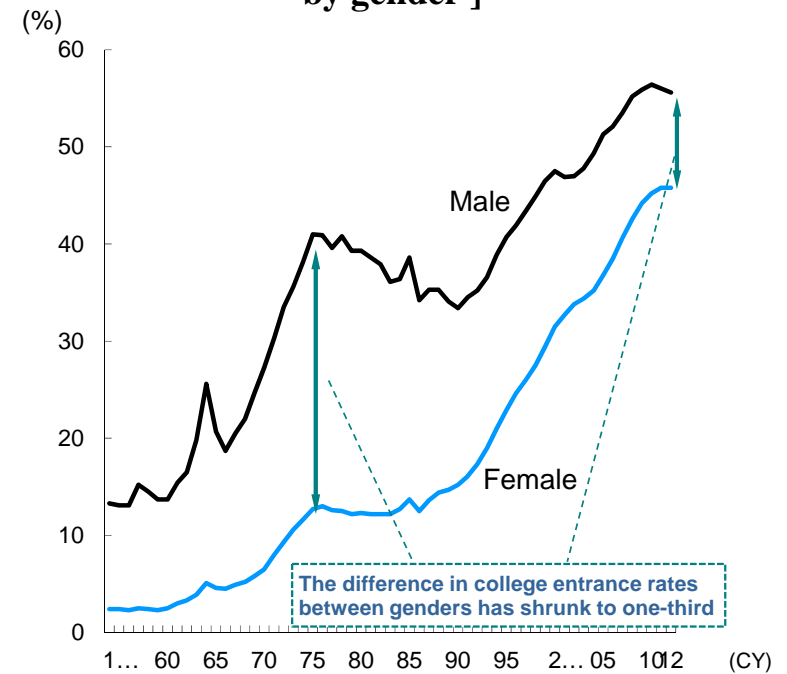
- Demographic trends began to polarize in the late 1990s. Of particular note is the population concentration in the Tokyo area.
 - The most prominent cause of regional demographic decline is the outflow of younger generations, particularly young women.
 - Unrealistic revitalization measures will not create jobs for highly educated young women and will have little effect in preventing the population outflow.

[Changes in population growth rates by prefecture]



Source: Made by MHRI based upon historical *National Census* issues by the Ministry of Internal Affairs and Communications Bureau of Statistics

[Changes in percentage of college-bound youth by gender]



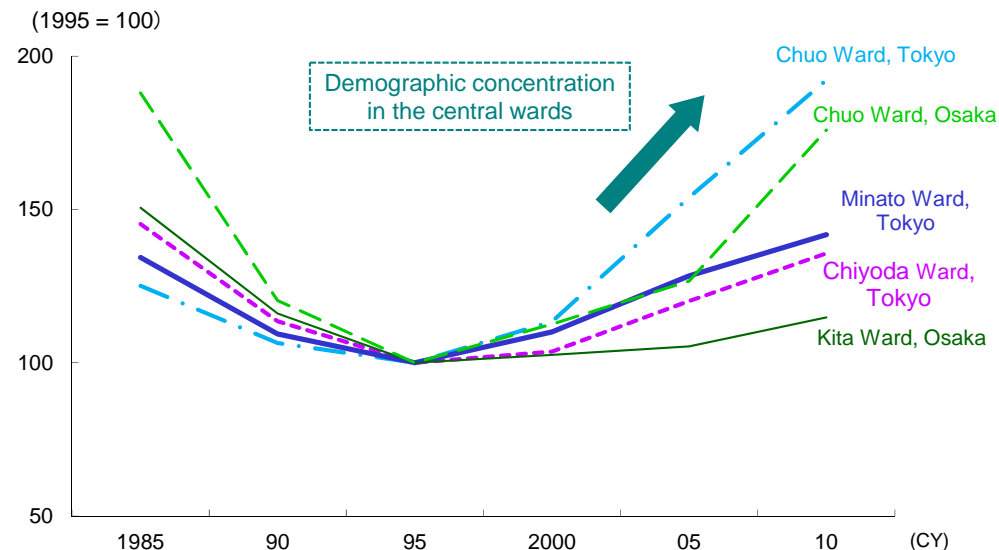
Source: Made by MHRI based upon the *White Paper on Gender Equality (2013)* by the Cabinet Office

Two-city compactification: centrally-located residences

○ In order to capitalize on the current advantages of being one of the world's most populous countries, demographic concentration is needed to promote tertiary industries.

- Building densely-populated residential areas (city centers) and promoting migration will lead to the promotion of service industries for city dwellers.
- Promotion of city migration of the senior population will lead to greater efficiency of public services in medical and nursing care fields and foster the development of businesses tailored to the senior population.
- In city centers, the proximity of work, home and leisure will lead to the promotion of new businesses that draw on around-the-clock urban activities.
- In regional towns facing conspicuous demographic decline, “terminal care of towns,” such as promoting city migration, will possess greater importance than regeneration efforts.

[Demographic shifts in the three central Tokyo wards and two central Osaka wards]

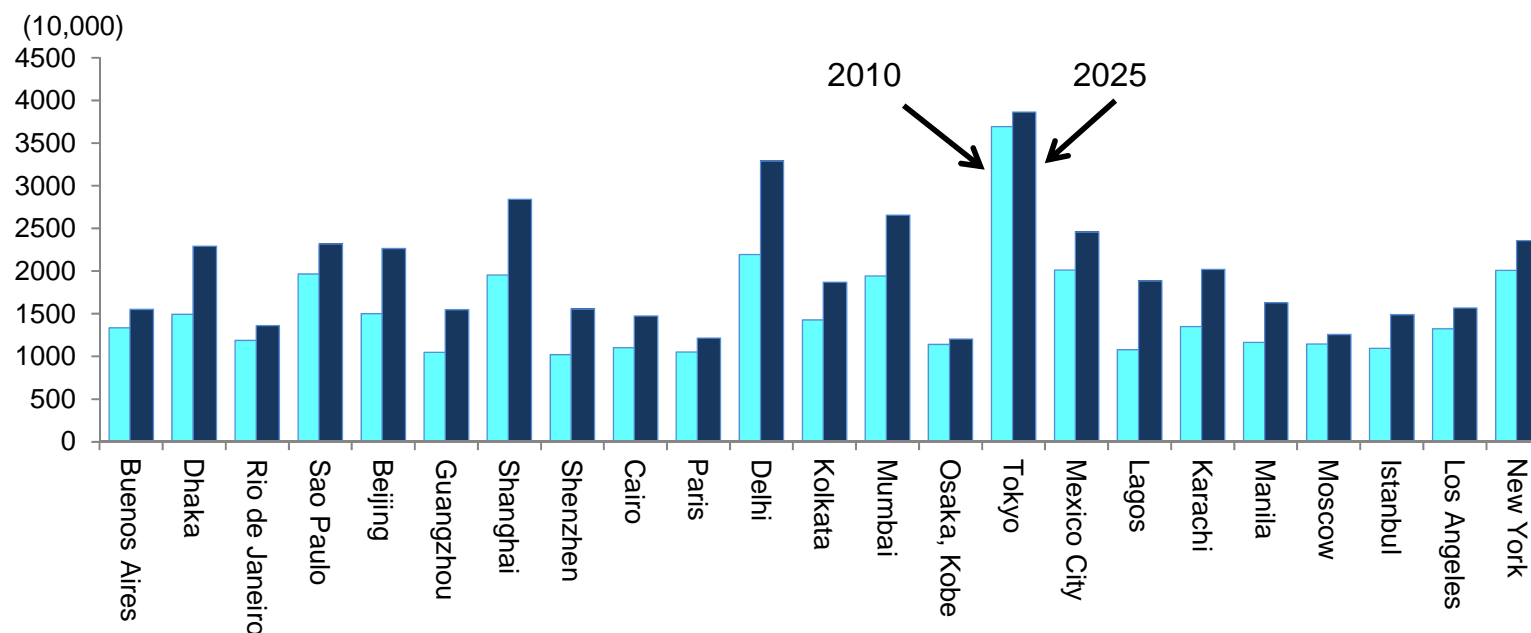


Source: Made by MHRI based upon historical *National Census* issues by the Ministry of Internal Affairs and Communications Bureau of Statistics.

Two-city compactification: brace for international megacity competition

- Emphasis should be placed on the promotion of megacities to prepare for global inter-city competition.
 - Conventional regional reactivation measures have emphasized “equal development” and focused little on metropolitan areas. Conflicts among prefectures and between prefectures and major cities have prevented the development of megacities other than Tokyo. The policy for national strategic zones should be applied to the development of megacities.
 - For example, it is vital to designate one to two major cities for each bloc comprised of a few prefectures (about 10 such cities across the nation) and develop them into megacities with global competitiveness.
 - “Regional core cities” promoted by the government (about 60 other than the three major metropolitan areas) are not promising due to demographic decline.

[Population of global megacities]

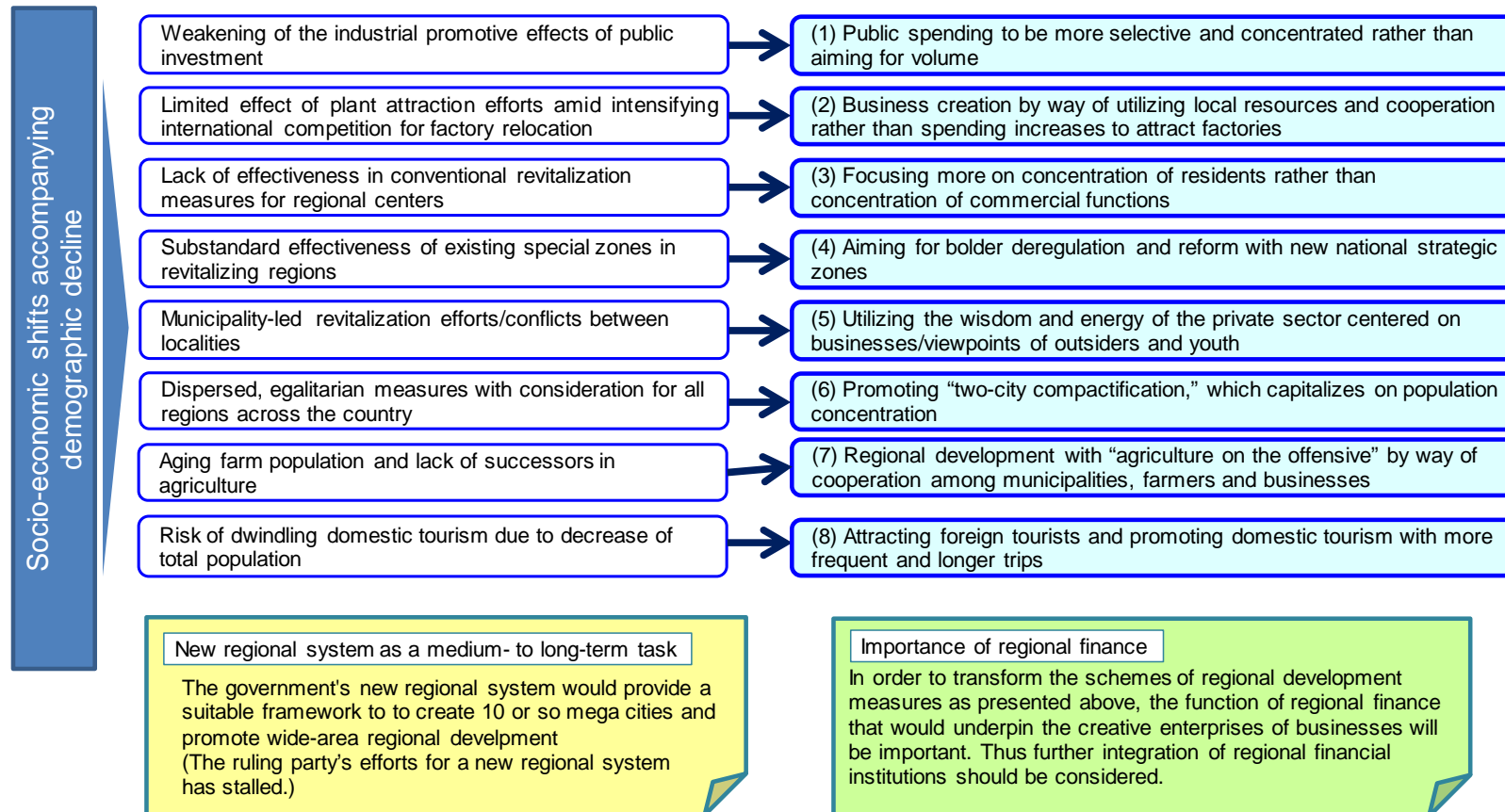


Source: Made by MHRI based upon *Population Projections by Prefecture (2013)* by the National Institute of Population and Social Security Research.

Eight essential policies for regional regeneration

- For the revitalization of regional areas, policies should be aimed at bringing out the best in concentration, accumulation and the power of the private sector.

[Eight implications obtained from the evaluation of conventional regional revitalization measures, and new regional system and regional finance as important themes]



Source: Made by MHRI.

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