津田塾大学
TSUDA UNIVERSITY

Adapting to New Challenges
- Japanese Case -

34th ASSA Board Meeting
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Udonthani, Thailand

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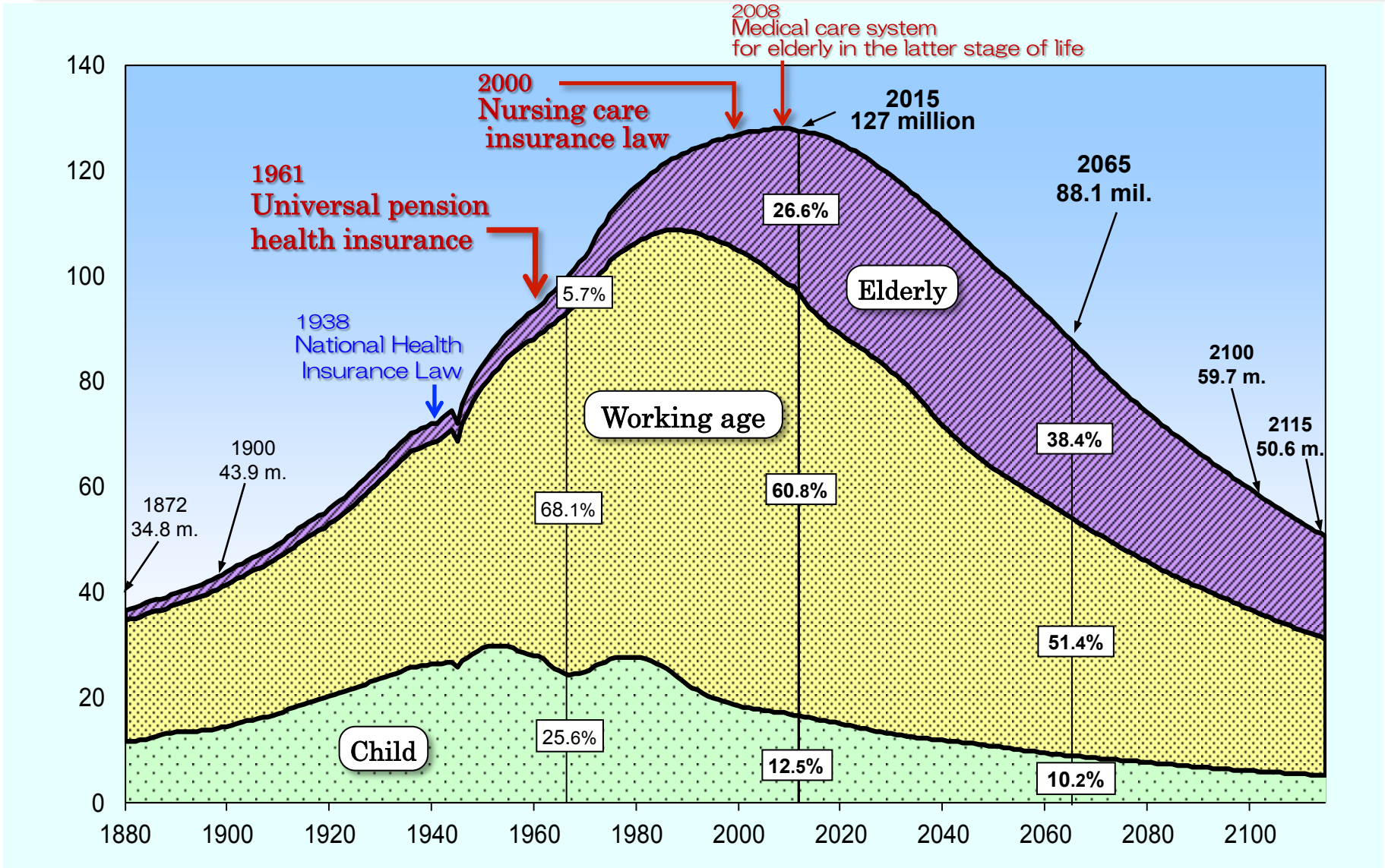
JAPAN

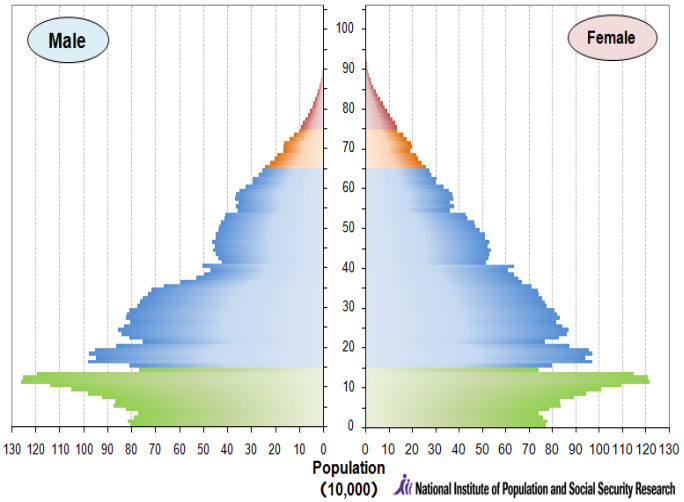
Trends of Japan's population and age structure:
1880 - 2110



Source: Ministry of Internal Affairs and Communications, Statistics Bureau, "*Population Census*," "*Population Estimates*", National Institute of Population and Social Security Research(2017), *Population Projection for Japan:2016-2065*.

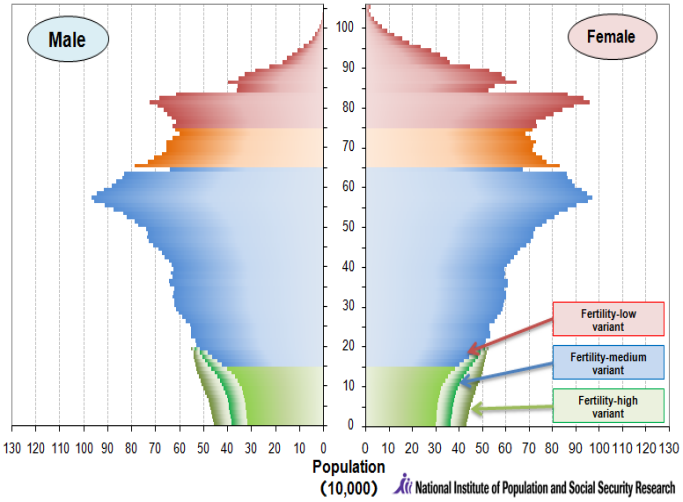
Population “Pyramids”

1960



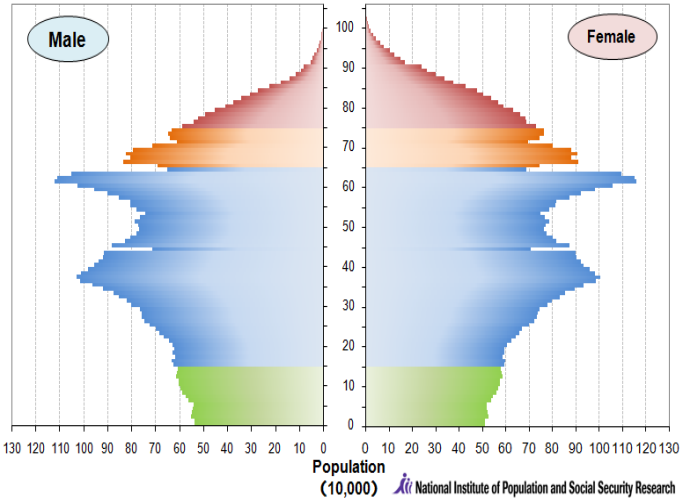
Sources: Census (1920-2010) and "Population Projections for Japan:2011-2060"(2015-2060)

2030



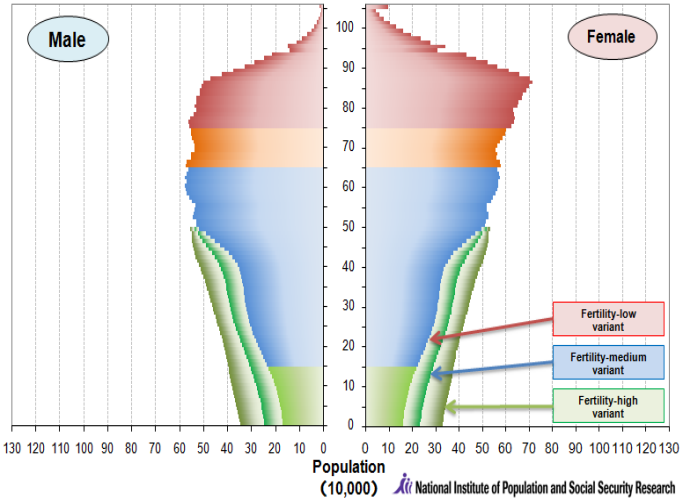
Sources: Census (1920-2010) and "Population Projections for Japan:2011-2060"(2015-2060)

2010



Sources: Census (1920-2010) and "Population Projections for Japan:2011-2060"(2015-2060)

2060



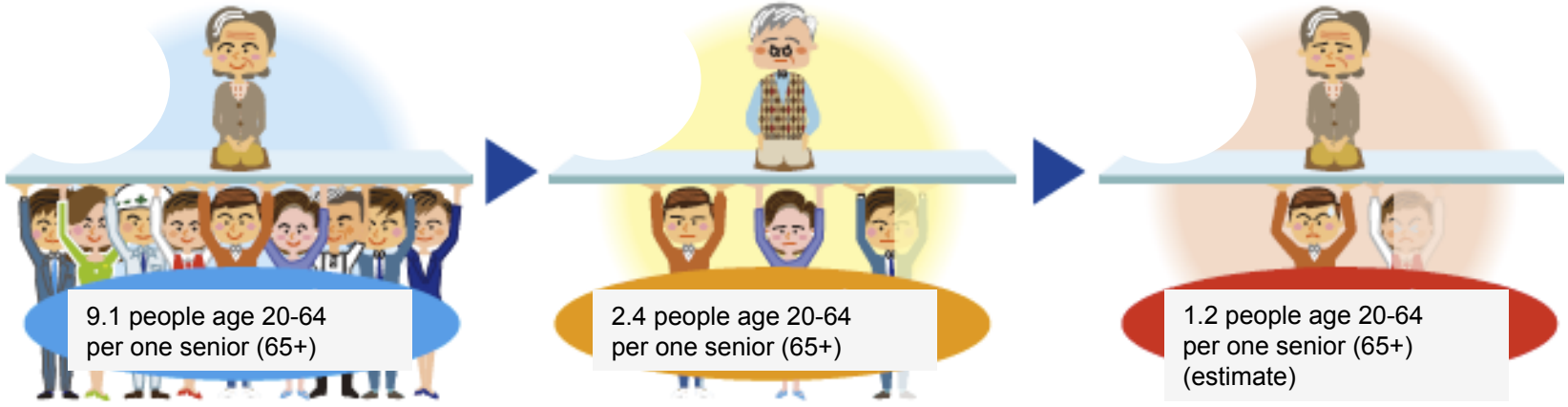
Sources: Census (1920-2010) and "Population Projections for Japan:2011-2060"(2015-2060)

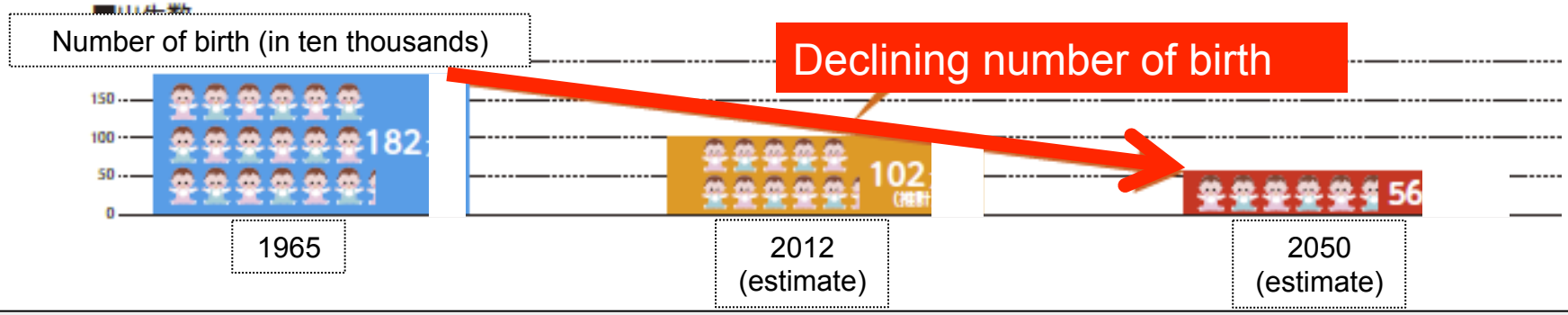
Increased burden on working generation's shoulders

Progress of aging

Concern for the burden of tax and social security by the younger generation raised the public support for "Comprehensive Reform of Tax and Social Security", initiated by the government in late 2000's.

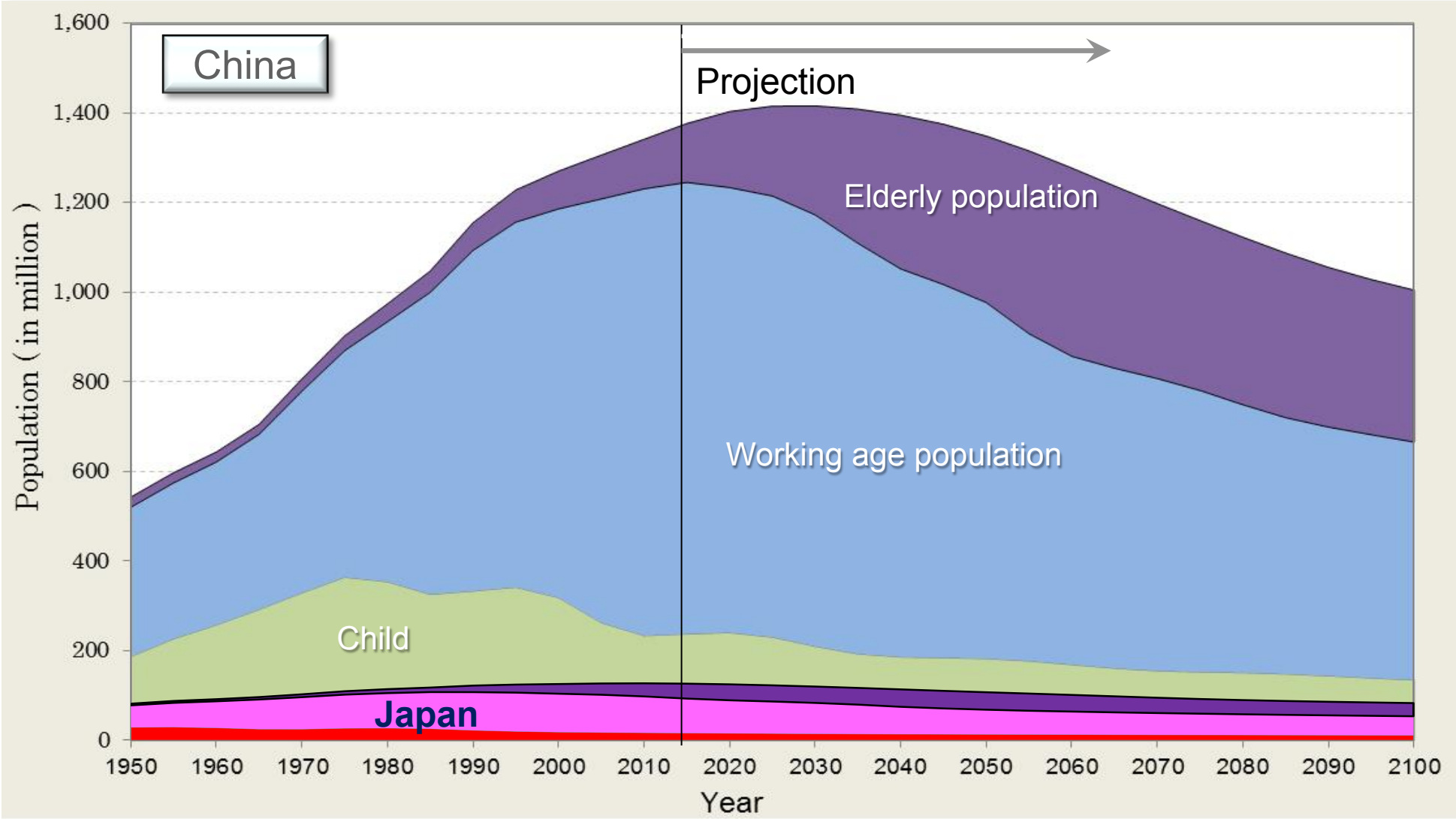
1965	2010	2050
Celebrating longevity with "victorious toss"	"Senior-Lifting" gymnastic exercise	Piggyback ride by a senior on the shoulder of one young





As for the public pension, however, the major "overhaul" from actuarial point of view, including the introduction of the "macroeconomic indexation", has already been introduced in 2004 reform. Today's topic, "raise of the eligibility age" has already been introduced in a gradual manner **before** the 2004 reform.

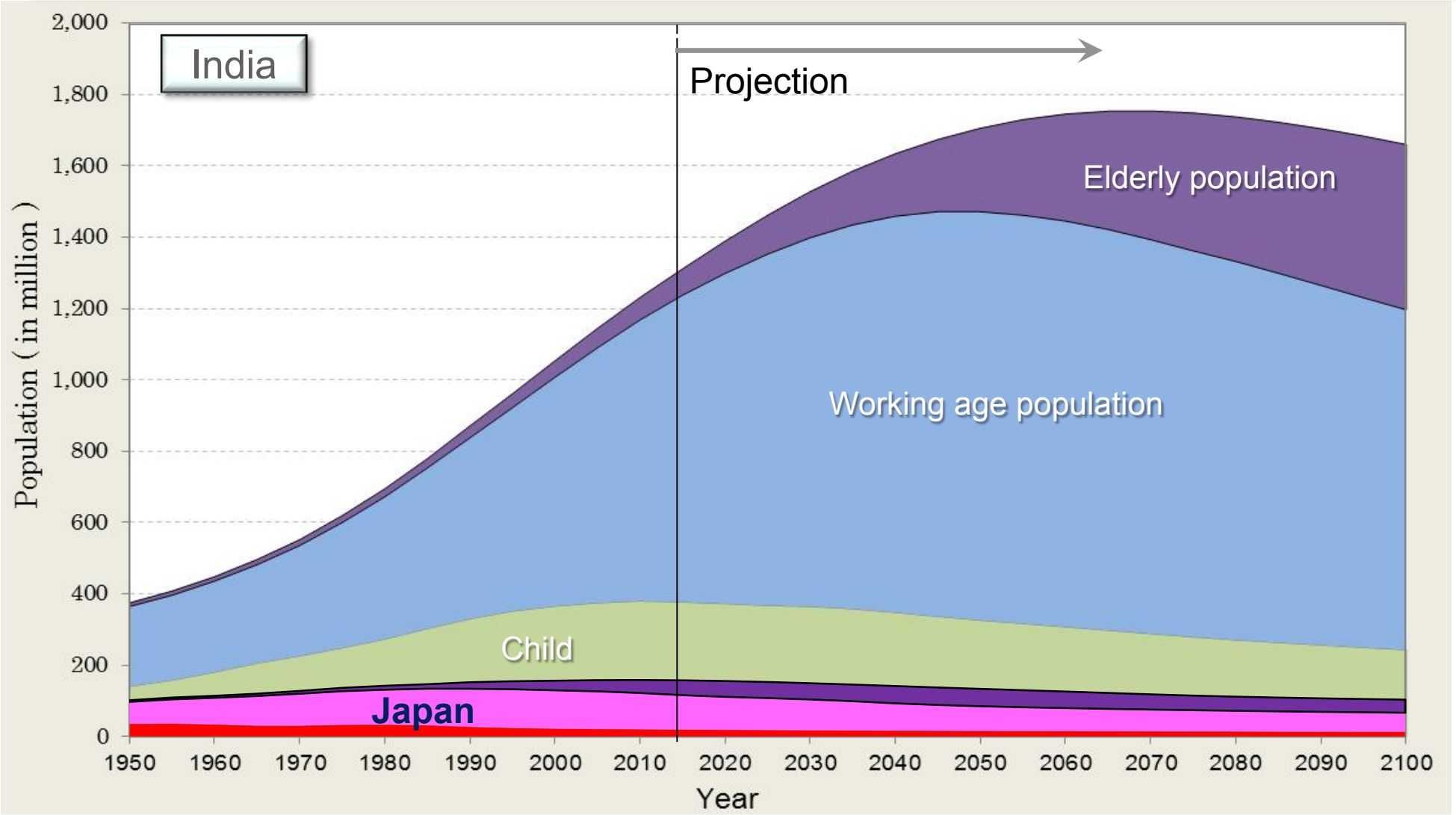
Population trends by age group in China : 1950-2100



Sources: United Nations (2015), *World Population Prospects: The 2014 Revision*. Statistics Bureau, *Census*, National Institute of Population and Social Security Research(2012), *Population Projection for Japan:2011-2060.*

From: Joseph A. McFalls, Jr. *Population: A Lively Introduction. Third edition*. Population Reference Bureau 53(3); 1998: 38

Population trends by age group in India : 1950-2100



Sources: United Nations (2015), *World Population Prospects: The 2014 Revision*. Statistics Bureau, *Census*, National Institute of Population and Social Security Research(2012), *Population Projection for Japan:2011-2060.*

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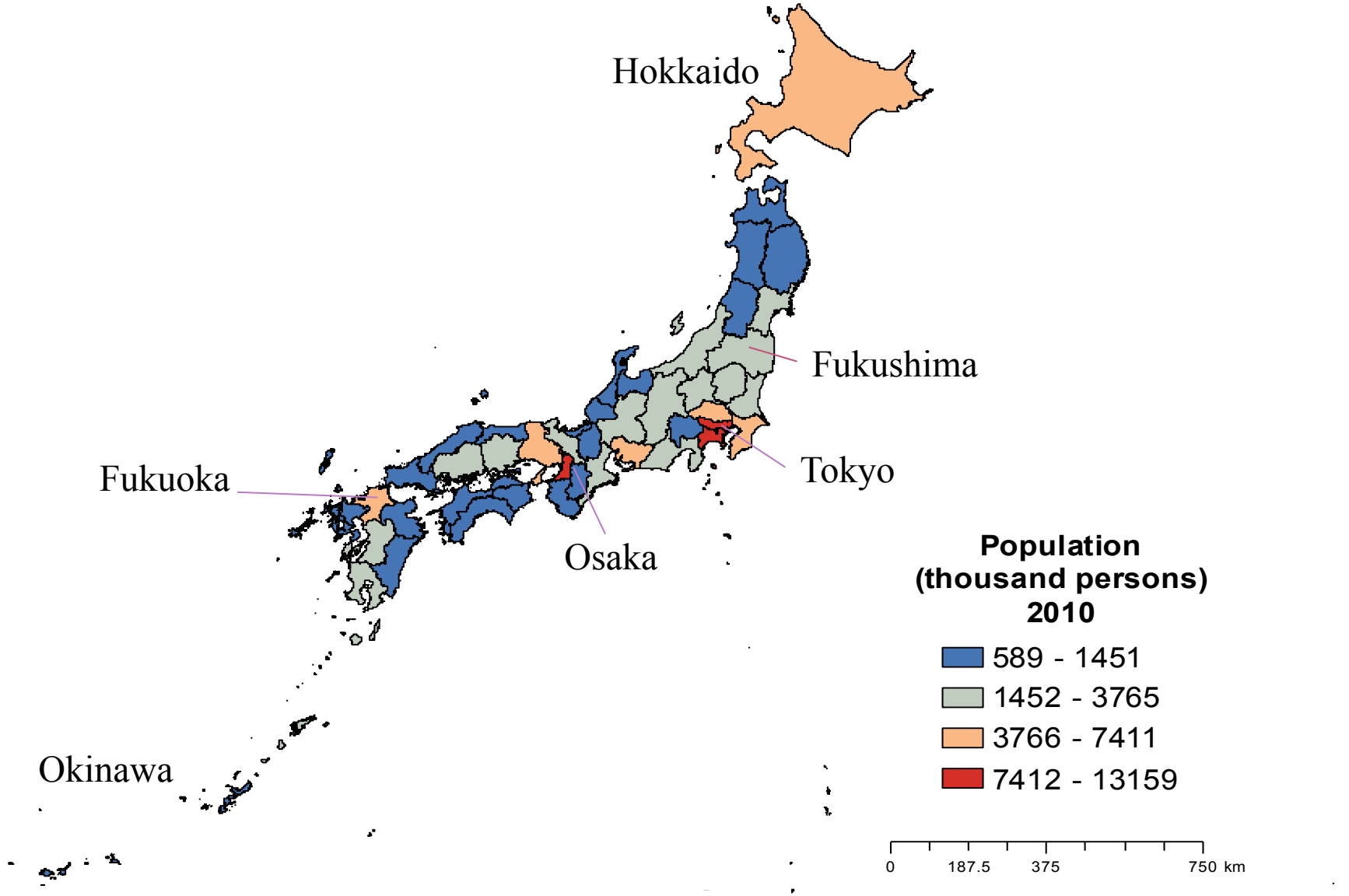

(source) Ministry of Internal Affairs and Communications(2010)*Census 2010*.

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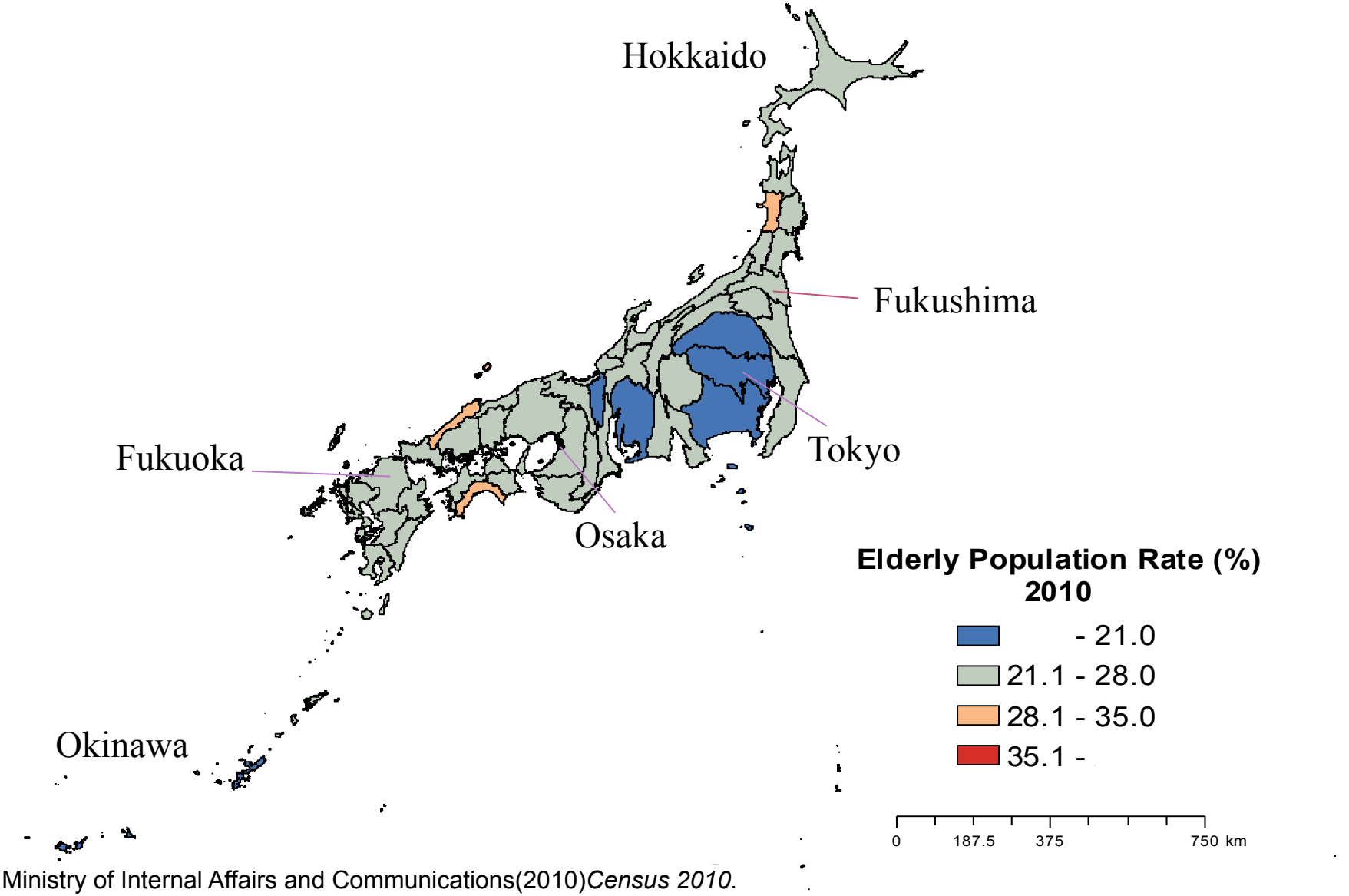
2010



(source) Ministry of Internal Affairs and Communications(2010)*Census 2010.*

*The Cartogram (based on Total Population 2010) is created using the Gastner-Newman method in ArcGIS

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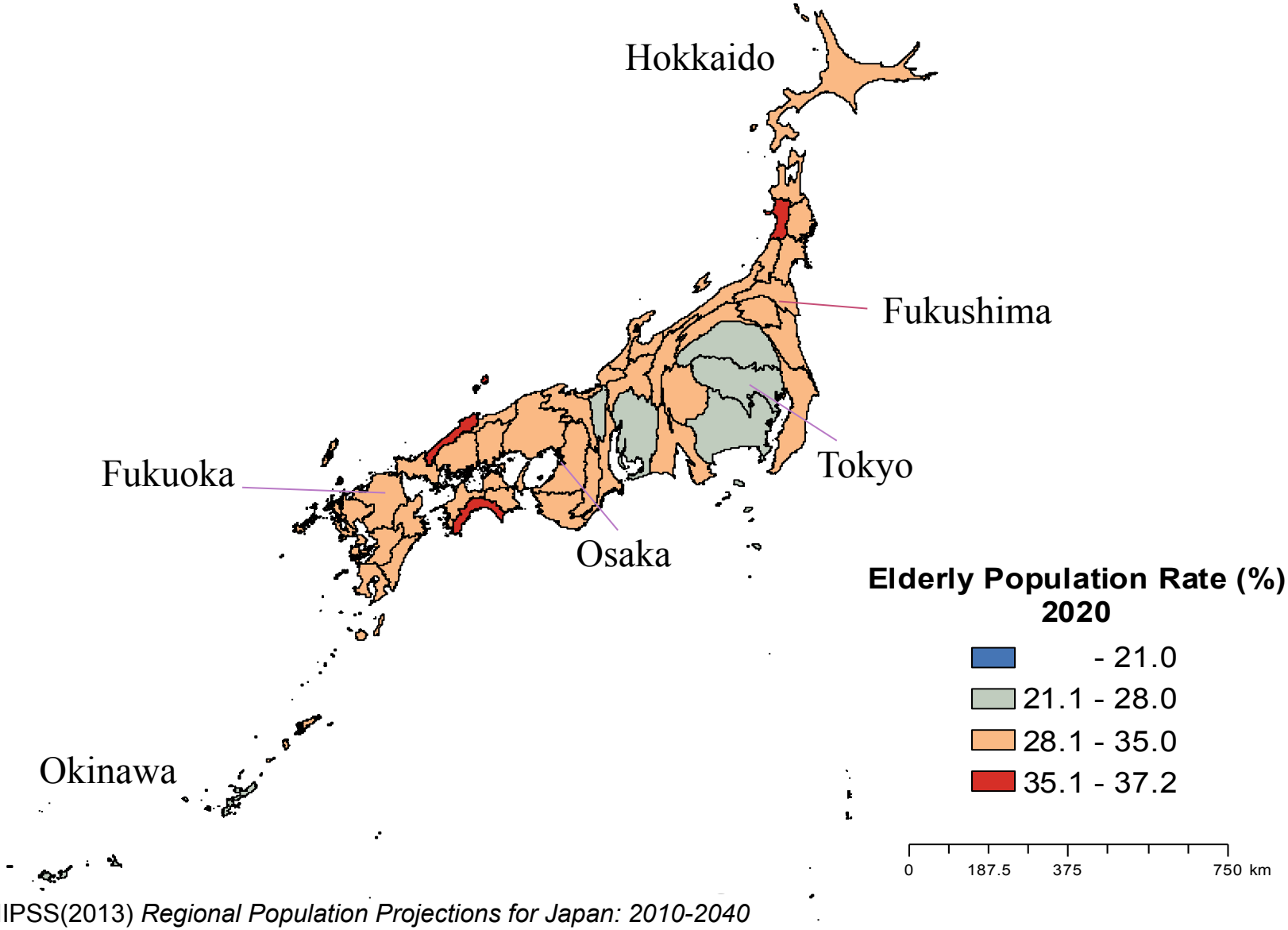
2020



(source) NIPSS(2013) *Regional Population Projections for Japan: 2010-2040*

*The Cartogram (based on Total Population 2020) is created using the Gastner-Newman method in ArcGIS

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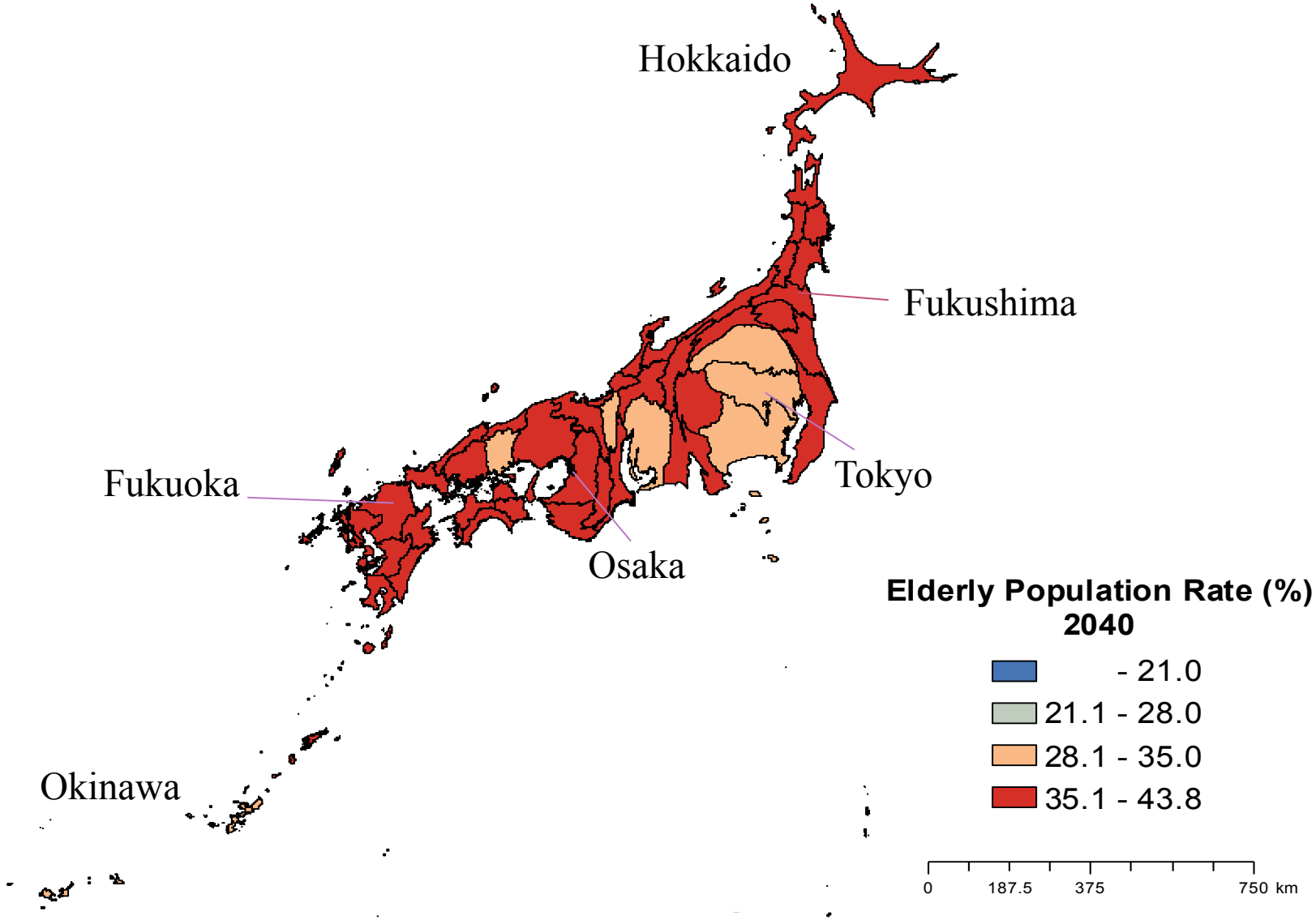
2040



(source) NIPSS(2013) *Regional Population Projections for Japan: 2010-2040*

*The Cartogram (based on Total Population 2040) is created using the Gastner-Newman method in ArcGIS

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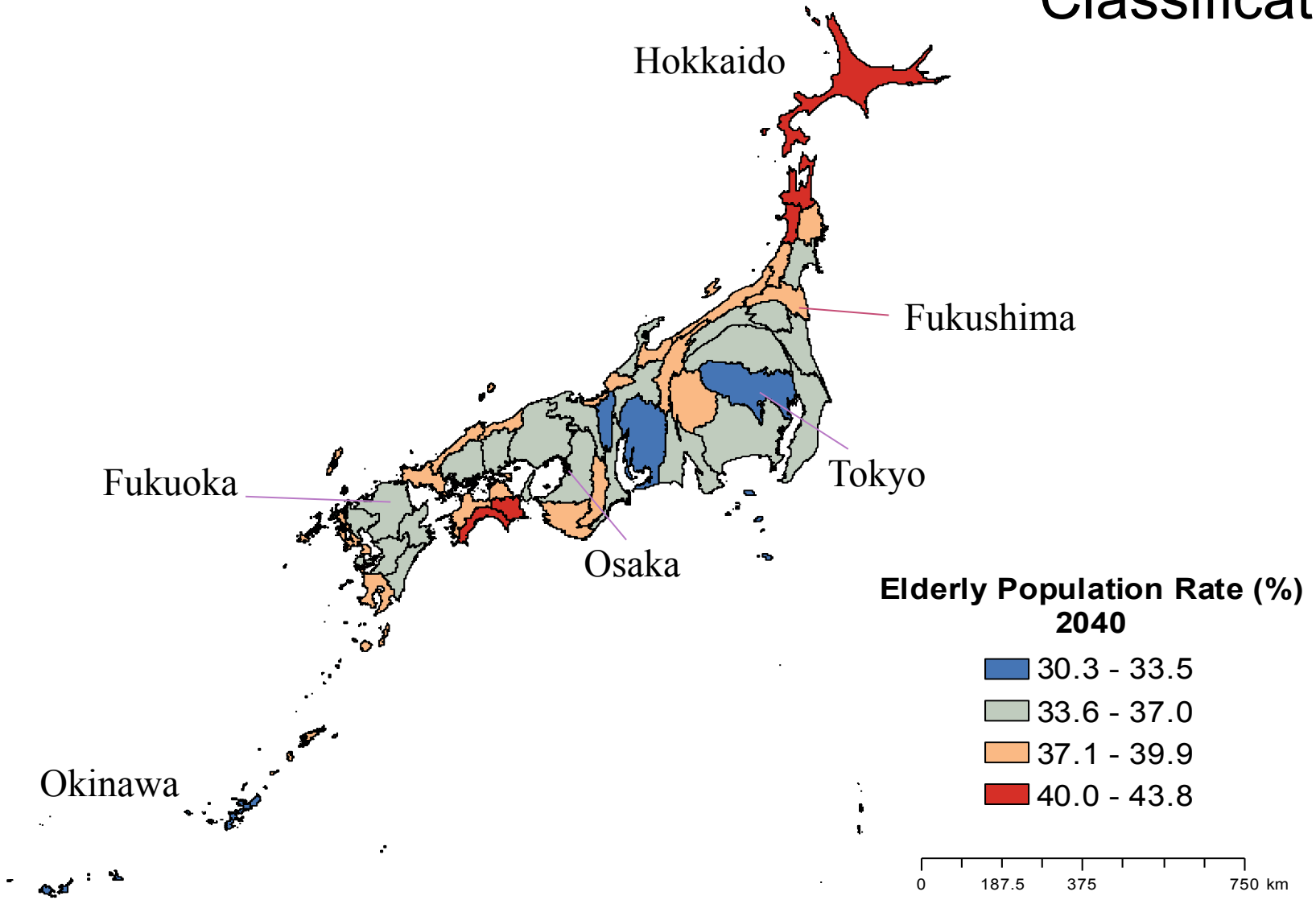
2040

Jenk Classification



(source) NIPSS(2013) *Regional Population Projections for Japan: 2010-2040*

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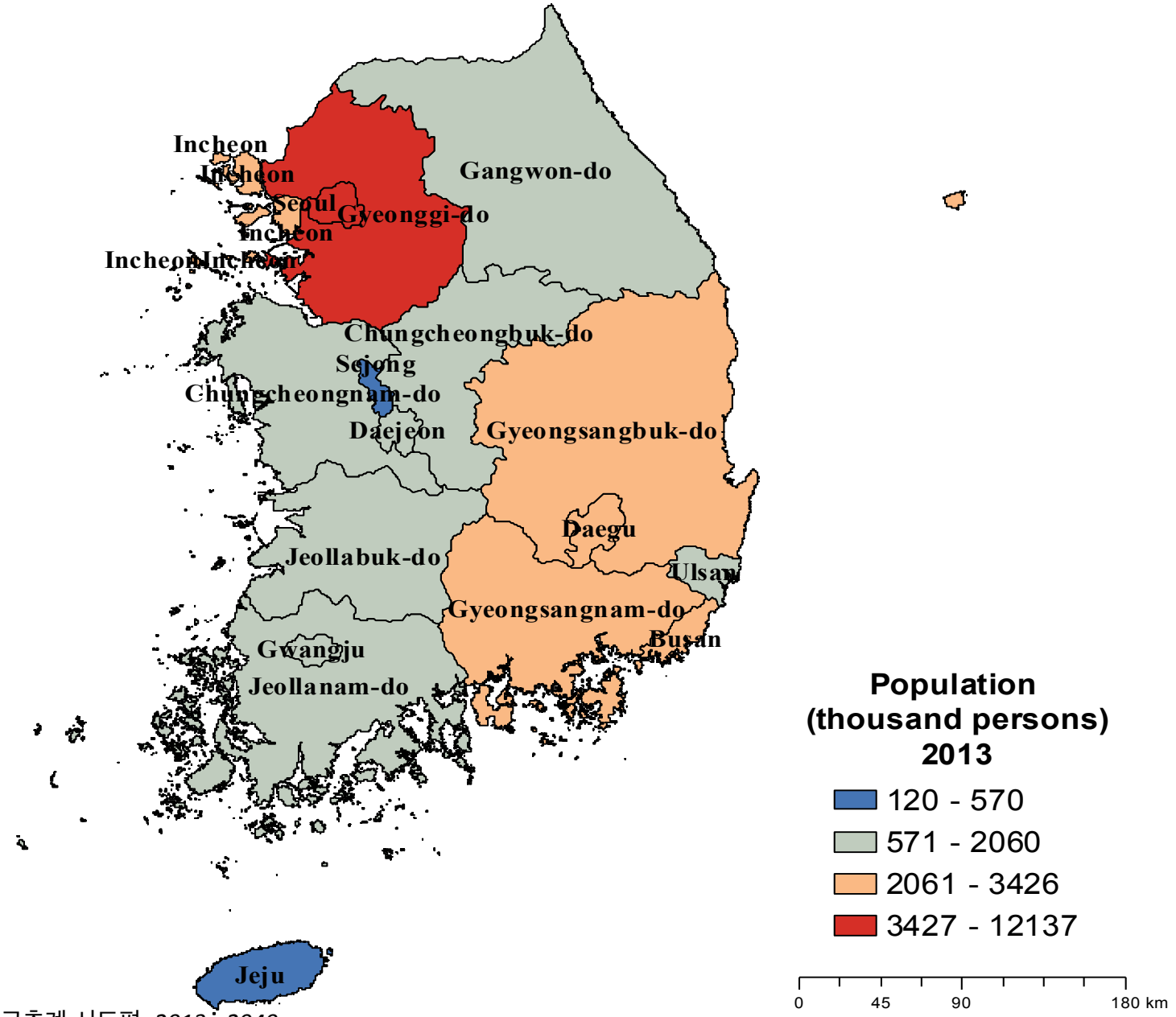
2013



(source) Kostat (2014) 장래인구추계 시도편: *2013 - 2040*

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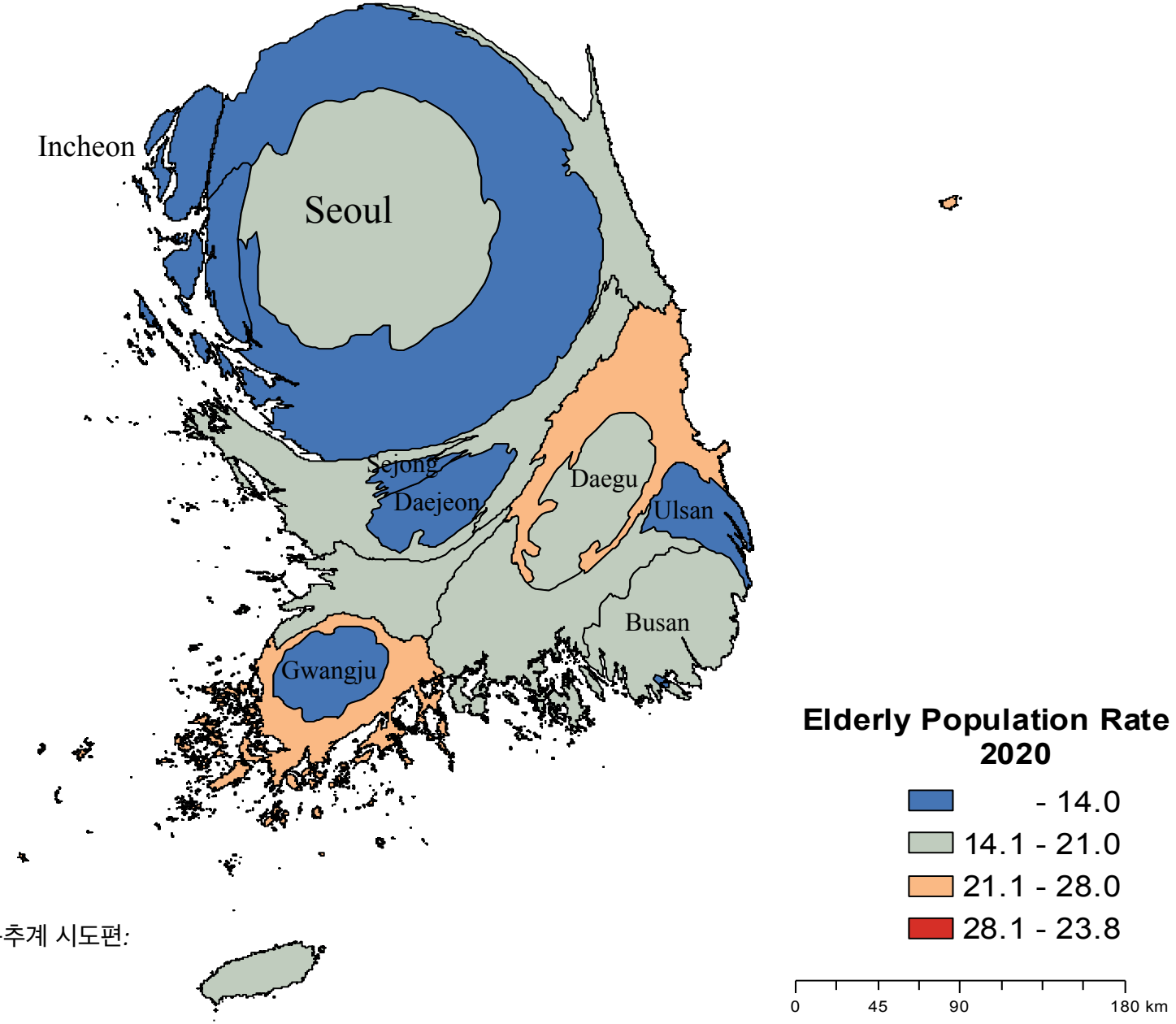
2020



(source) Kostat (2014) 장래인구추계 시도편*: 2013 - 2040*

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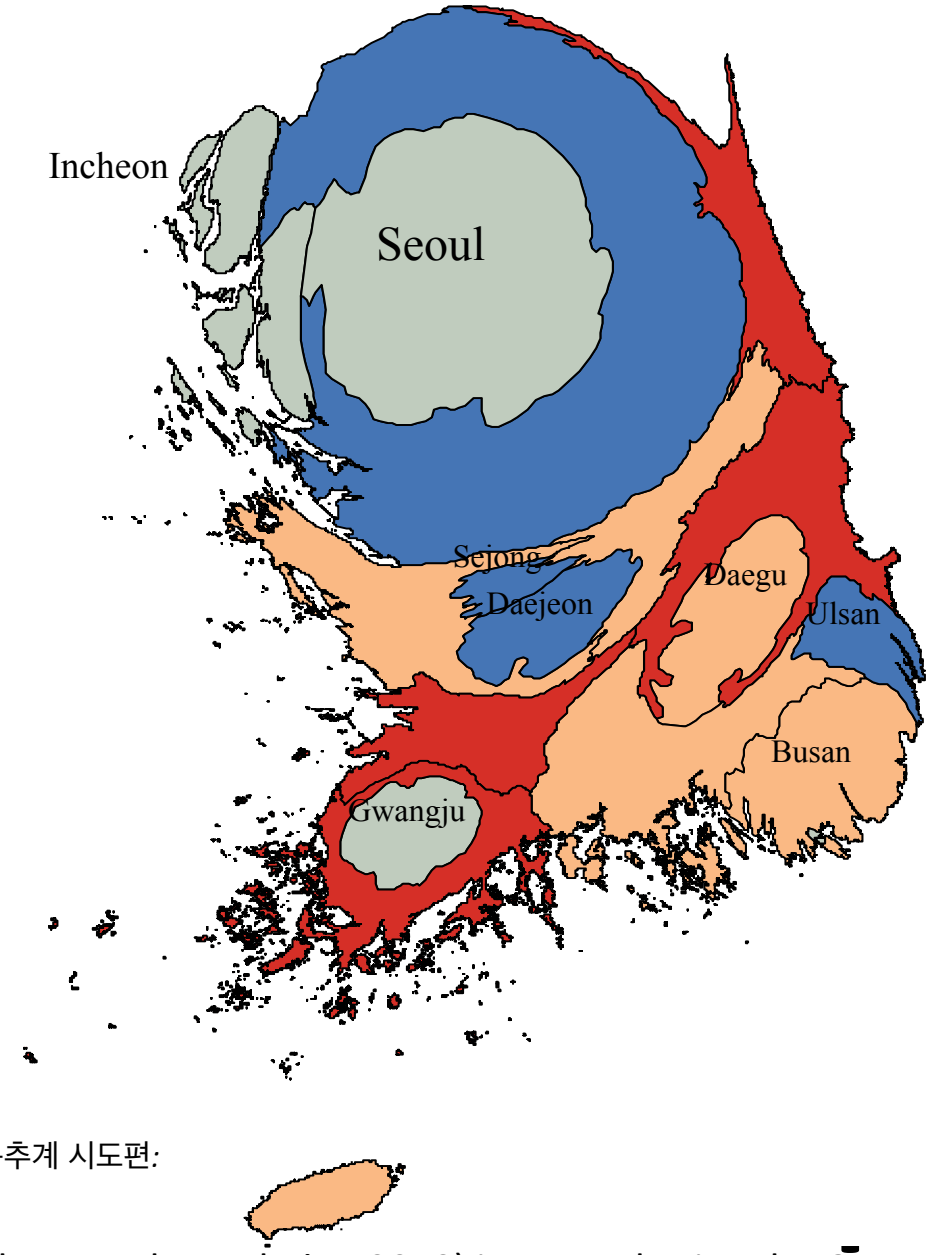
2040

Jenk Classification



Elderly Population Rate (%)
2040

- 25.7 - 28.5
- 28.6 - 30.4
- 30.5 - 36.3
- 36.4 - 41.1

0 45 90 180 km

(source) Kostat (2014) 장래인구추계 시도편*: 2013 - 2040*

*The Cartogram (based on Total Population 2040) is created using the Gastner-Newman method in ArcGIS

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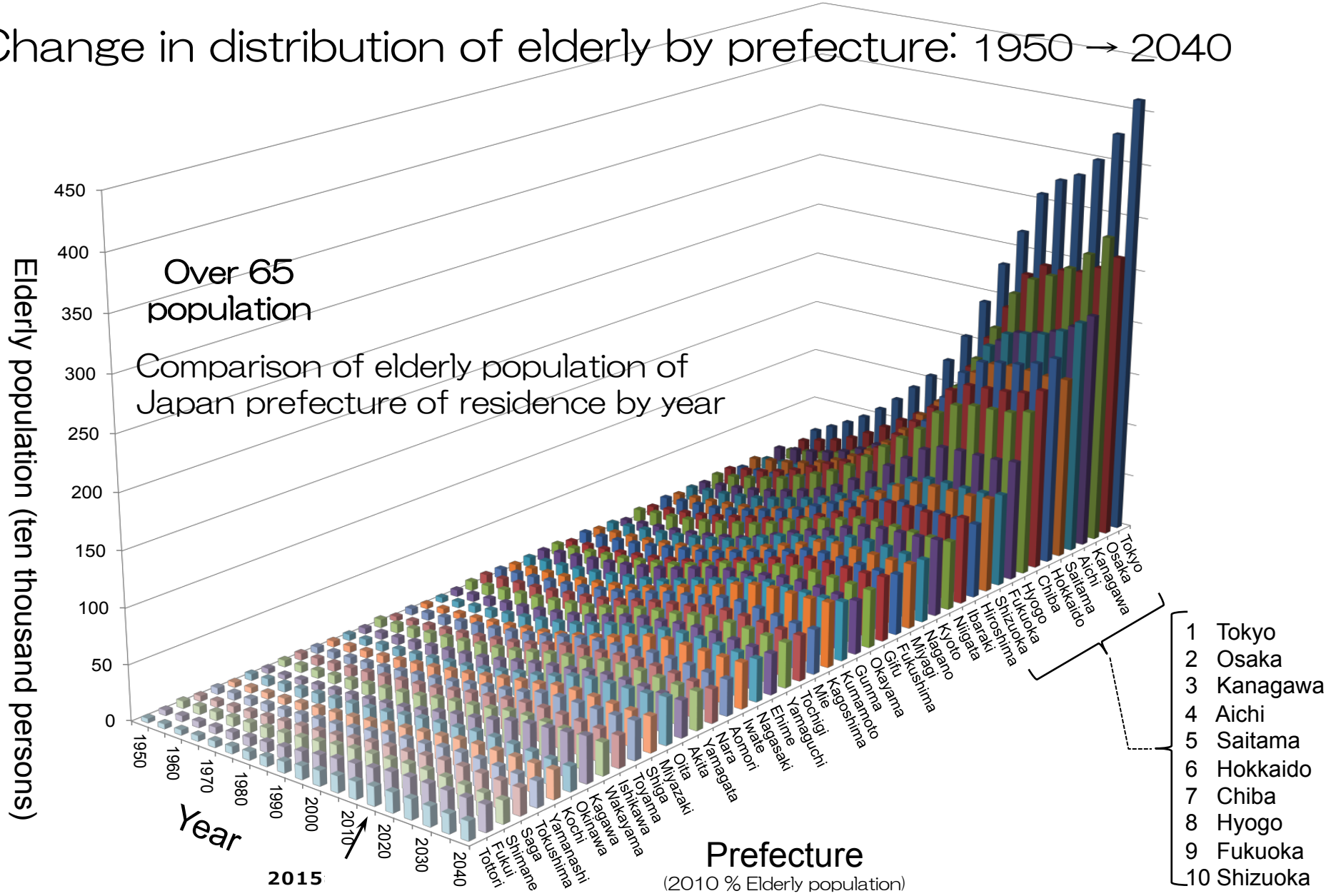
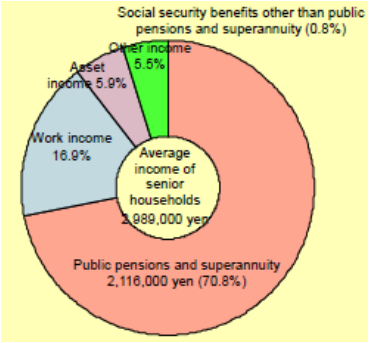
Change in distribution of elderly by prefecture: 1950 → 2040

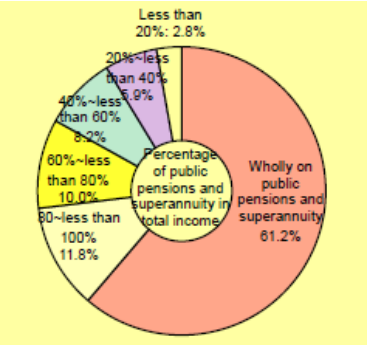


Source : *Population Census of Japan,* Statistics Bureau of Japan, Ministry of Internal Affairs and Communications, *Future Population Projections By Prefecture* (Mar. 2013) National Institute of Population and Social Security Research Japan

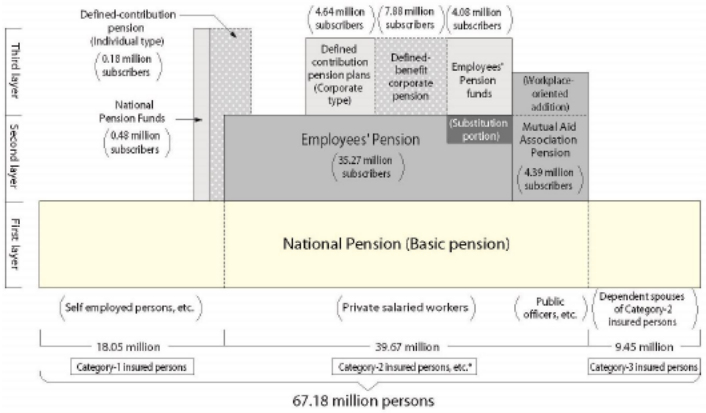
Pension system in Japan

- Universal pension coverage
  - All registered residents of Japan aged 20 to 59 years must be covered by the National Pension system
- Role of public pension in Japan
  - account for about 70% of the income of senior households
  - 60% of senior households live on pension income only.
  - 70% of persons rely on pensions for life design of their senior years.
  - It is fixed as a pillar of senior life, and plays an indispensable role in the life of the people





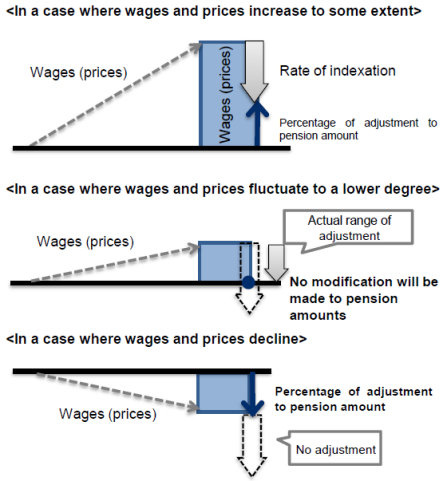
- Multi-tiered pension system
  - National Pension
  - Employees' Pension Insurance



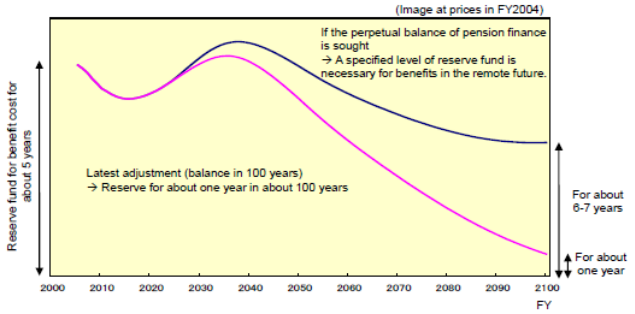
- Pension system financing
  - Premium
    - The contribution amount / rate
      - National Pension : \16,490/month (for the fiscal year 2017)
      - Employees' Pension Insurance : 18.182% (for the fiscal year 2017)
  - Government subsidy
    - Subsidy for basic pension
  - Reserve
    - Finite balance formula⇒pension reforms in 2004

Pension reforms in 2004

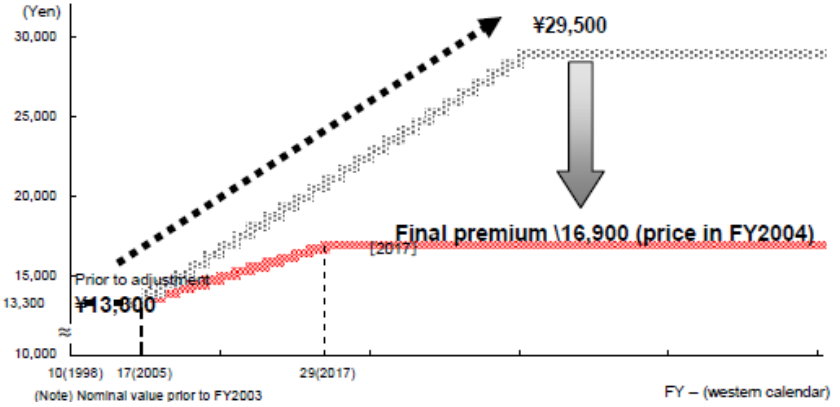
- Macro-Economic Slide Formula
  - Adjust benefit according to future social and economic conditions

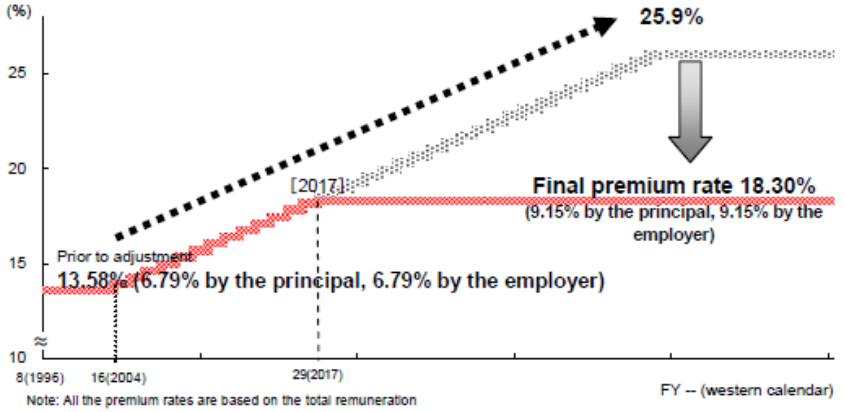


- Finite balance formula
  - Alleviate the burden of premium in the future by holding accumulated fund and utilizing its investment return
  - Reserve for about one year in about 100 years.



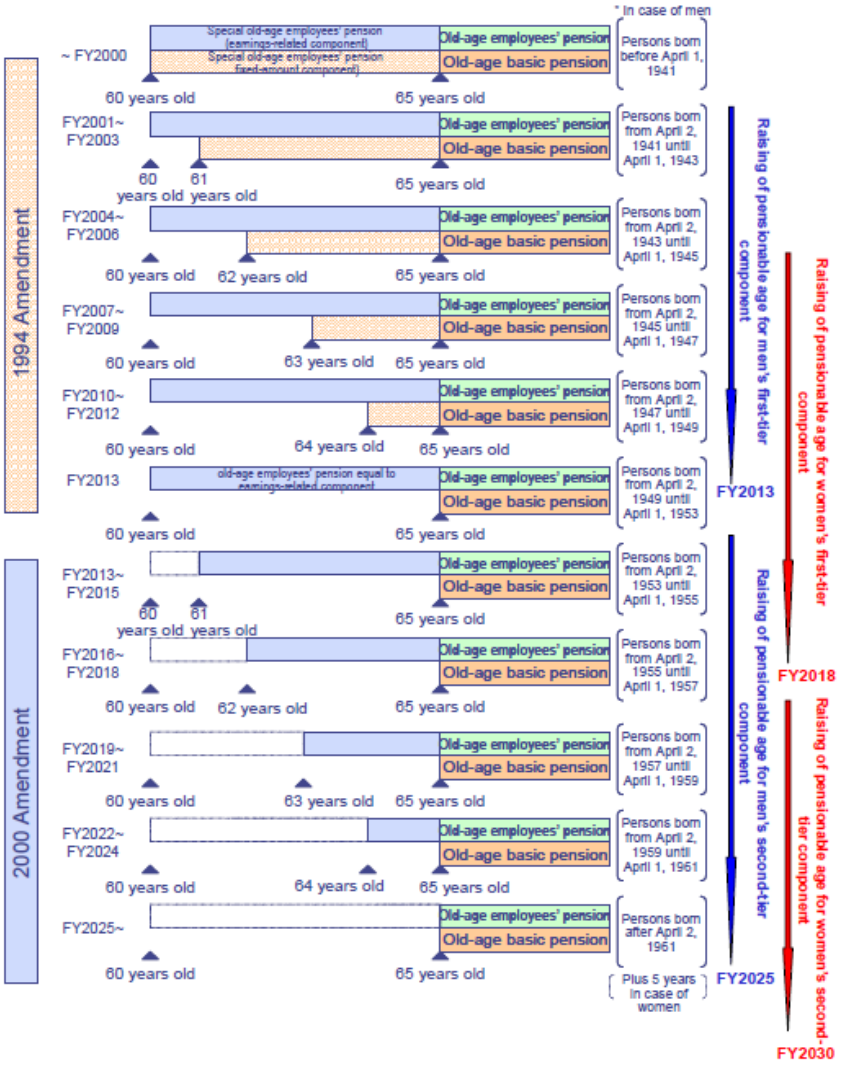
- Step-by-step raising of premium rate with fixed ceiling
  - National Pension
    - The premium would be raised by ¥280 (price in FY2004) each year from ¥13,300 in FY2004 and reach a ceiling of ¥16,900 (price in FY2004) in FY2017, and to maintain this level subsequently.
  - Employees' Pension Insurance
    - Raise the premium rate for employees' pension by 0.354% each year from 13.58% in 2004, to reach a ceiling of 18.3% in 2017,





Raising Pensionable Age

- Raise of the pensionable age for the “Basic Pension” (1st tier)
  - Introduced gradually from age 60 to 65
  - Started on April, 2001 for men, 2006 for women.
  - Completed in 2013.
- Raise of the pensionable age for the “Employees’ Pension Insurance” (2nd tier)
  - Introduced gradually from age 60 until 2025.
  - Started on April, 2013 for men, 2018 for women.
- The rule for the retirement age has been amended following the changes of the public pension system.
  - Secure elderly employment for everyone who desires employment until the age of 65.



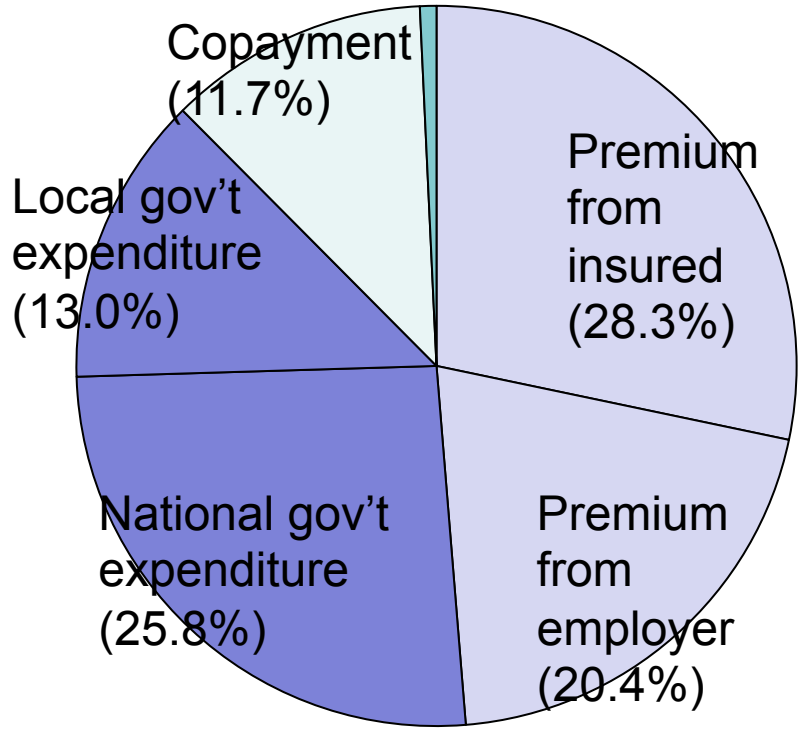
Universal Health Insurance System

- Japan has achieved one of the world's highest level of life expectancy and health care standards through a universal health insurance system.
- It is necessary to continue to ensure a safe and secure lives of citizens by firmly maintaining the universal health insurance under the current social insurance system.

Characteristics of the universal health insurance system in Japan

1. Universal coverage with compulsory public health insurance
2. Free access to medical facilities
3. High-quality health care services with low costs
4. Based on the social insurance system subsidized by public expenditure

Breakdown of National Medical Expenditure by source of funding in Japan (FY2014)



Outline of Healthcare Insurance System

Age

Medical Care System for the Elderly Aged 75 and Over

- Covers the elderly aged 75+ years (16.1 million people)
- 47 insurers (one in each prefecture)
- Medical benefit: 16 trillion yen

75

Fiscal adjustments: Each insurer pays medical benefit for the elderly aged 65–74 years (6.7 trillion yen, 16.3 million people*1) according to its number of insured people aged 0–74 years

65

National Health Insurance (NHI)

- Covers self-employed, pensioner, precarious worker, etc. (37 million people)
- 1,800+ insurers (municipal-controlled NHI and NHI societies)
- Medical benefit: 10 trillion yen

Japan Health Insurance Association (JHIA)

- Covers employees of small and medium-size enterprises (35 million people)
- Single insurer across the country
- Medical benefit: 5 trillion yen

Health Insurance Societies

- Cover employees of large corporations (28.9 million people)
- Approx. 1,400 ins

Mutual Aid Associations

- Cover civil servants (8.8 million people
- 85 insurers

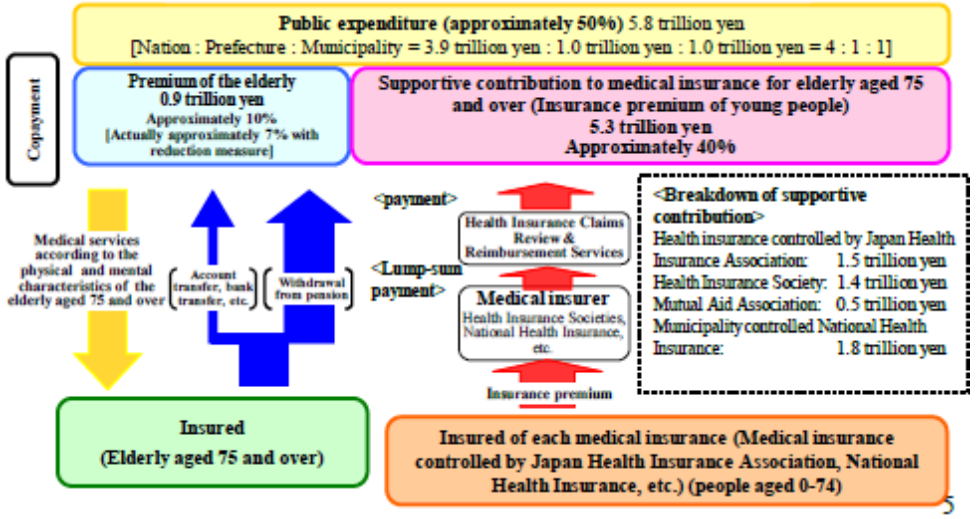
- Medical benefit: 4 trillion yen

*1 Of these, 13.1 million are covered by NHI, 2.1 million by JHIA, 0.9 million by Health Insurance Societies, and 0.1 million by Mutual Aid Associations.
*2 Figures are as at FY2015. In addition to the systems above, an interim scheme, System for Medical Services for Retired Persons (with about 2 million people covered), is in place.

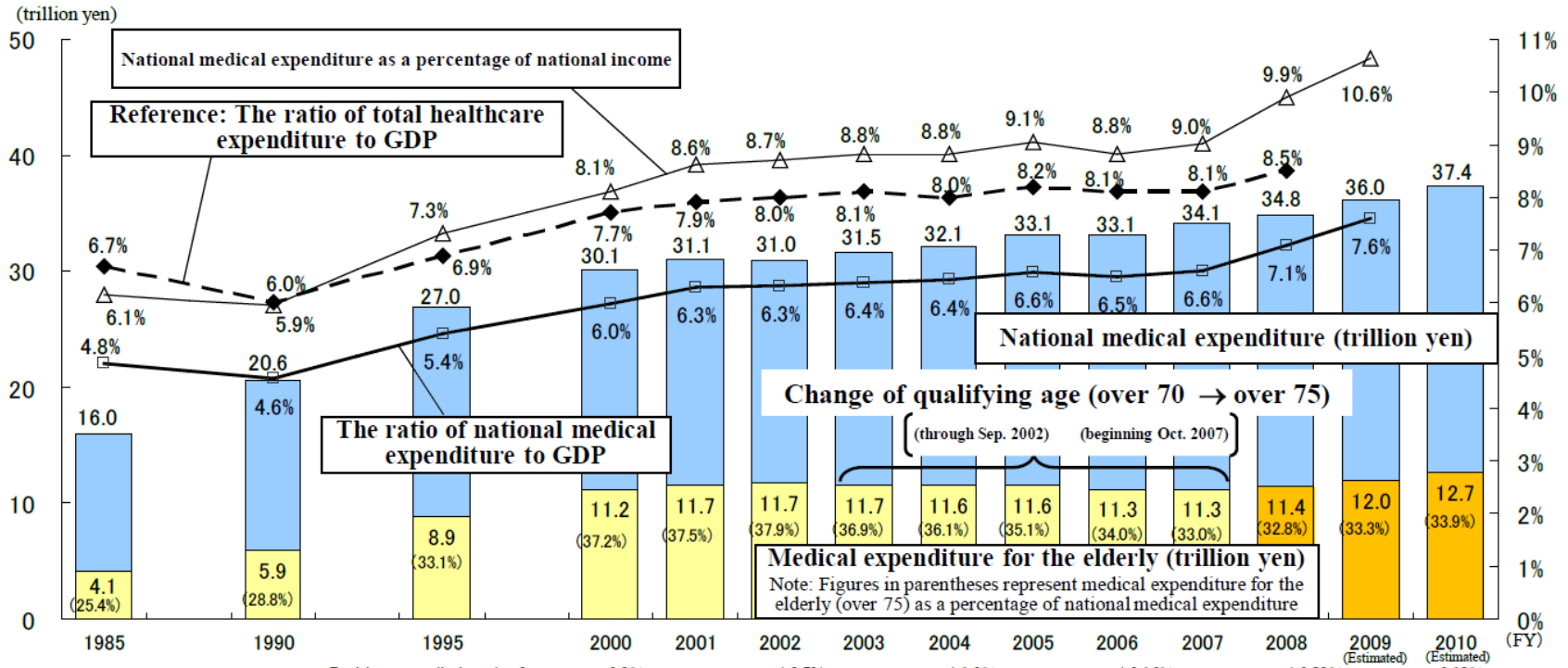
Current Medical Service System for the Elderly

- Summary of system
  - Medical insurance system for the elderly aged 75 and over was enacted in April 2008.
    - from the viewpoint to clarify the burden between aged and young generations.
  - System to adjust the finance of insurers was introduced.
    - in order to adjust the imbalance among the insurers due to the uneven distribution of the elderly aged between 65 and 74.

- Structure of Medical Care System for the Elderly aged 75 and Over



Trends in Medical Expenditure



Revisions to medical service fees: 0.2% ▲2.7% ▲1.0% ▲3.16% ▲0.82% 0.19%

Major system changes:
- Introduction of long-term care insurance system
- Introduction of 10% copayment for the elderly
- Thorough application of 10% copayment for the elderly
- 30% personal copayment for employed persons etc.
- 30% copayment for persons with income equivalent to employment income etc.
- Expansion of measures to reduce the burden of infant patients (less than 3 years of age → children before school age)

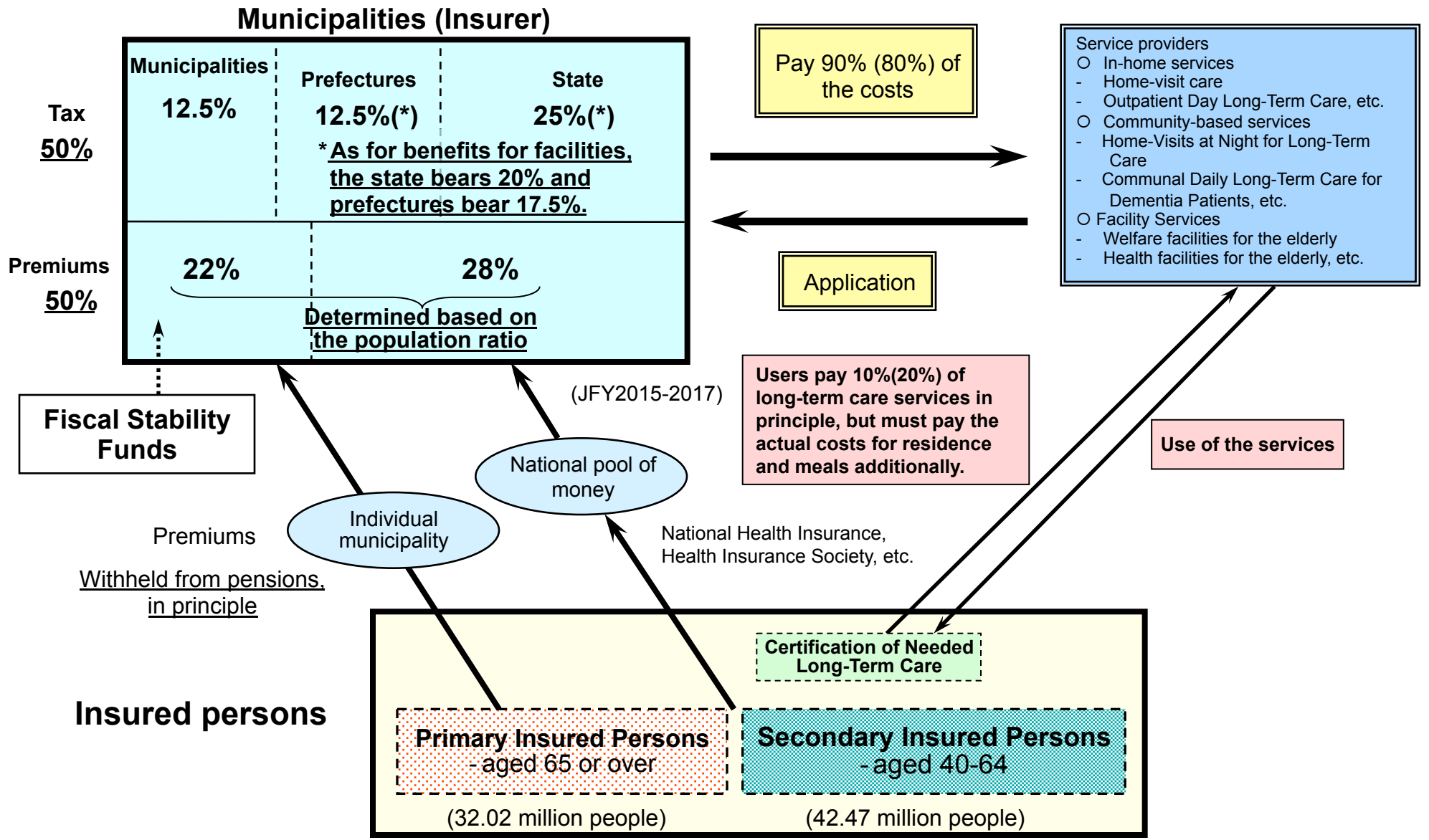
<Year-on year growth rates> (%)

	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
National medical expenditure	6.1	4.5	4.5	▲1.8	3.2	▲0.5	1.9	1.8	3.2	0.0	3.0	2.0	*3.5*	*3.9*
Medical expenditure for the elderly (over 75)	12.7	6.6	9.3	▲5.1	4.1	0.6	▲0.7	▲0.7	0.6	▲3.3	0.1	1.2	5.2	*5.5*
National income	7.2	8.1	▲0.3	2.0	▲2.8	▲1.5	0.7	1.6	0.5	2.6	0.9	▲7.1	▲3.6	-
GDP	7.2	8.6	1.7	0.9	▲2.1	▲0.8	0.8	1.0	0.9	1.5	1.0	▲4.6	▲3.7	-

Long-Term Care Insurance System of Japan

- Introduction of the Long-Term Care Insurance System in 2000
- Basic Concepts
  - Support for independence
  - User oriented
  - Social insurance system
- Primary Insured Persons(aged 65 or over) and Secondary Insured Persons(aged 40-64)
- Long-term care benefits and Preventive long-term care benefits
- Varieties of Long-term Care Insurance Services
- State of Affairs Regarding Long-Term Care Insurance in the Future
- Major Contents of Revision of Long-term Care Insurance (2014 revision)

Structure of the Long-Term Care Insurance System



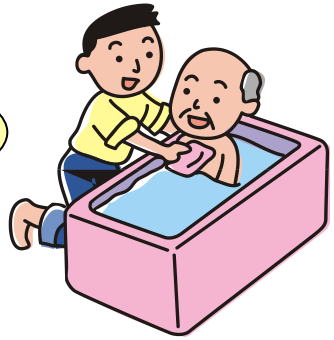
Note: The figure for Primary Insured Persons is from the Report on Long-Term Care Insurance Operation (provisional) (April, 2009), Ministry of Health, Labour and Welfare and that for Secondary Insured Person is the monthly average for JFY2008, calculated from medical insurers' reports used by the Social Insurance Medical Fee Payment Fund in order to determine the amount of long-term care expenses. Burden ratio for persons with income above certain level is 20:80, after Aug 2015.

Varieties of Long-term Care Insurance Services

Private Home

Home-visit Services

Home-visit Care, Home-visit Nursing, Home-Visit Bathing Long-Term Care, In-Home Long-Term Care Support, etc.



Day Services

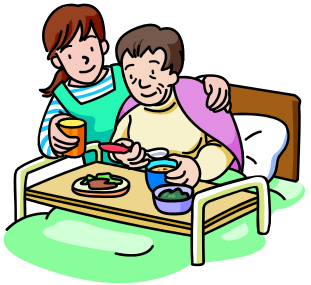
Outpatient Day Long-Term Care, Outpatient Rehabilitation, etc.

Short-stay Services

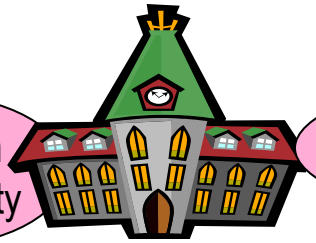
Short-Term Admission for Daily Life Long-Term Care, etc.

Residential Services

Daily Life Long-Term Care Admitted to a Specified Facility and People with Dementia etc.



Long-term Care Facility



In-facility Services

Facility Covered by Public Aid Providing Long-Term Care to the Elderly, Long-Term Care Health Facility, etc.

Increase in number of persons who are eligible for LTC insurance and users

- Increase in number of insured persons aged 65 and older

End of April, 2000		End of April, 2015
21.65 million	1.53 times ⇒	33.08 million

- Increase in number of persons with care needs & support needs certification

End of April, 2000		End of April, 2015
2.18 million	2.79 times ⇒	6.08 million

- Increase in number of service users

	End of April,2000		End of April,2015
Number of users of in-home care	0.97million	3.94 times ⇒	3.82million
Number of users of facility care	0.52million	1.73 times ⇒	0.90million
Number of users of community-based care			39million
Total	1.49million	3.43 times ⇒	5.11million

State of Affairs Regarding Long-Term Care Insurance in the Future

- The no. of seniors over age 65

	2010	2015	2025	2055
No. of seniors 65 & older	29.48 million	33.95 million	36.57 million	36.26 million
No. of seniors 75 & older	14.19 million	16.46 million	21.79 million	24.01 million

- Among seniors over age 65, seniors with dementia will increase
  - 4.62million in 2012, approx. 7million in 2025.

- Changes in the Population Over Age 75

(Age group with high percentage of persons requiring care)

  - Increased rapidly and such increase will continue for 2025.
  - From around 2030, the rapid growth of the population over age 75 will level off
  - the population over age 85 will continue to increase for another 10 years.

- Changes in the Population Over Age 40

(Age group paying for long-term care insurance system)

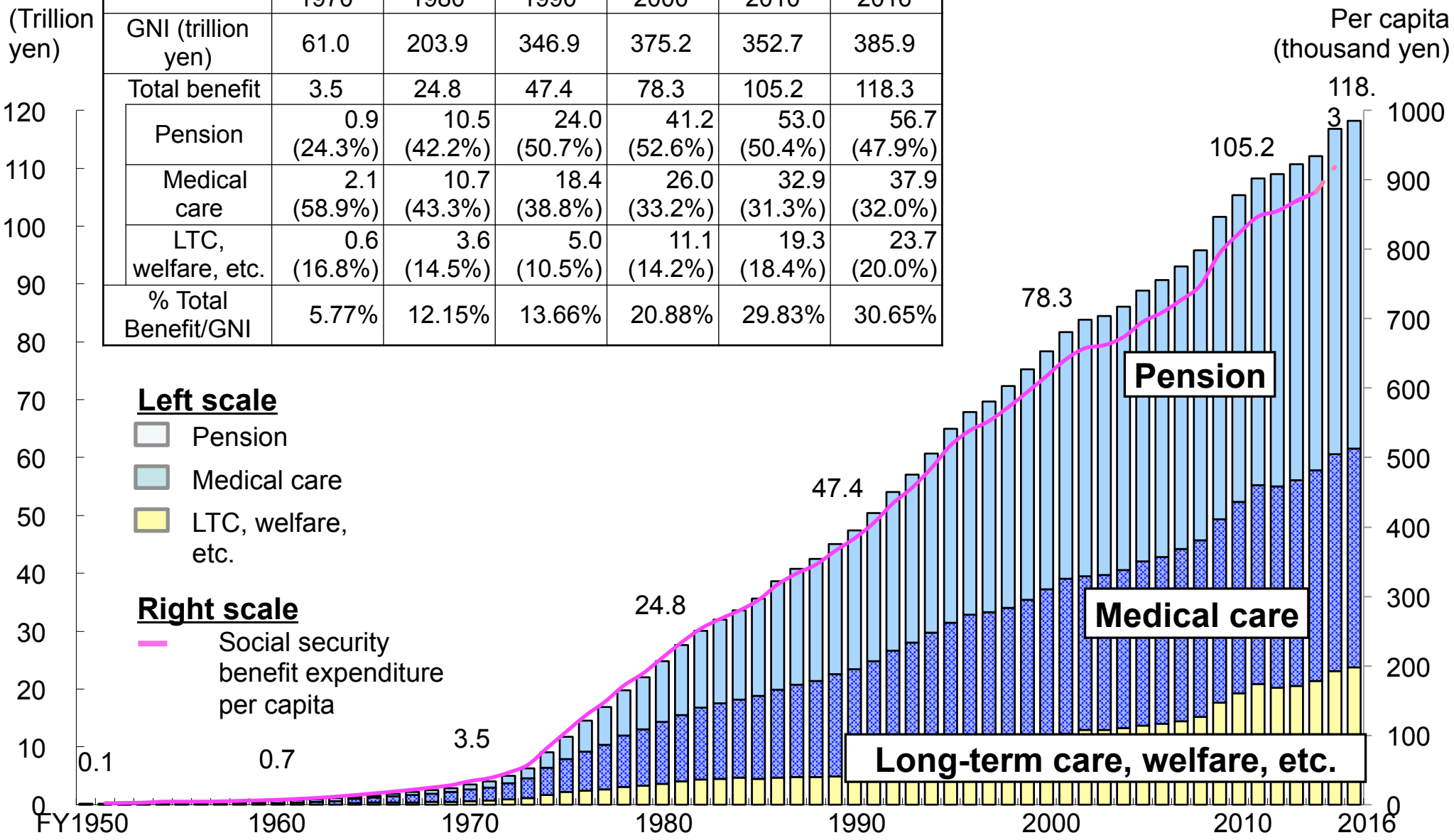
  - The population over age 40, who pay for the long-term care insurance, will start to decrease after 2021.

Major Contents of Revision of Long-Term Care Insurance in 2014

- Establishing the Community-based Integrated Care System
  - Enriching Services
    - Enhancing coordination between In-home Medical Care and In-home Long-term Care
    - Promoting measures against dementia
    - Enhancing Community Care Meetings
    - Improving the Livelihood Support Services
  - Making Services More Focused and Efficient
    - Transferring nationally-unified Preventive benefits (Homevisit Care and Out-patient Long-tem Care) to Community Support Projects of municipalities, and diversifying them.
    - Restricting users of in-facility services of Special Long-term Care Health Facilities to people whose care level is 3 or higher in principle.
- Making Contribution Equitable
  - Expanding Reduction of Premiums of People with Low-income
    - Expanding the reduction rate of premiums of people with low income
  - Review of Co-payments etc.
    - Increasing co-payments of users with income more than a certain level.
    - Adding assets to the check list of requirement for "Supplementary Benefits," which provides money for food and residence to in-facility users with low income.

Trends in social security benefits expenditure

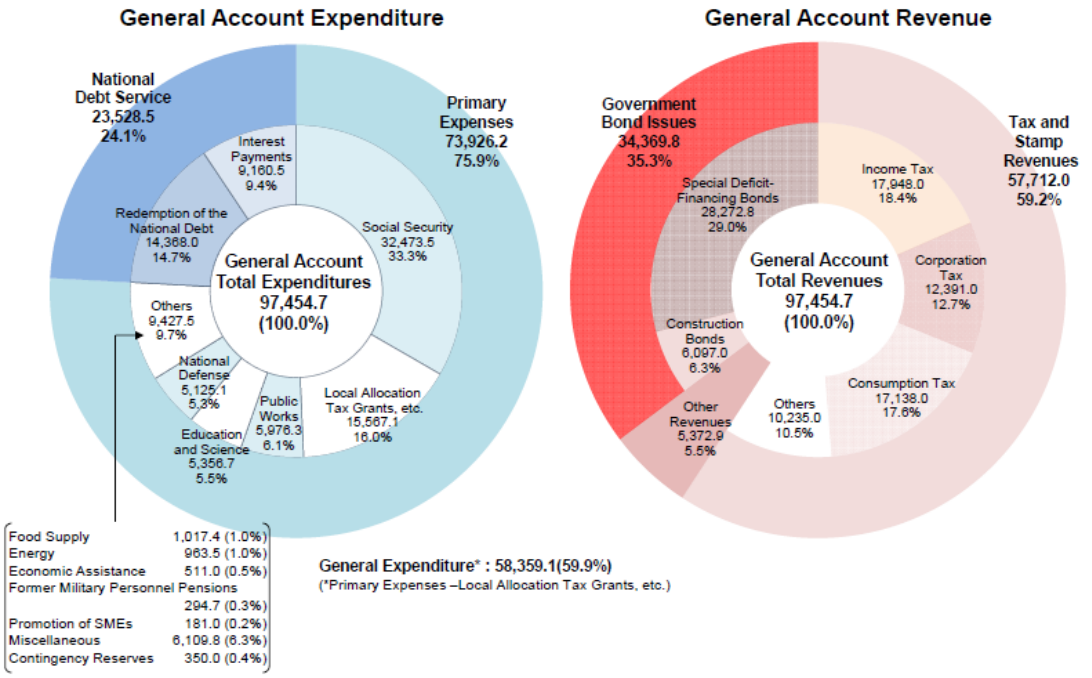
	1970	1980	1990	2000	2010	2016
GNI (trillion yen)	61.0	203.9	346.9	375.2	352.7	385.9
Total benefit	3.5	24.8	47.4	78.3	105.2	118.3
Pension	0.9 (24.3%)	10.5 (42.2%)	24.0 (50.7%)	41.2 (52.6%)	53.0 (50.4%)	56.7 (47.9%)
Medical care	2.1 (58.9%)	10.7 (43.3%)	18.4 (38.8%)	26.0 (33.2%)	32.9 (31.3%)	37.9 (32.0%)
LTC, welfare, etc.	0.6 (16.8%)	3.6 (14.5%)	5.0 (10.5%)	11.1 (14.2%)	19.3 (18.4%)	23.7 (20.0%)
% Total Benefit/GNI	5.77%	12.15%	13.66%	20.88%	29.83%	30.65%



Sources: "The Financial Statistics of Social Security in Japan for FY2014," National Institute of Population and Social Security Research. The figures for FY2015 and 2016 are estimated by MHLW. GNI for FY2016 is based on "Fiscal 2016 Economic Outlook and Basic Stance for Economic and Fiscal Management," Cabinet Decision of Jan22, 2016.
Note: Figures in the graph are social security benefit expenditures for FY1950, 1960, 1970, 1980, 1990, 2000, 2010, and 2016.

Comprehensive Reform of Social Security and Tax

- FY2017 Budget: Expenditure and Revenue

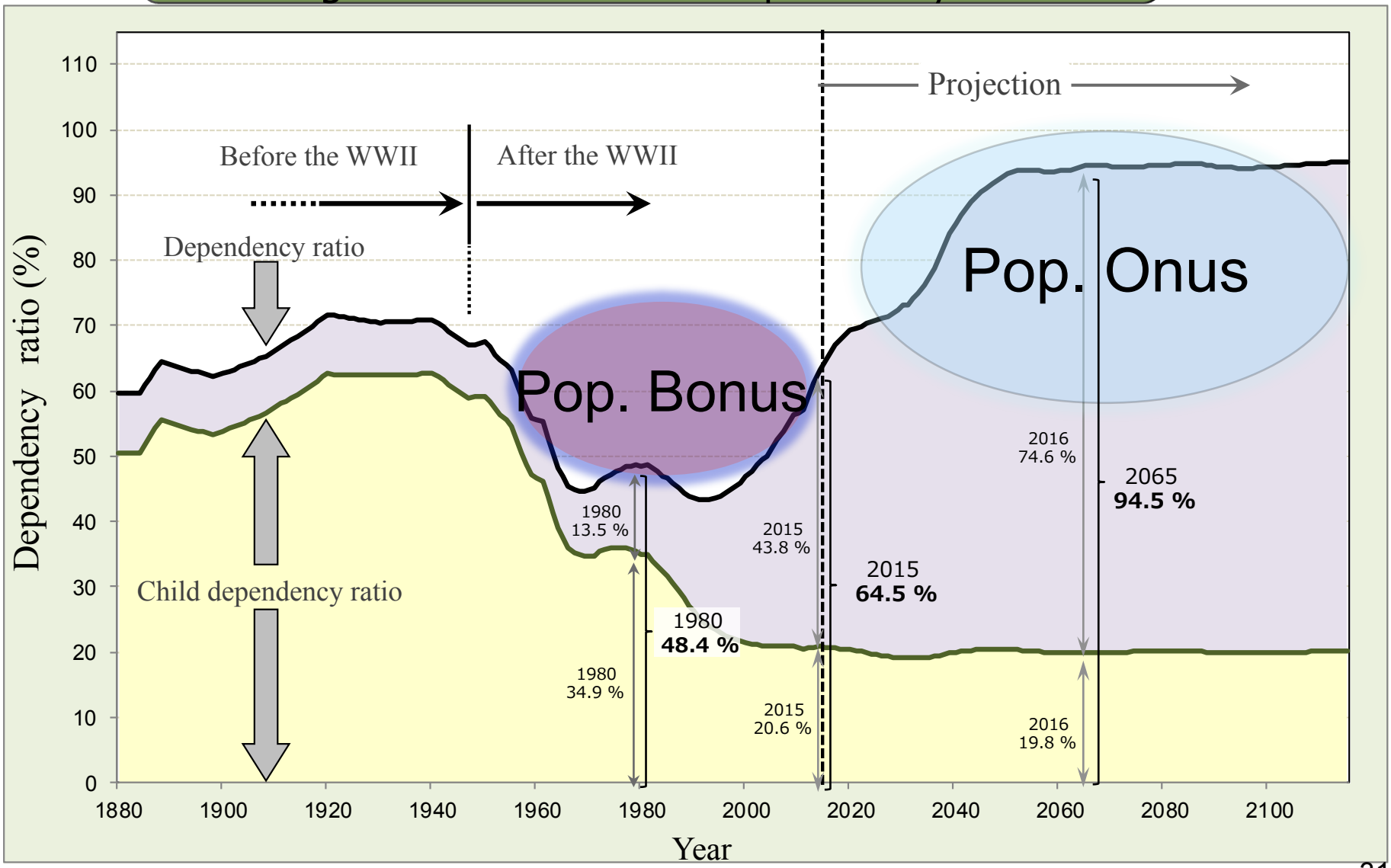


- Social security plays an important role, but reform is required

- Comprehensive Reform of Social Security and Tax
  - Increasing the consumption tax rate
  - Expand the range of purposes: Four costs for social security
    - Pension
    - Medical care
    - Long-Term care
    - Children and Child-Rearing

Waves of Population Bonus and Onus in Japan

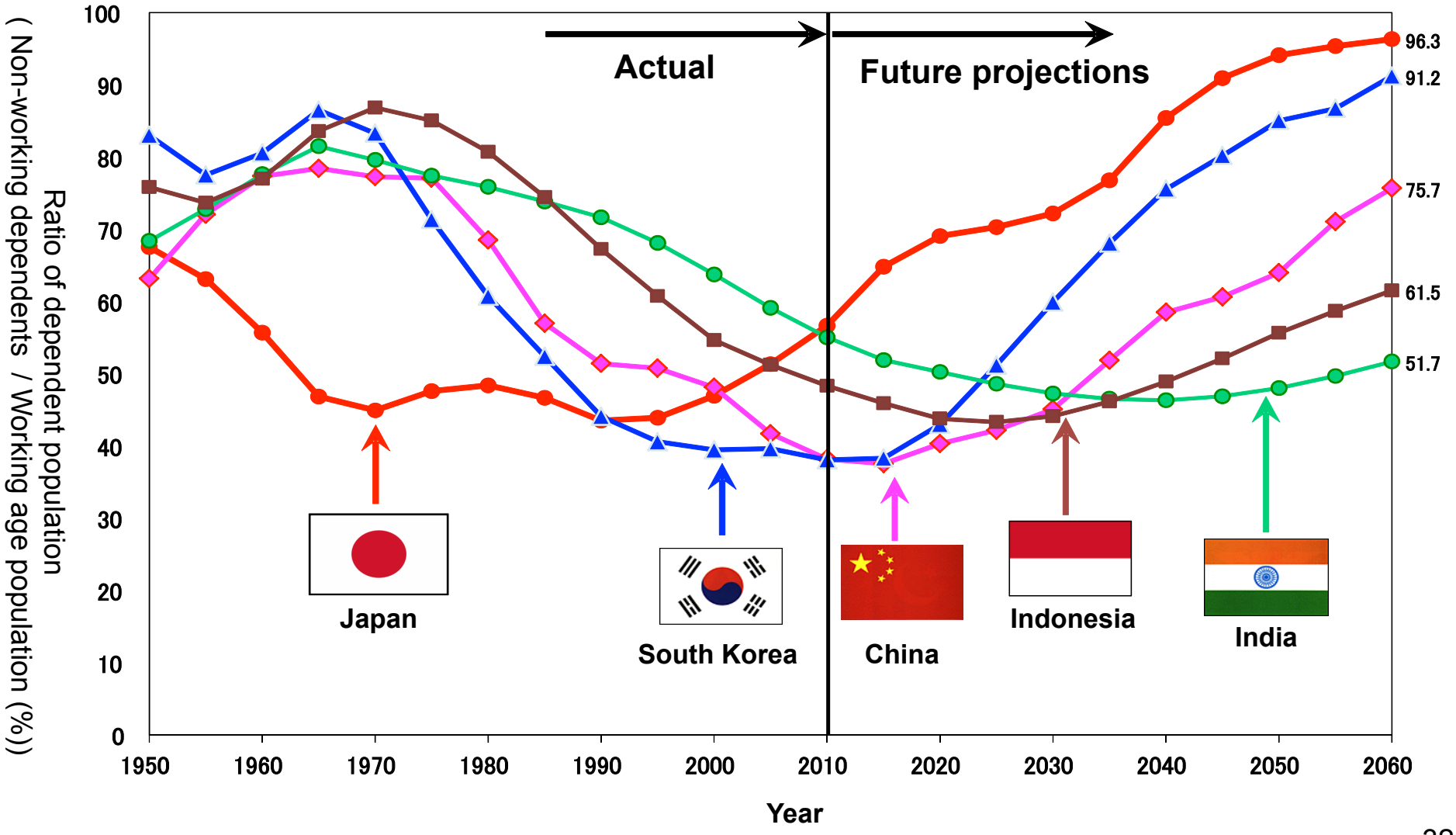
Long term trend of the dependency ratio



Source: Ministry of Internal Affairs and Communications, Statistics Bureau, "*Census*," "*Population Estimates*", National Institute of Population and Social Security Research(2017), *Population Projection for Japan:2016-2065*.

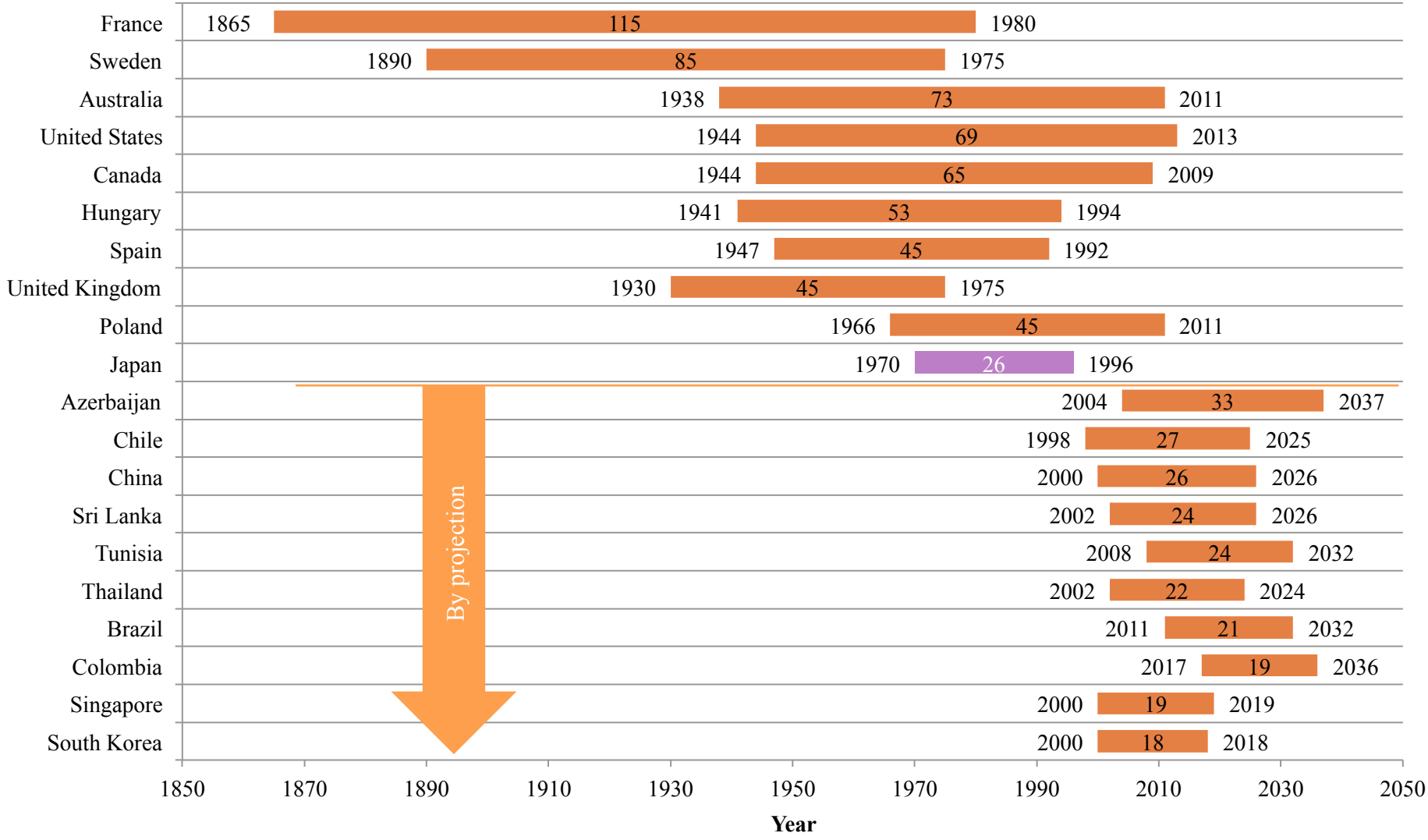
Comparison of population bonus

— Japan vs. South Korea, China, Indonesia and Indonesia



Source: United Nations (2011) *World Population Prospects: The 2010 Revision.* NIPSSR (2012), *Population Projection for Japan:2010-2060*

The time required from aging rate 7% to 14%



Note : The number of the left of the bar designated the year when the aging rate attained 7%; the number on the right of the bar designated the year when the aging rate attained 14%. The number in the middle of the bar designates the years required that the aging rate changed from 7% to 14%.

Source : Kinsella and Wan He (2009)

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Re-define Elderlies:
Life Expectancy Equivalent Age

Male

	Remaining expectancy			
	50	65	75	90
1960	22.4	11.6	6.5	2.6
1990	28.4	16.2	9.5	3.5
2010	31.4	18.7	11.4	4.2
2030	33.5	20.6	13.1	5.1
2060	35.5	22.3	14.6	5.9

Female

	Remaining expectancy			
	50	65	75	90
1960	28.0	14.1	7.9	2.9
1990	33.4	20.0	12.0	4.1
2010	37.5	23.8	15.3	5.5
2030	39.7	25.8	17.1	6.7
2060	41.7	27.7	18.9	7.9

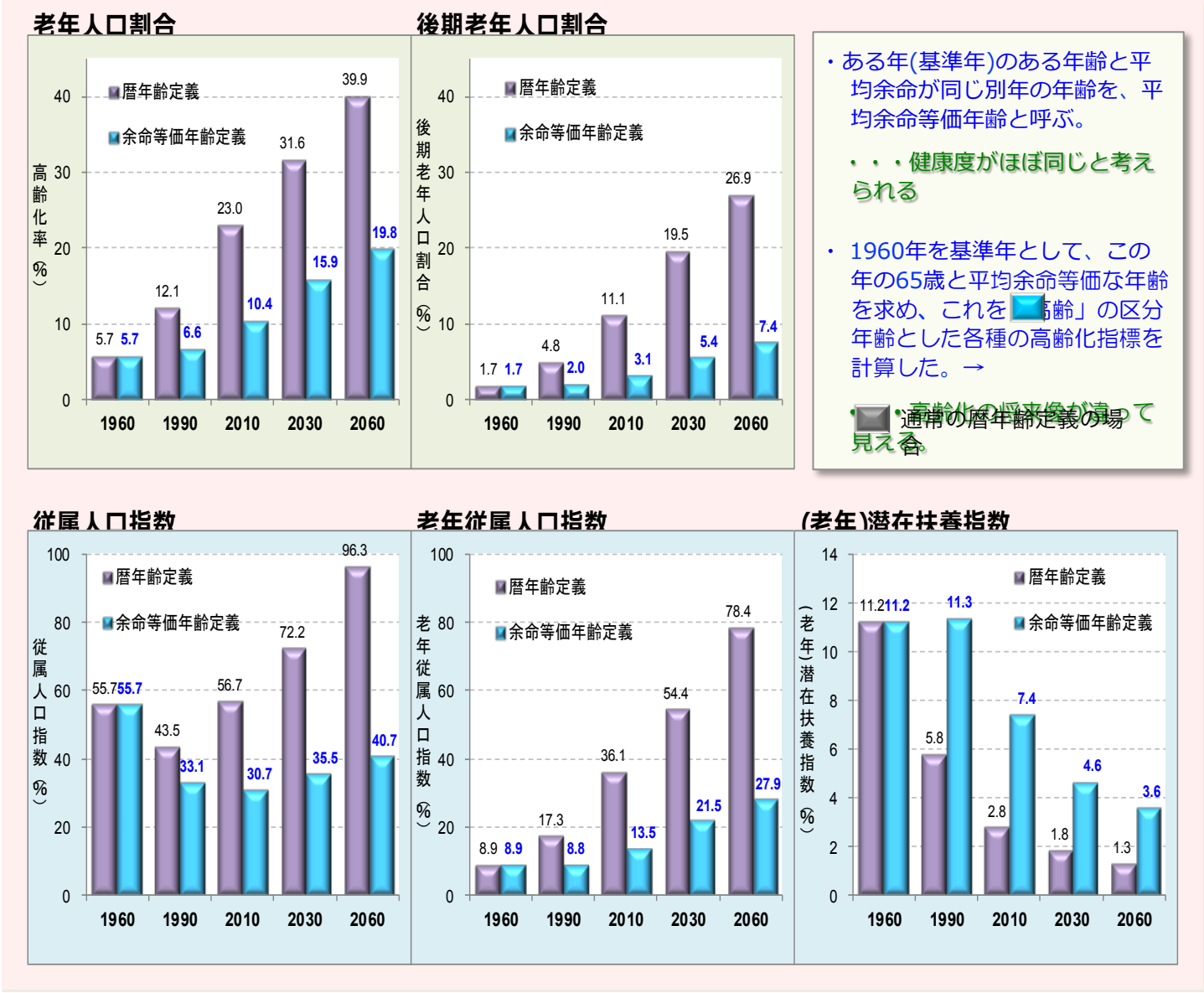
Male

	Equivalent age adjusted 1960 remaining expectancy			
	50	65	75	90
1960	50.0	65.0	75.0	90.0
1990	57.0	71.6	80.8	94.5
2010	60.4	74.8	83.7	96.7
2030	62.8	77.2	86.4	99.5
2060	64.9	79.3	88.5	101.7

Female

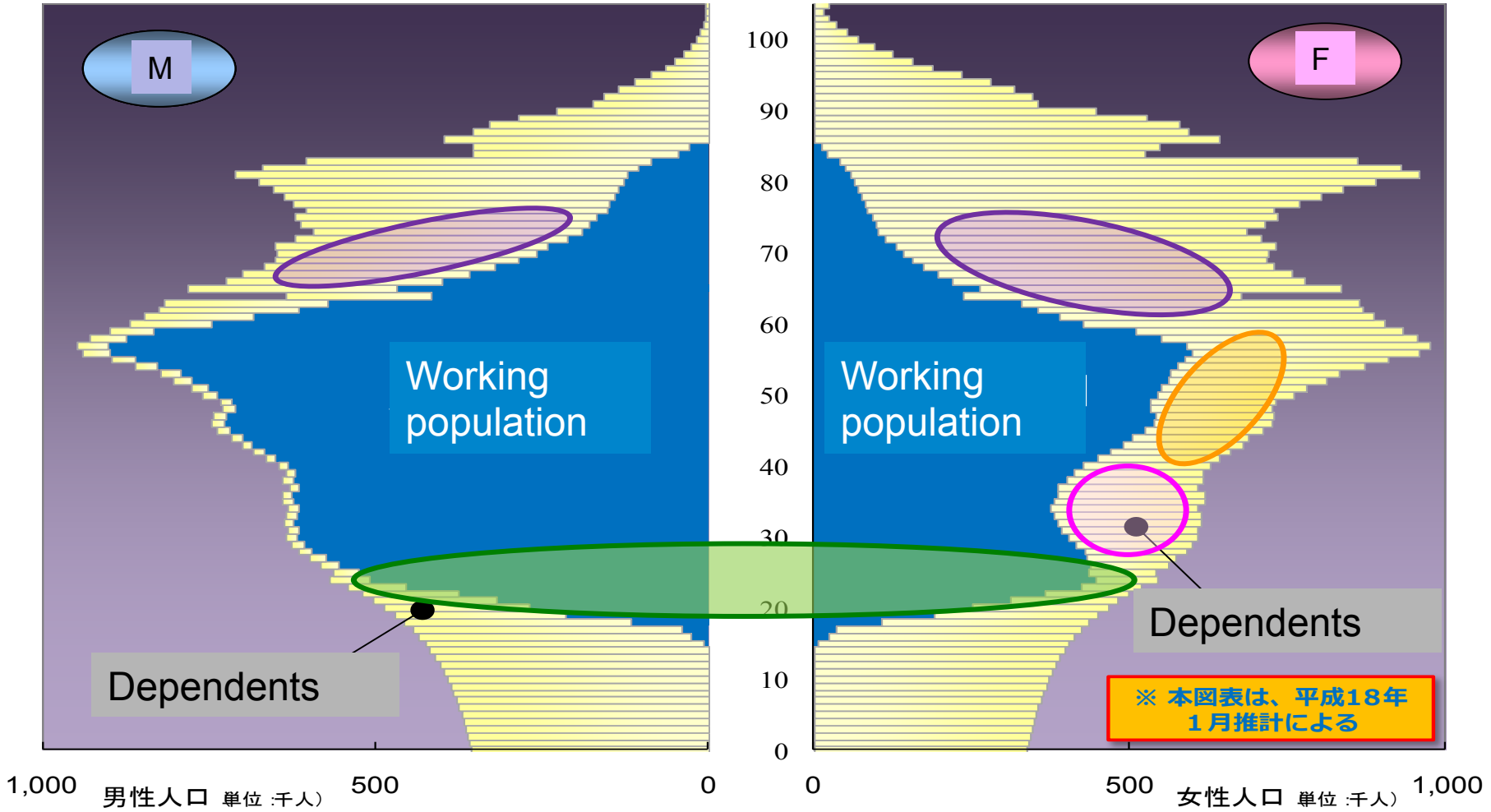
	Equivalent age adjusted 1960 remaining expectancy			
	50	65	75	90
1960	50.0	65.0	75.0	90.0
1990	58.1	72.2	81.2	94.4
2010	62.5	76.5	85.4	97.9
2030	64.8	78.8	87.8	100.6
2060	66.9	81.0	89.9	102.7

Statistical indicators change due to re-defining elderlies Through Life Expectancy Equivalent Age



資料： 2010年以前は「完全生命表」、2030年、2060年は「将来推計人口（平成24年1月推計・死亡中位仮定）」を用いて算出。

Working age population – approach to the shortage of labor supply



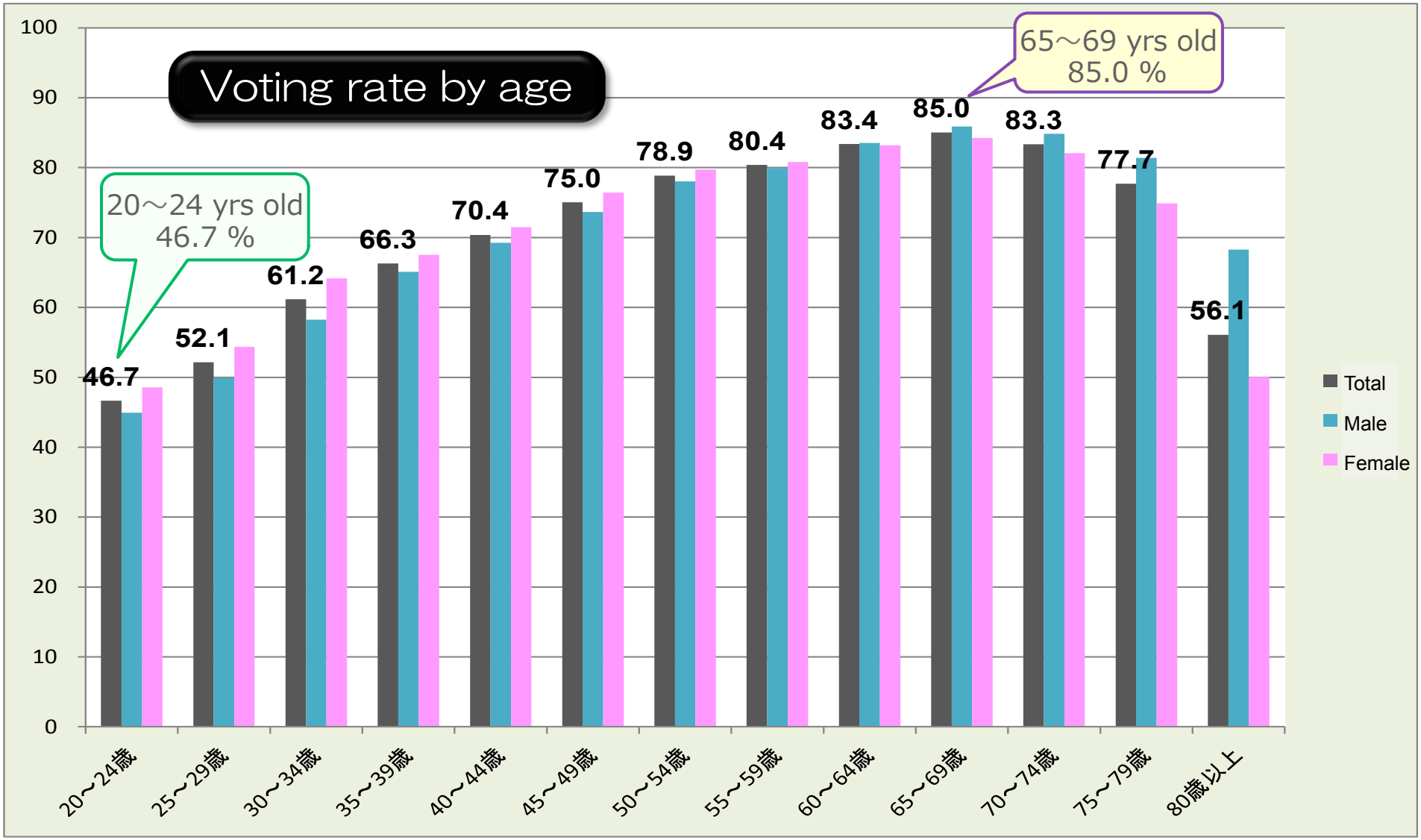
資料：国立社会保障・人口問題研究所「日本の将来推計人口（平成 18 年 12 月[推計出生中位・死亡中位推計]）」、
2005 年国勢調査（労働力率）

Aging of decision-making structure (1960~2060)

Year			Ratio of voting population to total population	Age Composition of Voting Population (Japanese over voting age)			
				% Young Voters (~35 yrs old)	% Middle Aged Voters (35~64 yrs old)	% Elderly Voters (65~yrs old)	% Old elderly Voters (75~ yrs old)
Actual results	1960	Old system	**59.7 %**	**42.9 %**	**47.5 %**	**9.6 %**	**2.9 %**
	1990		**73.1**	**27.0**	**56.5**	**16.5**	**6.6**
	2010		**81.0**	**20.9**	**50.8**	**28.3**	**13.6**
Future projections	2016		81.7	18.5	48.0	33.5	16.5
		New system	**83.5**	**20.3**	**47.0**	**32.7**	**16.1**
	2030		**85.1**	**18.5**	**44.7**	**36.8**	**22.8**
	2060		**85.0**	**15.7**	**38.4**	**45.9**	**31.1**

(Note) % Voters : Ratio of Japanese population over legal age to total population and distribution ratio by age group
% Young Voters : Ratio of voters under 35 years old to total voting population, % Middle Aged Voters : Ratio of voters 35 -64 years old to total voting population; % Elderly Voters : Ratio of voters over 65 years old to total voting population, % Old elderly voters : Ratio of voters over 75 years old to total voting population; Old system : Calculates Japanese voters over 20 years old as of October 1 each year, New system : Calculates Japanese voters over 18 years old as of October 1 each year
(Source) 1955~2010 : *Population Census of Japan,* Statistics Bureau of Japan, Ministry of Internal Affairs and Communications, 2016~2060 : *Future Population Projections By Prefecture* (estimated Jan. 2012) Estimated based on [Projection of Medium Fertility and Medium Mortality]

Aging of decision-making structure: Voting rate



(Note) Number of voters by age group in 45th Lower House general election (Aug. 2009)

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The End

Thank you for your attention.