Hyper-ageing in Japan and its policy concerns

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 Outline

- Background of hyper-ageing in Japan
  (fertility trends and population negative growth)

- Consequences of demographic trends
  (Burden of society due to the age-structure of population)

- Policy options
Trends in the past and future population in Japan

<table>
<thead>
<tr>
<th>Year</th>
<th>Fertility Assumptions with Mortality</th>
<th>Medium</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>127,768 (100.0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>115,224 (90.2%)</td>
<td>118,347 (92.6%)</td>
<td>112,578 (88.1%)</td>
<td></td>
</tr>
<tr>
<td>2055</td>
<td>89,930 (70.4%)</td>
<td>97,775 (76.5%)</td>
<td>84,106 (65.8%)</td>
<td></td>
</tr>
<tr>
<td>2080</td>
<td>63,387 (49.6%)</td>
<td>76,356 (59.8%)</td>
<td>54,721 (42.8%)</td>
<td></td>
</tr>
<tr>
<td>2105</td>
<td>44,592 (34.9%)</td>
<td>61,489 (48.1%)</td>
<td>34,518 (27.0%)</td>
<td></td>
</tr>
</tbody>
</table>

Started Tokugawa era in 1603

Fertility assumption
- Med. TFR(2055)=1.26
- High TFR(2055)=1.55
- Low TFR(2055)=1.06

Number of birth and total fertility rate

- Post war baby boom: 2.70 million
  - TFR(1949) = 4.32

- Second baby boom: 2.09 million
  - TFR(2010) = 1.39

- Fire-house year: 1.36 million
  - TFR(1966) = 1.58

- TFR(2005) = 1.26
  - 1.06 million
- TFR(2010) = 1.39
  - 107 million
Population pyramid in 1930

Percentage distribution by age group:

- 0-14: 36.6%
- 15-64: 58.7%
- 65+: 4.8%
Population pyramid in 2005
Population pyramid in 2030

Percentage distribution by age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Med.</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>9.7</td>
<td>8.9</td>
<td>4.9</td>
</tr>
<tr>
<td>15-64</td>
<td>58.5</td>
<td>42.9</td>
<td>37.4</td>
</tr>
<tr>
<td>65+</td>
<td>31.8</td>
<td>30.8</td>
<td>21.2</td>
</tr>
</tbody>
</table>

Fertility assumption
Med. TFR(2055)=1.26
High TFR(2055)=1.55
Low TFR(2055)=1.06
Population pyramid in 2055

Fertility assumption
Med. TFR(2055)=1.26
High TFR(2055)=1.55
Low TFR(2055)=1.06

Percentage distribution by age group

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Med.</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>8.4</td>
<td>10.8</td>
<td>6.6</td>
</tr>
<tr>
<td>15-64</td>
<td>51.1</td>
<td>51.9</td>
<td>50.1</td>
</tr>
<tr>
<td>65+</td>
<td>40.5</td>
<td>37.3</td>
<td>43.4</td>
</tr>
</tbody>
</table>

Male

Female
Trend in the number of major three age groups

Proportion of population aged 65 and more over

Fertility assumptions:
Med. TFR(2055)=1.26
High TFR(2055)=1.55
Low TFR(2055)=1.06
Various trends of future populations under different fertility rates

Assumptions for future population projection

1. Fertility used here various patterns from TFR(2005)=1.26 to the level in 2030
2. Constant survival rate as Life tables in 2005
3. No international migration (Closed population)
Background factors associated with the below replacement-fertility

- The decline in the level of fertility rate is closely associated with the transformation of work force in the structure of major industry related to the gender role.

- The number of younger women increased in labor market, particularly in service sector, and moreover, the degree of regular-employed worker is relatively high among a never-married population.

- As a result, the rise of the percentage of unmarried people was caused, and it brought very low fertility rate to a Japanese society.
Consequences of demographic trends below replacement fertility

(1) Decrease of working-age population
(2) Increase of older age population
(3) Acceleration of population aging due to fertility decline

- Economics: Slower economic growth
  Shrinking labor supply
  Slower growth in worker productivity
  Slower growth in standard of living

- Governmental: Unsustainable medical care and pension costs
  Rising government budget deficits

- Political: Rising voting power of the elderly
Trend of Total Fertility Rates for Selected Countries

![Graph showing trends of total fertility rates for selected countries from 1960 to 2010. The graph includes lines for Canada, France, Germany, Italy, Japan, and the United States. The level of population replacement fertility is indicated by a dashed line.](image-url)
Population supporting ratio
(Ratio=[N(0-14) + N(65+)] / N(15-64))

China
Korea
UK
FRANCE
GERMANY
JAPAN
CANADA
ITALY
USA

Policy options in aging societies

• **Pension system options:**
  Raise age at eligibility; encourage private savings; reduce benefits; raise taxes.

• **Labor force options**
  Encourage higher labor force participation and later age at retirement.

• **Demographic options**
  Encourage childbearing; permit more immigration.
Social security expenditure in Japan

<table>
<thead>
<tr>
<th>year</th>
<th>Total</th>
<th>Pensions</th>
<th>Medical care</th>
<th>Welfare &amp; Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>94,084.9</td>
<td>49,544.3</td>
<td>29,611.7</td>
<td>14,928.9</td>
</tr>
</tbody>
</table>

Situation of living expenses for older people

percentage of pension in total income for elderly household

- Only pension, 61.5%
- from 80 to 99%, 9.6%
- from 60 to 89%, 11.4%
- from 40 to 59%, 8.3%
- from 20 to 39%, 5.4%
- under 20%, 3.5%

Source: Statistics and Information Department, MHLW "Comprehensive Survey of Living Conditions 2009"
Balance of annual revenue and annual expenditure

- Ageing of population
- Increase of the cost of social security
- Increase of financial deficit
- = increase of Government bond

Instability of politics
Reform of Tax and The cost cut
Japan's Diet election results, seats by party

<table>
<thead>
<tr>
<th>Diet</th>
<th>Total</th>
<th>DPJ and allies</th>
<th>Other</th>
<th>LDP and allies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower house</td>
<td>480</td>
<td>318</td>
<td>22</td>
<td>140</td>
</tr>
<tr>
<td>(2009)</td>
<td>100.0</td>
<td>66.3</td>
<td>4.6</td>
<td>29.2</td>
</tr>
<tr>
<td>Upper house</td>
<td>242</td>
<td>109</td>
<td>28</td>
<td>105</td>
</tr>
<tr>
<td>(2010)</td>
<td>100.0</td>
<td>45.0</td>
<td>11.6</td>
<td>43.4</td>
</tr>
</tbody>
</table>

Reform of finance = increase of Tax aimed to the social security

<table>
<thead>
<tr>
<th>Indirect Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
</tr>
<tr>
<td>FRANCE</td>
</tr>
<tr>
<td>CANADA</td>
</tr>
<tr>
<td>JAPAN</td>
</tr>
</tbody>
</table>
Policy options in aging societies

• **Pension system options:**
  Raise age at eligibility; encourage private savings; reduce benefits; raise taxes.

• **Labor force options**
  Encourage higher labor force participation and later age at retirement.

• **Demographic options**
  Encourage childbearing; permit more immigration.
Age-shape of Population by working status in 2005

- Male population
- Female population
- Population in labour market
- Population not in labour market

Population (in thousand)
Percentage of regular and non-regular employees by age and sex

Source: Statistics Bureau, 2007 Employment Status Survey
Concluding remarks

• The high-powered ageing is closely associated with the very low fertility, particularly increase of never-married population among younger ages, in Japan.

• The development of a service-oriented domestic economy, has led to an increase in employment opportunities for women in the service sector since the 1980s. However, it brought us an increase of the non-regular employees at the tight gender role society.

• The government introduced the policy aimed to supporting the balance between work life and family life. However such policy dose not seem to be effective. Because the institutional constrain in labor market have not changed for working women and also elderly people who are wishing to work.

• The issue of the population problems appear to be caused by a mismatch between the system, structure and practice of the Japanese society and the human reproductive system, and dealing with these problems should be one of the main tasks for modern society.
## Relative frequency distribution of number of households by income group, 2009

<table>
<thead>
<tr>
<th>Income group</th>
<th>All households</th>
<th>Aged household</th>
<th>Households with children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accumulated percentage (%)</td>
<td>Percentage (%)</td>
<td>Accumulated percentage (%)</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>100.0</td>
<td>-</td>
</tr>
<tr>
<td>Less than 500 thousand yen</td>
<td>1.7</td>
<td>1.7</td>
<td>3.3</td>
</tr>
<tr>
<td>500 thousand~Less than 1 million yen</td>
<td>6.6</td>
<td>4.9</td>
<td>14.3</td>
</tr>
<tr>
<td>1 million~1.5 million</td>
<td>13.3</td>
<td>6.7</td>
<td>27.8</td>
</tr>
<tr>
<td>1.5 million~2 million</td>
<td>19.4</td>
<td>6.1</td>
<td>39.5</td>
</tr>
<tr>
<td>2 million~2.5 million</td>
<td>26.5</td>
<td>7.1</td>
<td>50.8</td>
</tr>
<tr>
<td>2.5 million~3 million</td>
<td>33.3</td>
<td>6.8</td>
<td>62.1</td>
</tr>
<tr>
<td>3 million~3.5 million</td>
<td>40.5</td>
<td>7.2</td>
<td>72.8</td>
</tr>
<tr>
<td>3.5 million~4 million</td>
<td>46.6</td>
<td>6.1</td>
<td>80.6</td>
</tr>
<tr>
<td>4 million~4.5 million</td>
<td>52.2</td>
<td>5.5</td>
<td>85.3</td>
</tr>
<tr>
<td>4.5 million~5 million</td>
<td>56.6</td>
<td>4.5</td>
<td>88.6</td>
</tr>
<tr>
<td>5 million~6 million</td>
<td>65.5</td>
<td>8.9</td>
<td>93.7</td>
</tr>
<tr>
<td>6 million~7 million</td>
<td>72.6</td>
<td>7.1</td>
<td>95.6</td>
</tr>
<tr>
<td>7 million~8 million</td>
<td>78.8</td>
<td>6.2</td>
<td>96.8</td>
</tr>
<tr>
<td>8 million~9 million</td>
<td>83.8</td>
<td>5.1</td>
<td>97.6</td>
</tr>
<tr>
<td>9 million~10 million</td>
<td>87.7</td>
<td>3.9</td>
<td>98.1</td>
</tr>
<tr>
<td>10 million or more</td>
<td>100.0</td>
<td>12.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Average income per one household
- **Average income per one household** (Ten thousand yen): 547.5
- **Average income per one household member** (Ten thousand yen): 208.4

### Average income for households
- **Average income per one household** (Ten thousand yen): 297.0
- **Average income per one household member** (Ten thousand yen): 192.9
Pension system in Japan

The National Pension Fund

Defined Contribution Pension
(individual type)

Employees’ Pension Fund
(Entrusted)

Defined Benefit Corporate Pension Plan

Tax-Qualified Pension Plan

Occupational addition

Mutual Aid Association Pension

National Pension (Basic Pension)

Dependent spouses of Category-2 insured persons

Self-employed persons, etc.

Private salaried workers

Public officers, etc.

10.63 million people

20.35 million people

39.08 million people

70.07 million people

(Note) “Category-2 insured persons, etc.” include those covered by the Employees’ Pension Insurance (include category-2 insured persons and those aged 65 or over who are eligible for pension benefits on the grounds of old age or retirement).
Number of employees by annual income and gender

Source: Statistics Bureau, 2007 Employment Status Survey