The Elderly as a Potential Source of Economic Growth in Aging Japan

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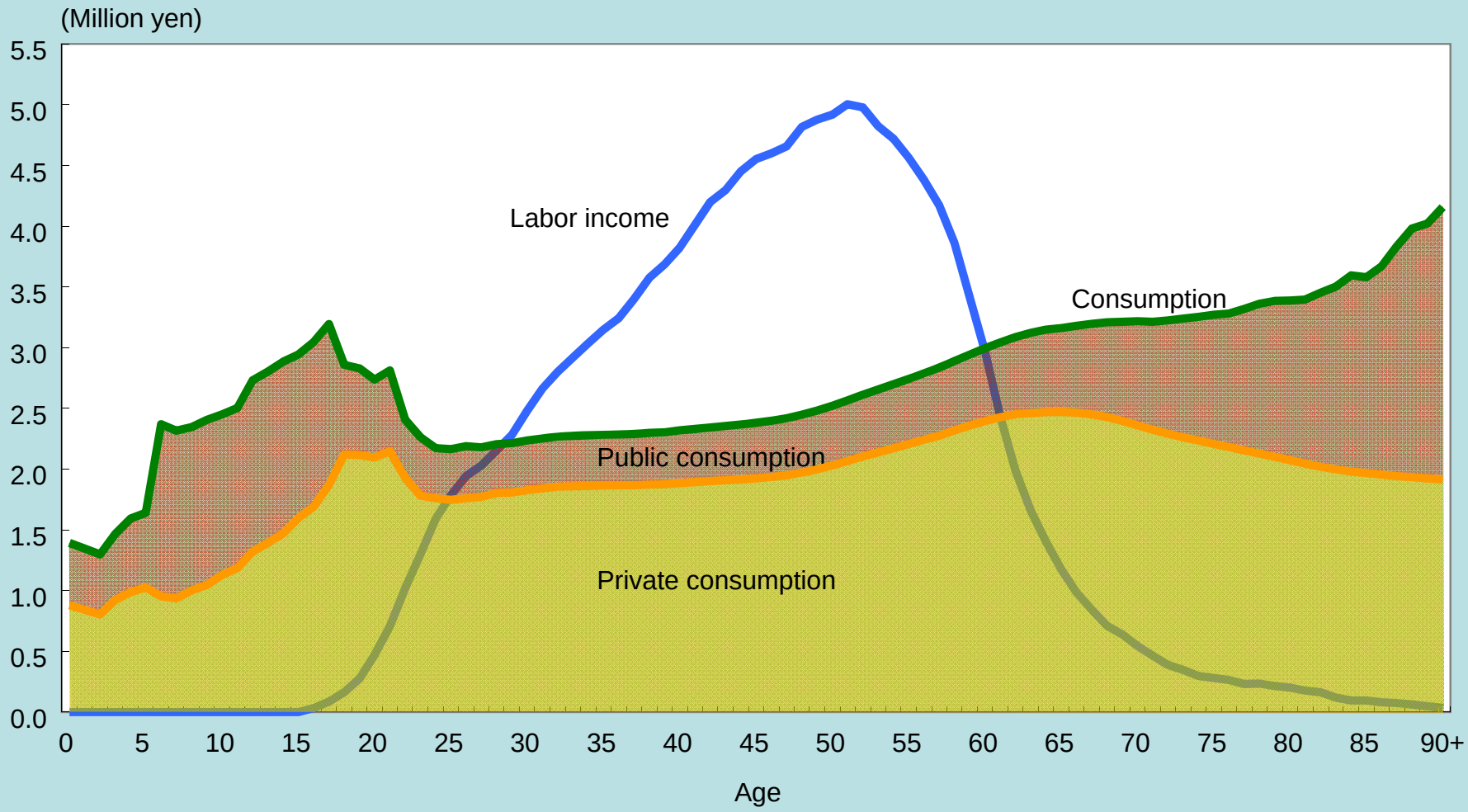
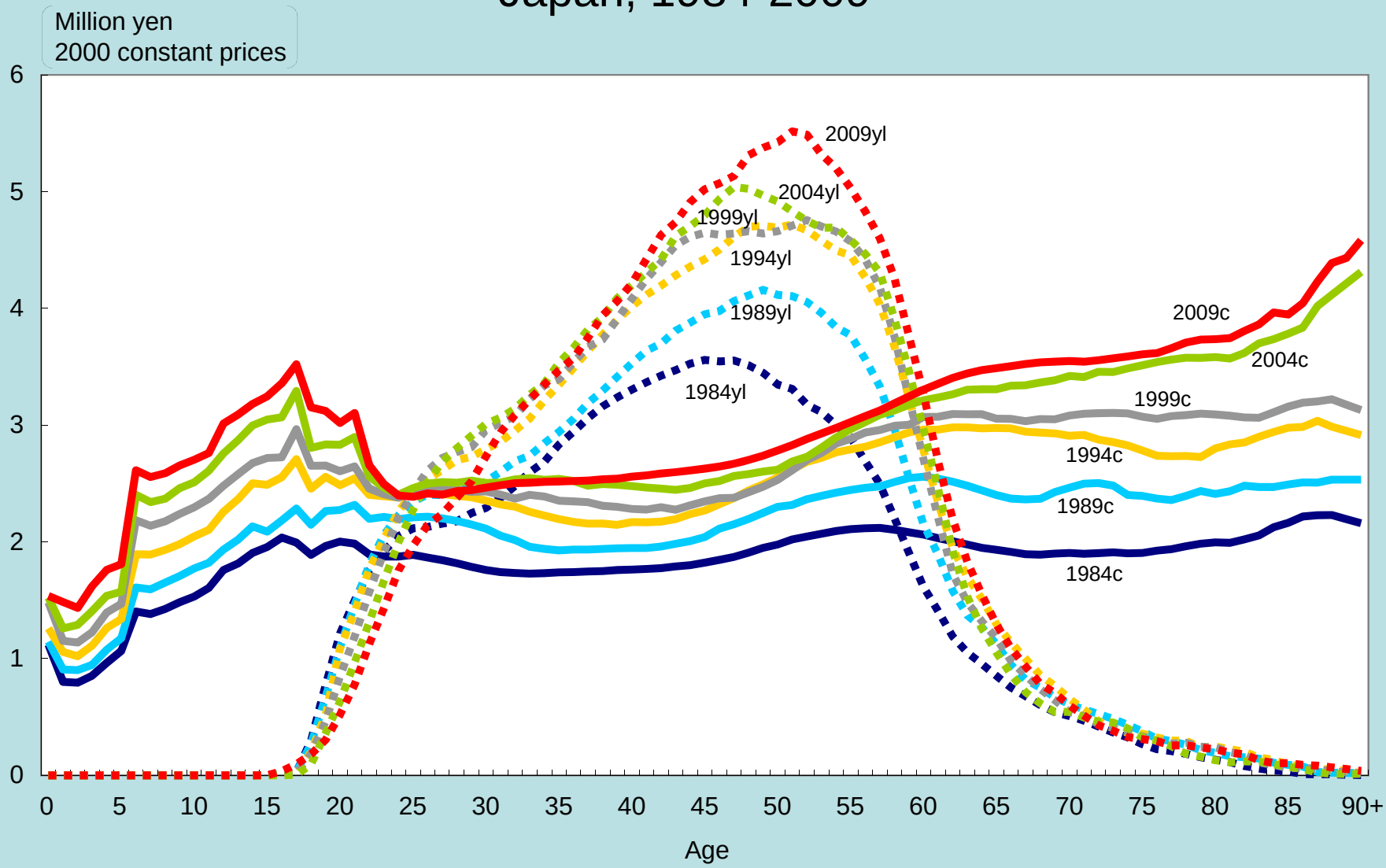
Japan's Most Important Graph

Per capita lifecycle: Japan (2009)



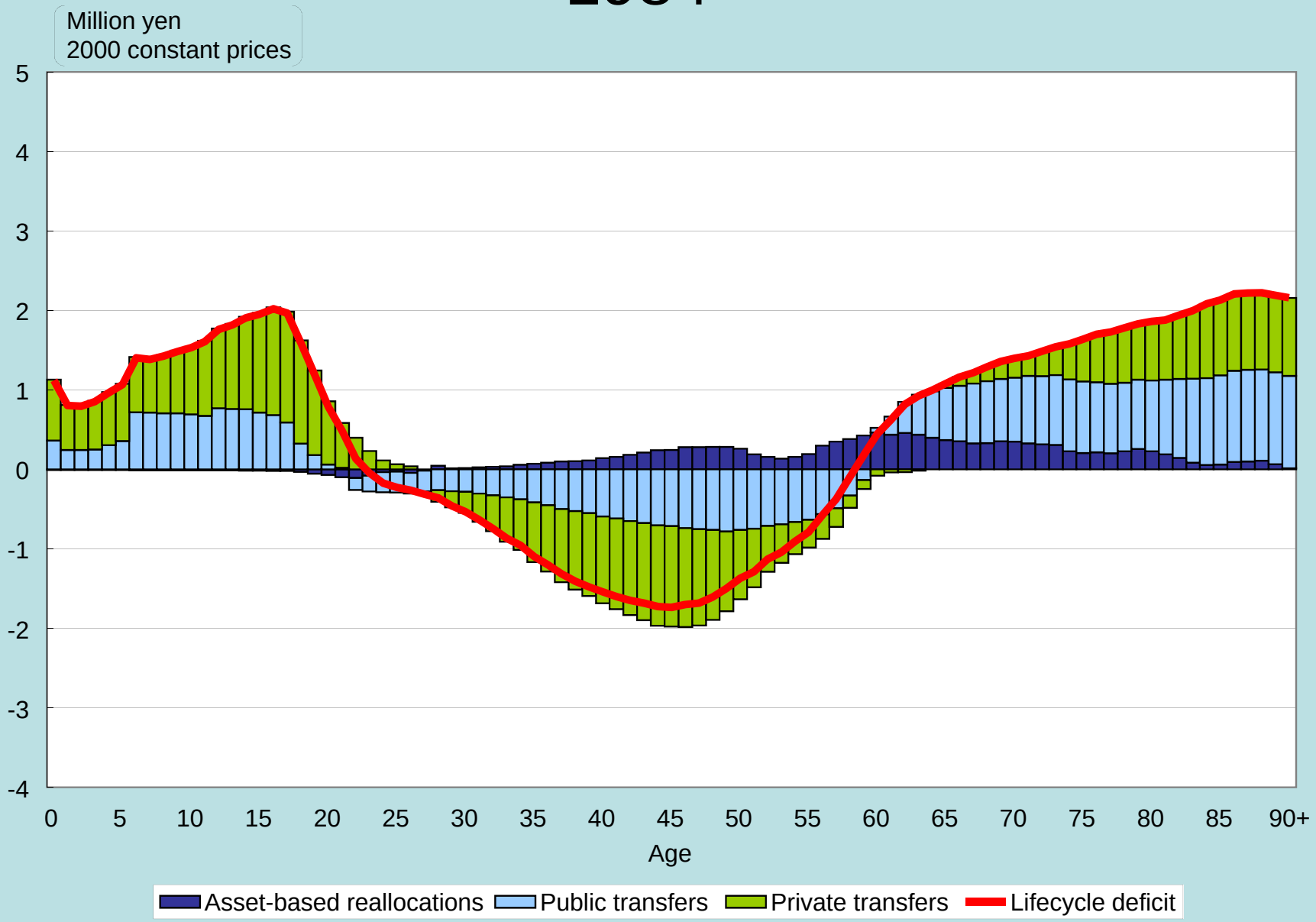
Per capita age specific profiles of consumption and labor income
Japan, 1984-2009

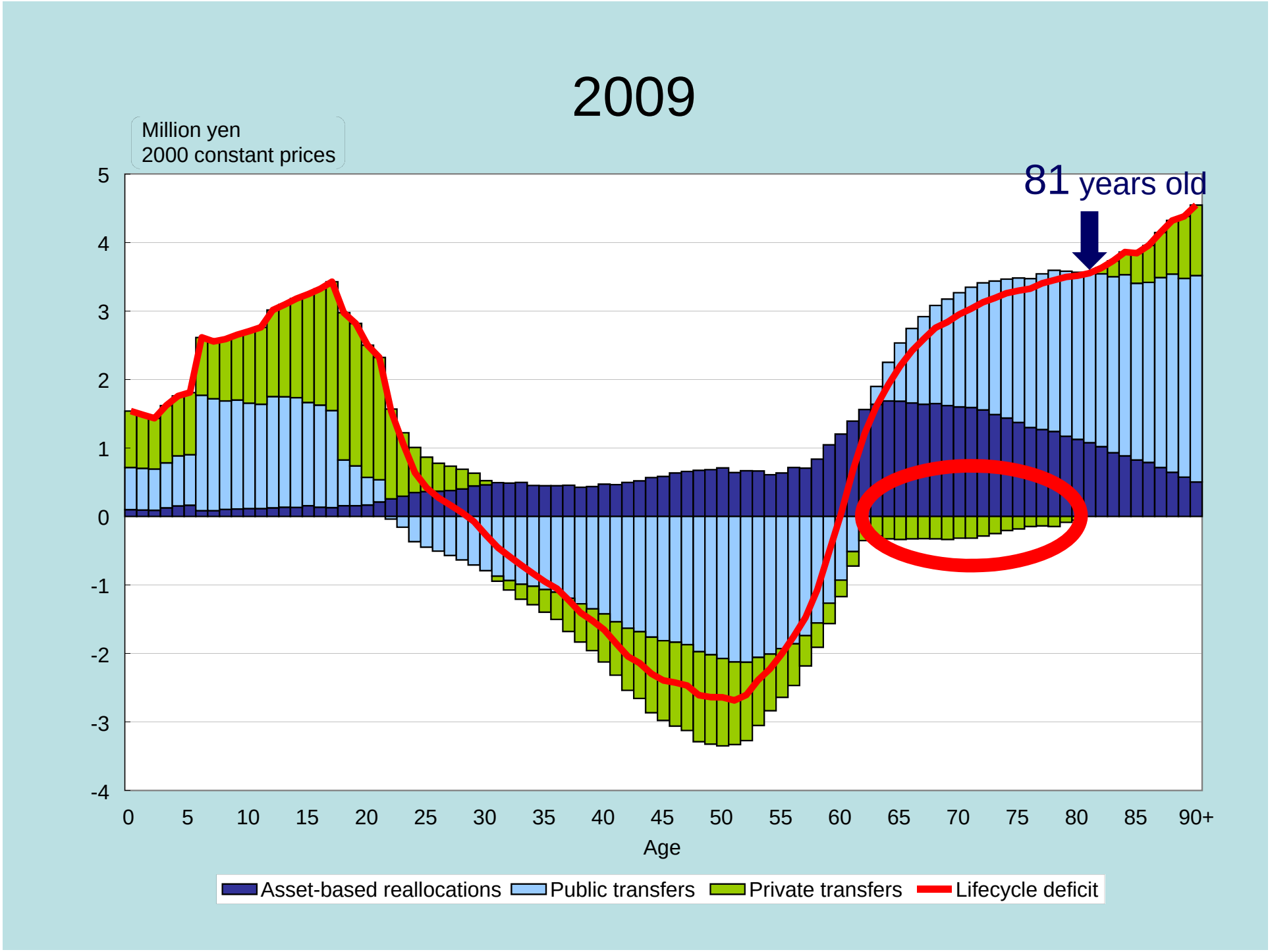


Note: “c” denotes consumption, and “yl” denotes labor income.

Changing per capita lifecycle deficit in Japan 1984-2009

1984


Million yen
2000 constant prices
5
4
3
2
1
0
-1
-2
-3
-4
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90+
Age
Asset-based reallocations
Public transfers
Private transfers
Lifecycle deficit


2009
Million yen
2000 constant prices
81 years old
5
4
3
2
1
0
-1
-2
-3
-4
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90+
Age
Asset-based reallocations
Public transfers
Private transfers
Lifecycle deficit

Message (1)

In Japan, the elderly are playing the role of the society's safety net…

Changing cutoff ages for net public transfers and net familial transfers:

60 → 63 years old

vs.

64 → 81 years old

Message (2)

The elderly as a source of untapped work capacity in Japan

“Untapped Work Capacity”

- we have attempted to quantify the untapped work capacity in Japan in terms of health status.
- we do not include a number of factors affecting the decision of labor supply (e.g., wages) but focus on the health disability to examine to what extent the labor supply of the elderly is limited

Data

- JSTAR (Japanese Study on Aging and Retirement).
- Comparable to HRS/ELSA/SHARE.

“Untapped Work Capacity”

- We employ a linear probability model to regress a binary variable of employment, which is equal to 1 if the individual is in the labor force (both working and looking for a job) and 0 if the individual is out of the labor force, on the following explanatory

- We use the sample of individuals aged 50 to 59 and combine both sexes for the baseline regression.

Explanatory variables:

(1) dummy variables for self-reported health status (five-point scale)

(2) the prevalence of limitations on instrumental activities of daily living (IADLs)

(3) the CESD depression scale

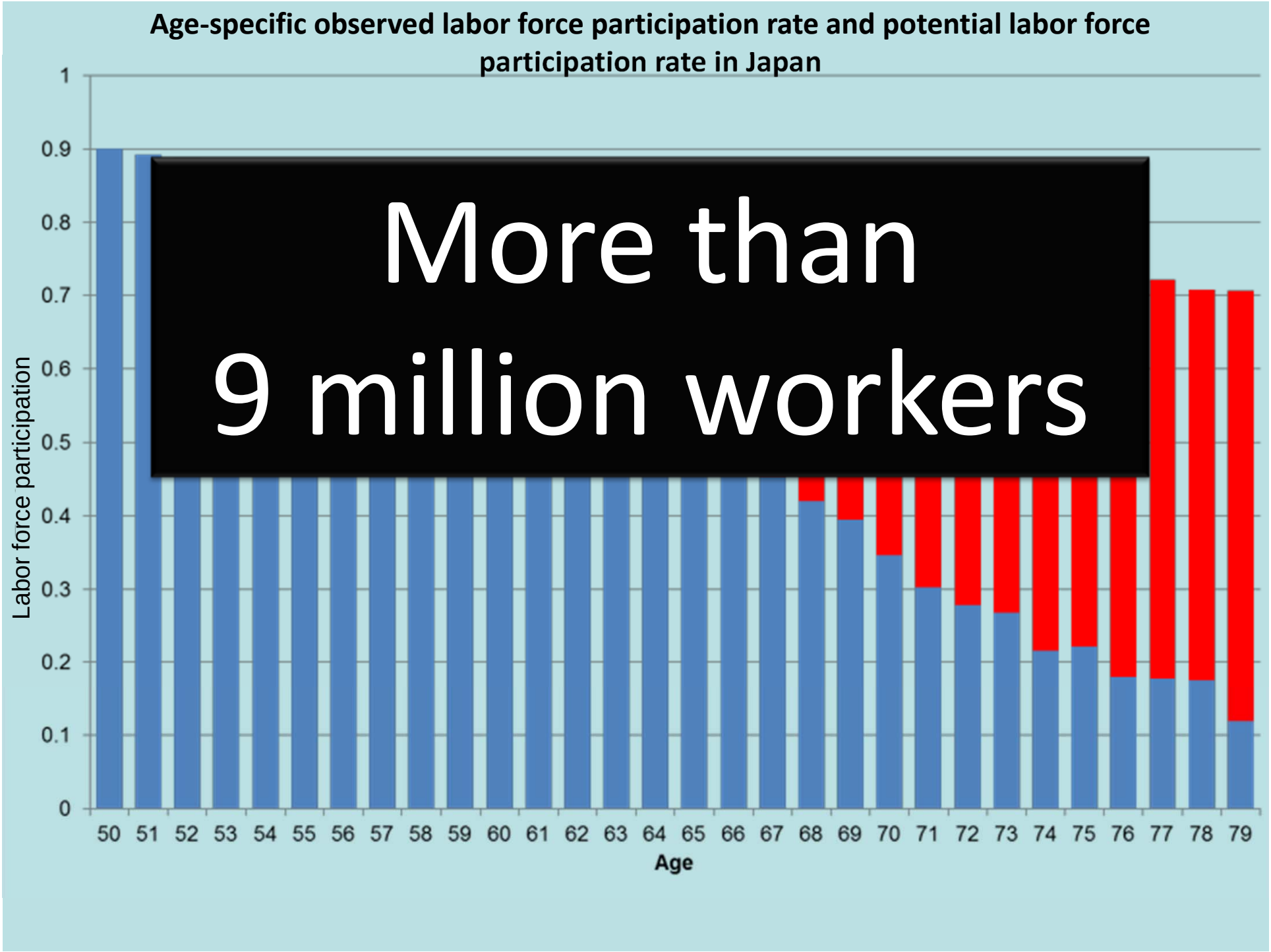
(4) the Nagi physical ability index

(5) limitations in sensory organs (eyesight, hearing and chewing)

(6) individual attributes, such as sex, educational attainment and marital status. In addition, dummy variables for each municipality and survey years are included.

“Untapped Work Capacity”

- The estimated regression for those 50-59 was applied to those aged 60-79 to compute the additional work force to be generated


Age-specific observed labor force participation rate and potential labor force participation rate in Japan
More than
9 million workers
Labor force participation
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79
Age

- Applied the three different wage levels:
- Case1: NTA’s age-specific labor income profile
- Case2: Market wage rates
- Case3: Minimum wages

In Case II, the labor income to be generated by the additional elderly workers corresponds to 4.8% of Japan's real GDP in 2014.

"Silver"

demographic dividend

Message (3)

Changing cognitive function among old age groups and their economic potential contributions

Changing cognitive function among the elderly: Global evidence

●**Dementia prevention, intervention, and care**, ***Lancet*** **2017** Vol.390. pp.2673-2734. **Livingston, Gill, et al.**
In 2015, there are 50 million elderly persons suffering from dementia, and it is expected to increase to 150 million by 2050. The economic cost of dementia was estimated to be US$818 billion. Nearly 85% of costs are related to familial and social, rather than medical, care.

●Medically, dementia is not curable**,** but **modifiable!**

●Countries where the onset of dementia has been delayed

USA, UK, Sweden, the Netherlands, Denmark, Germany, Canada

●Factors contributing this new trend are as follows: medical progress, lifestyle changes, better social and economic life, particularly education

●Countries where the onset of dementia has been getting earlier

China and **Japan**

International comparison of the CADR score

● USA	·····	0.10
●Northern Europe (Denmark, UK, Ireland, Sweden)	·····	0.12
●Western Europe (Austria, Belgium, France, Germany, the Netherlands, Poland, Switzerland)	·····	0.18
●Southern Europe (Greece, Italy, Spain)	·····	0.32
●Asia		
India	·····	0.14
China	·····	0.15
Japan	·····	**0.18**

Regression Analysis of Immediate Recall Score

(Dependent variable = immediate recall score)

Explanatory variables	Coefficient	t-value
Age		
50–54	0.34599	1.88
55–59	0.13683	1.67
60–64 †	–	–
65–69	−0.25622	−3.85
70–74	−0.51452	−7.23
75–79	−0.85736	−11.21
80+	−1.09697	−10.05
Sex		
Men	−0.69841	−14.95
Women †	–	–
Marital status		
Married	0.20015	3.89
Not married †	–	–
Work status		
Working	0.08243	1.68
Not working †	–	–
Education		
Junior high †	–	–
Senior high	0.29770	5.07
Junior college	0.54121	7.19
University	0.61923	7.91
Health status		
Very good	0.06619	0.80
Good	0.10765	1.39
Fair †	–	–
Rather bad	−0.04787	−0.64
Bad	−0.14599	−0.83
CESD16 score	−0.06311	−1.08
IADL score	0.05047	7.06
Municipalities		
Takigawa	−0.61109	−5.89
Sendai	−0.33201	−3.27
Adachi	−0.45270	−4.19
Chofu	−0.45723	−4.17
Kanazawa	−0.43710	−4.27
Shirakawa	−0.29666	−3.17
Tondabayashi	−0.25684	−2.52
Hiroshima	−0.73435	−8.42
Tosu	−0.78988	−7.97
Naha †	–	–
Year of survey		
2013 †	–	–
2015	0.30753	7.1
Intercept	4.04219	28.01

Adjusted R-squared = 0.1383

Number of observations = 6,576

Message (4)
Unprecedented value shifts

Thank you