



Hong Kong

6-9 May 2012



How social security is responding to the low birthrate and longevity? (focusing on annuity)

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Session Number: TBR7



Joint IACA, IAAHS and PBSS Colloquium in Hong Kong
www.actuaries.org/HongKong2012/

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Today's presentation

My suggestion

For responding to the low birthrate and longevity in Japan

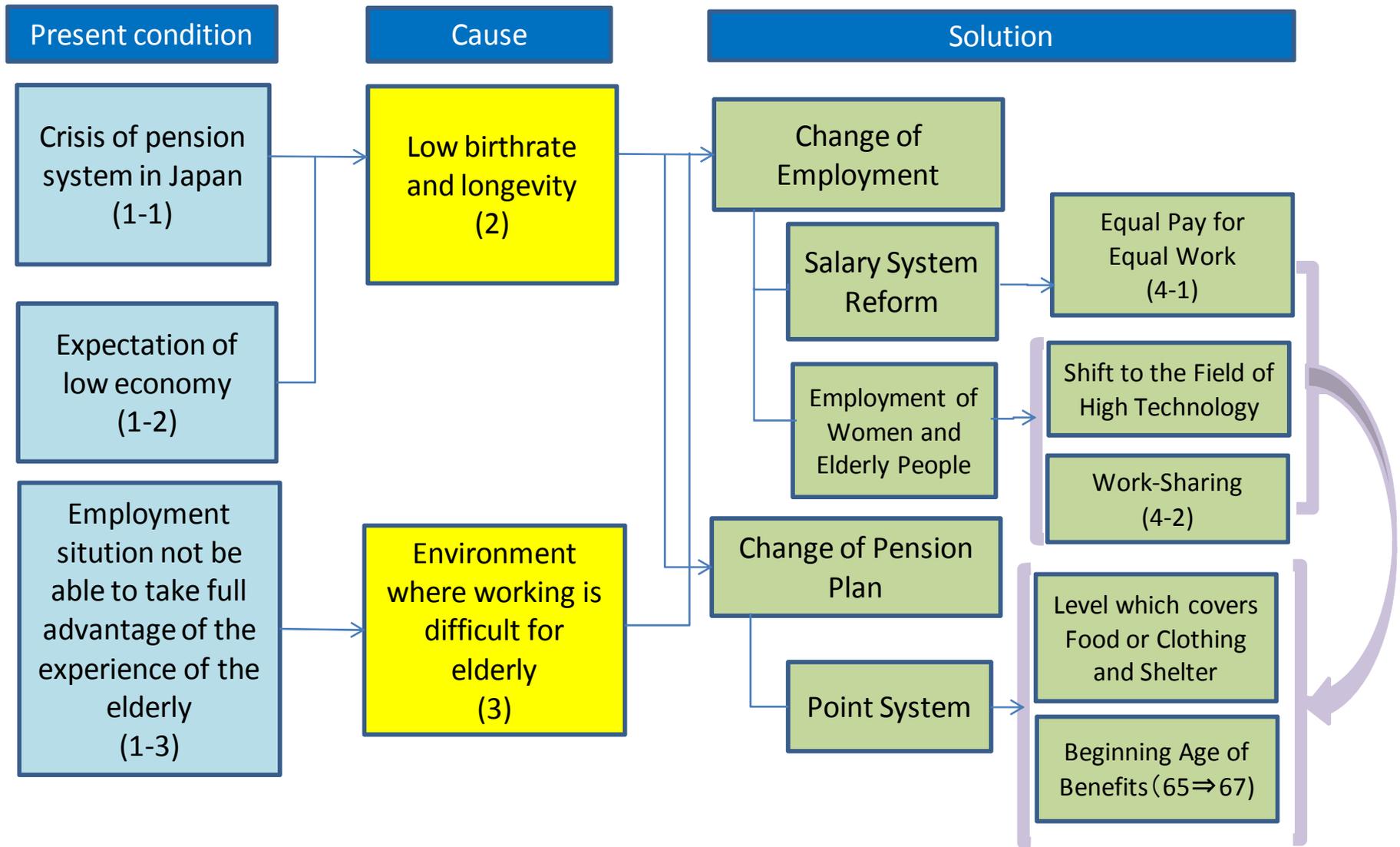
▪ Change of Employment System

- ✓ Equal pay for equal work
- ✓ Work-sharing

▪ Change of Pension Plan

- ✓ Point system
A mechanism which accumulates the premium subscribed to the system as a point during working, and uses it as living expenses of old age

Today's presentation



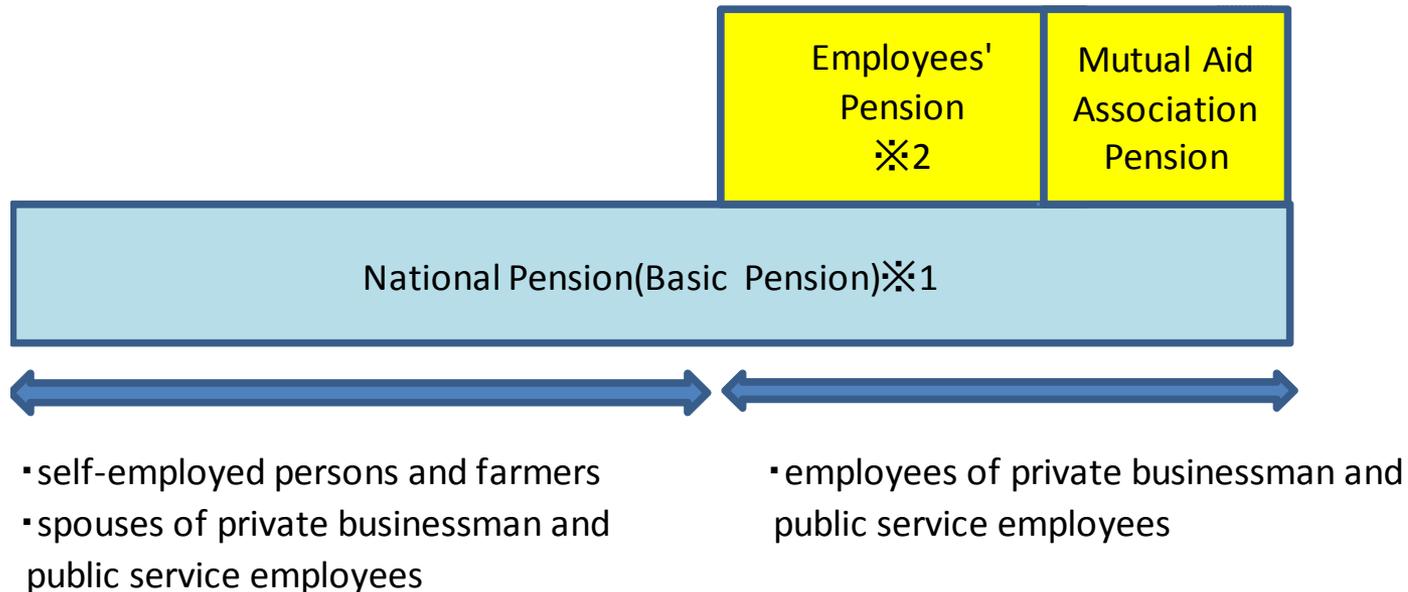
1. Present condition in Japan

1.1 Crisis of pension system in Japan

The Japanese public pension system is a system of two layers.

- **National Pension: all nation**
- **Employees' Pension :company employee**
or Mutual Aid Association Pension :civil servants

The outline of Japanese Public Pension System



※1: Pension benefit is determined according to the covered period.

※2: Pension benefit is determined according to the total salary.

1.1 Crisis of pension system in Japan

By the 2004 pension reform, Macro-Slide Formula which adjusts the level of benefits has been introduced due to the low birthrate and longevity.

Macro-Slide Formula

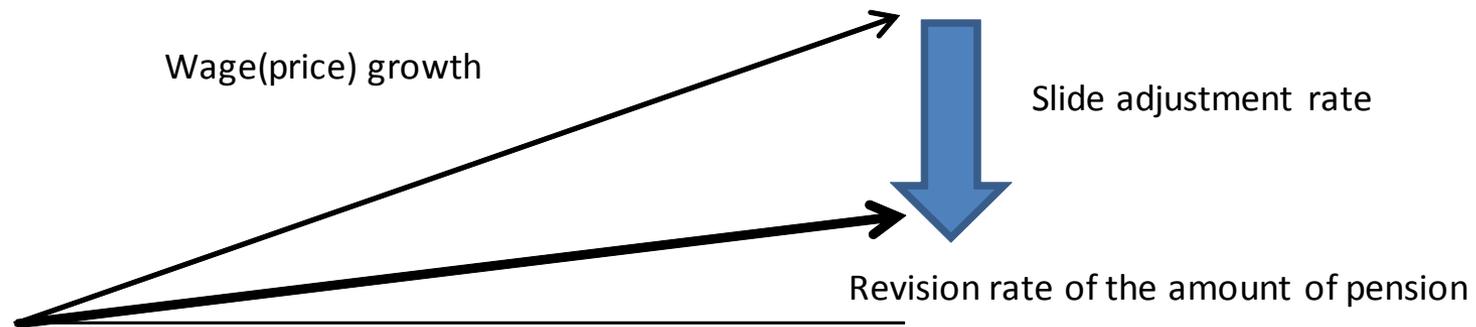
In calculating amount of pension, the system that adjust growth of the amount of pension, instead of direct use wage growth and price growth

- people who newly start receiving pension : wage growth - slide adjustment rate※
- people who are currently receiving pension : price growth - slide adjustment rate※

※ slide adjustment rate

increase rate of the total number of people covered by public pensions

+ fixed rate with consideration of growth rate of average life expectancy



1.1 Crisis of pension system in Japan

Though reformation regarding the pension scheme, such as reduction of benefits for future, was done, reliance from the nation cannot be restored.

The reason is why :

- The past political power provided for the transitional measures.
- The present government is considering pulling up a consumption tax rate gradually to secure stable source-of-revenue for social security. However, there are many opinions which the tax increase should be avoided by first reducing other budgets. It is a difficult situation for realization.

1.2 Expectation of low economy

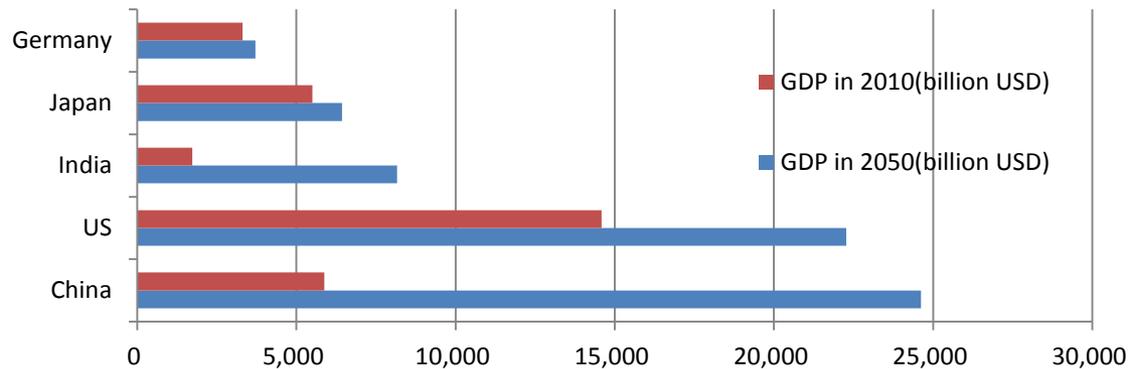
Growth of an economy in Japan is low in recent years, and its expectation in the future is low even in high growth assumption.

Forecast of GDP in Japan (Source: Cabinet Office(2011))

	Assumption	2012	2013	2014	2015	2020	2023
Real growth rate	high growth	2.2	2.1	1.4	1.7	2.3	2.3
	low growth	2.2	1.5	0.7	0.9	1.2	1.1
Nominal growth rate	high growth	2.0	2.7	4.1	3.6	3.7	3.5
	low growth	2.0	1.7	2.6	1.8	1.8	1.8

Assumption : Consumption tax increase from 5% to 8% in 2014, to 10% in 2015.

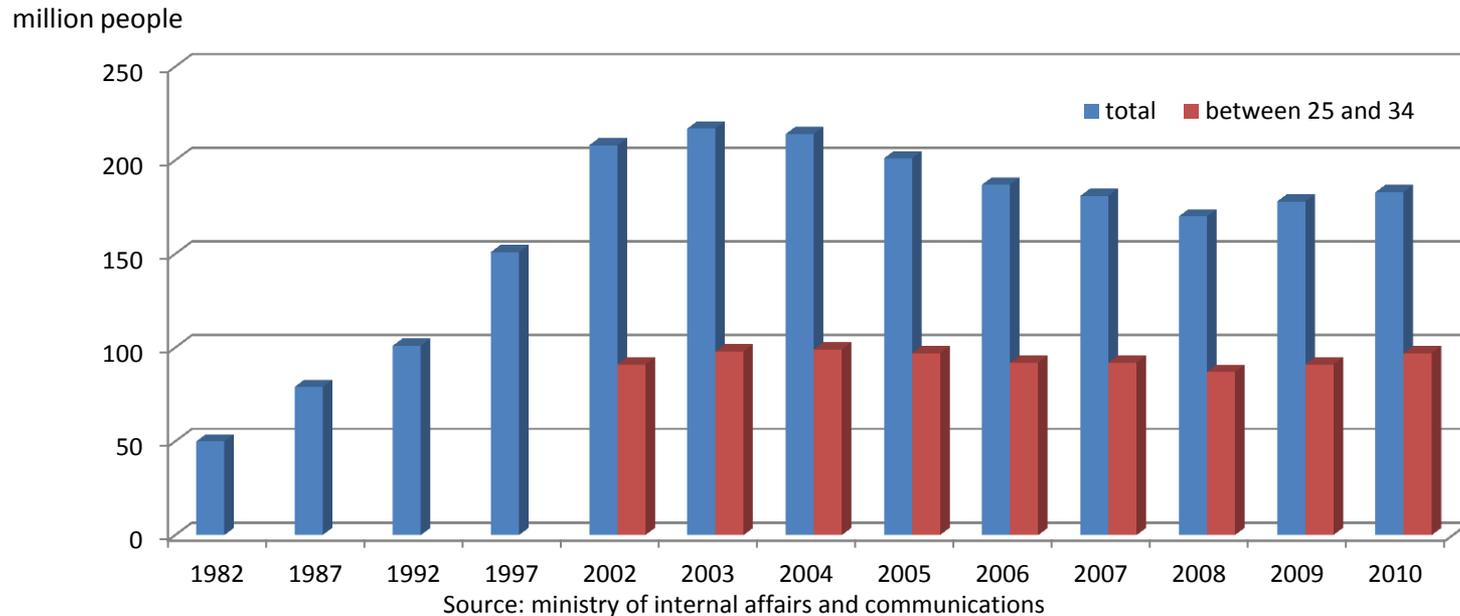
Forecast of GDP (Source: HSBC Global Research, The world in 2050 (2011 Jan))



1.2 Expectation of low economy

By reluctance to future employment adjustment due to an expectation of low economy, major company employed many permanent part timers since 2002.

Transition on the number of permanent part-timer



Change in the number of permanent part timers around 25~34 years old isn't seen in spite of the prosperity or the labor force reduction.

1.3 Employment situation not be able to take full advantage of the experience of the elderly

Turning elderly people's previous experience to advantage is difficult after they retire.

<the hope and the situation about their workplace after retirement age >

(%)

	Work in the same company at the time of retirement age	Work in the different company at the time of retirement age	Self-employed individuals	Retirement from work	Other
Desired percentage	47.9	16.7	5.3	15.8	14.3
Actual percentage	28.1	15.9	4.2	21.0	30.8

<the hope and the situation about their job after retirement age >

(%)

	the same work at the time of retirement age	the different work at the time of retirement age	Retirement from work	Other
Desired percentage	38.8	12.1	16.1	33.0
Actual percentage	31.4	13.2	21.0	34.4

Source: The Japan Institute for Labor Policy and Training 'Research on elderly people's promotion of working (2009)'

2. Low birthrate and longevity

2. Low birthrate and longevity (the cause of 1.1and 1.2)

The number of workers supporting the elderly people is decreasing.

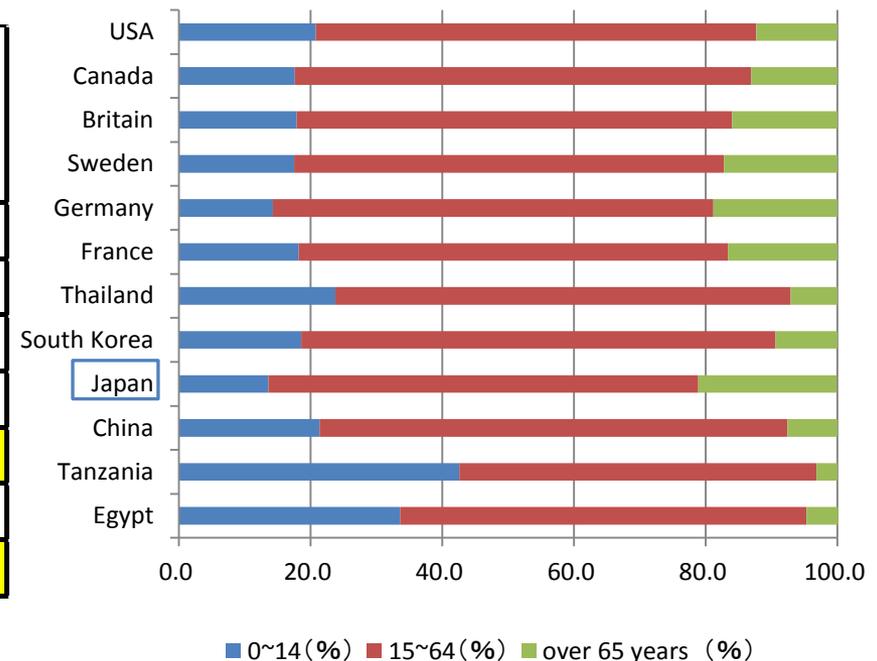
2.6 persons in 2009 ⇒ 1.2 persons in 2055

<Movement and prospects of percentage of over 65 years population >

	over 65 years population/ total population	over 65 years population/ population of over 20 but younger than 65 years
1960	5.70%	10.6% (one per 9.5 persons)
1980	9.10%	15.1% (one per 6.6 persons)
1990	12.00%	19.6% (one per 5.1 persons)
2000	17.30%	27.9% (one per 3.6 persons)
2009	22.70%	38.5% (one per 2.6 persons)
2030	31.80%	58.2% (one per 1.7 persons)
2055	40.50%	85.0% (one per 1.2 persons)

(Source) Statistics Bureau of the Ministry of Internal Affairs and Communication "National Census", "Population Estimates" National Institute of Population and Social Security Research, "Japan's Future Population Estimates" (Estimate at December 2006)"

<The population rate(three classification) according to age in foreign countries >

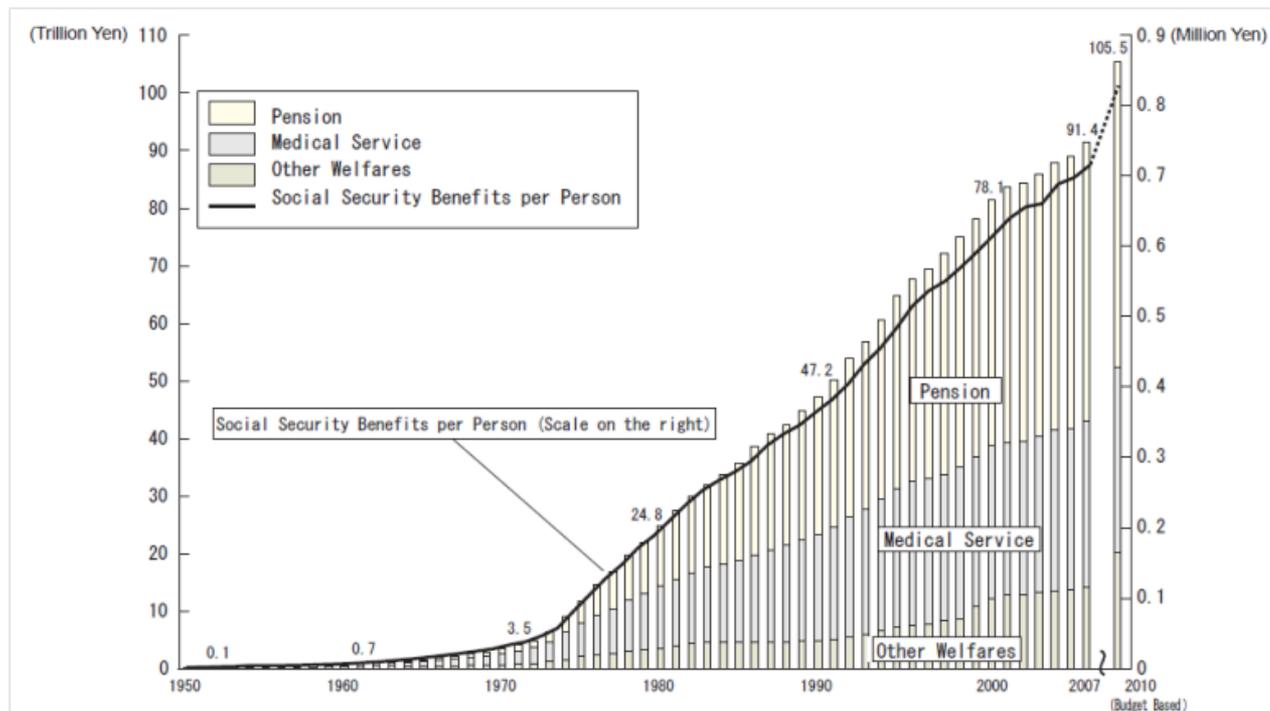


(Source: United Nations , World Population Prospects(2004))

2. Low birthrate and longevity (the cause of 1.1and 1.2)

Social security benefits per person are increasing. Especially, a benefit of pension is huge.

- The expense in 2010 is five times in 1980.
- The expense occupies 50% of the whole social security cost.



Sources: National Institute of Population and Social Security Research "FY 2006 Social Security Benefits"FY2009 (budget based)- Estimated by MHLW.

Note: Figures shown in the diagram are social security benefits (Trillion Yen) of 1950, 1960, 1970, 1980, 1990, 2000 as well as FY 2009 (budget based).

Reference: Social security benefits per person in FY2007 was 716,000 yen and 828,000 yen in FY2010 (budget base)

3. Environment where working is difficult for elderly

3. Environment where working is difficult for elderly (the cause of 1.3)

There are many companies which update an annual contract regarding the employment after elderly people's retirement age. However, a salary decreases to about 60 percent before retirement age.

The pensionable age of the public pension plan is pulling up gradually to be 65 years old from fiscal year 2013.



Choosing from the following three options was legislated.

As a result, the most is :

- extension of the retirement age : 6.1%
- **continuous employment** (= employment system which set the contract term) : **93.3%**
- abolition of the rule of retirement age: 0.6%

Source: the ministry of internal Affairs and Communications(2010 survey)

4. Development on the employment situation

4.1 Equal pay for equal work

For making an optimal employment situation for the elderly in Japan

salary system:

a seniority-based system \Rightarrow equal pay for equal work

The reduction of wages prevents the elderly from working.



There is no convincing feeling for the reduction of wages.

Wages decrease sharply as compared with retirement age before

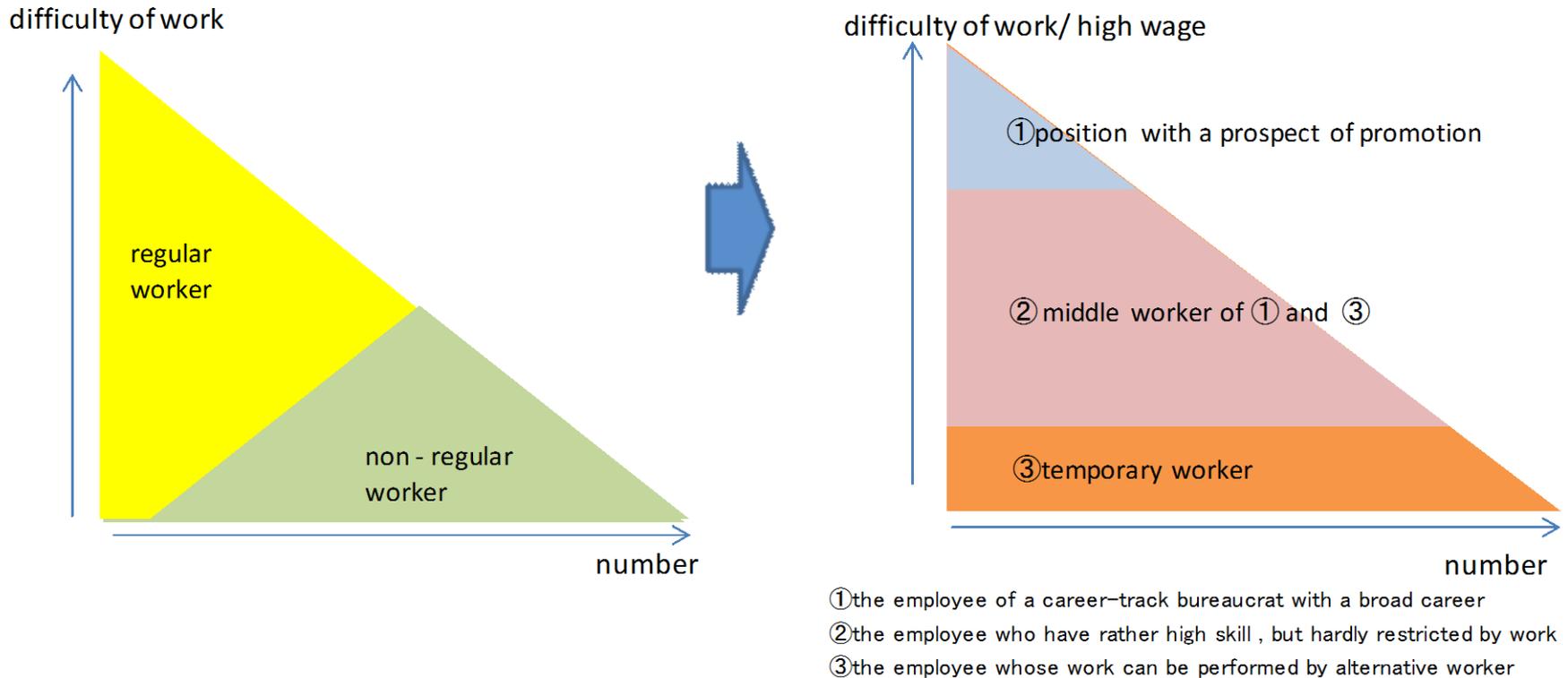
The reduction of wages by public pension, which is paid to the elderly



Change to the system which relates a wage structure to the salary according to work rather than to the type of employment
 \Rightarrow **equal pay for equal work**

4.1 Equal pay for equal work

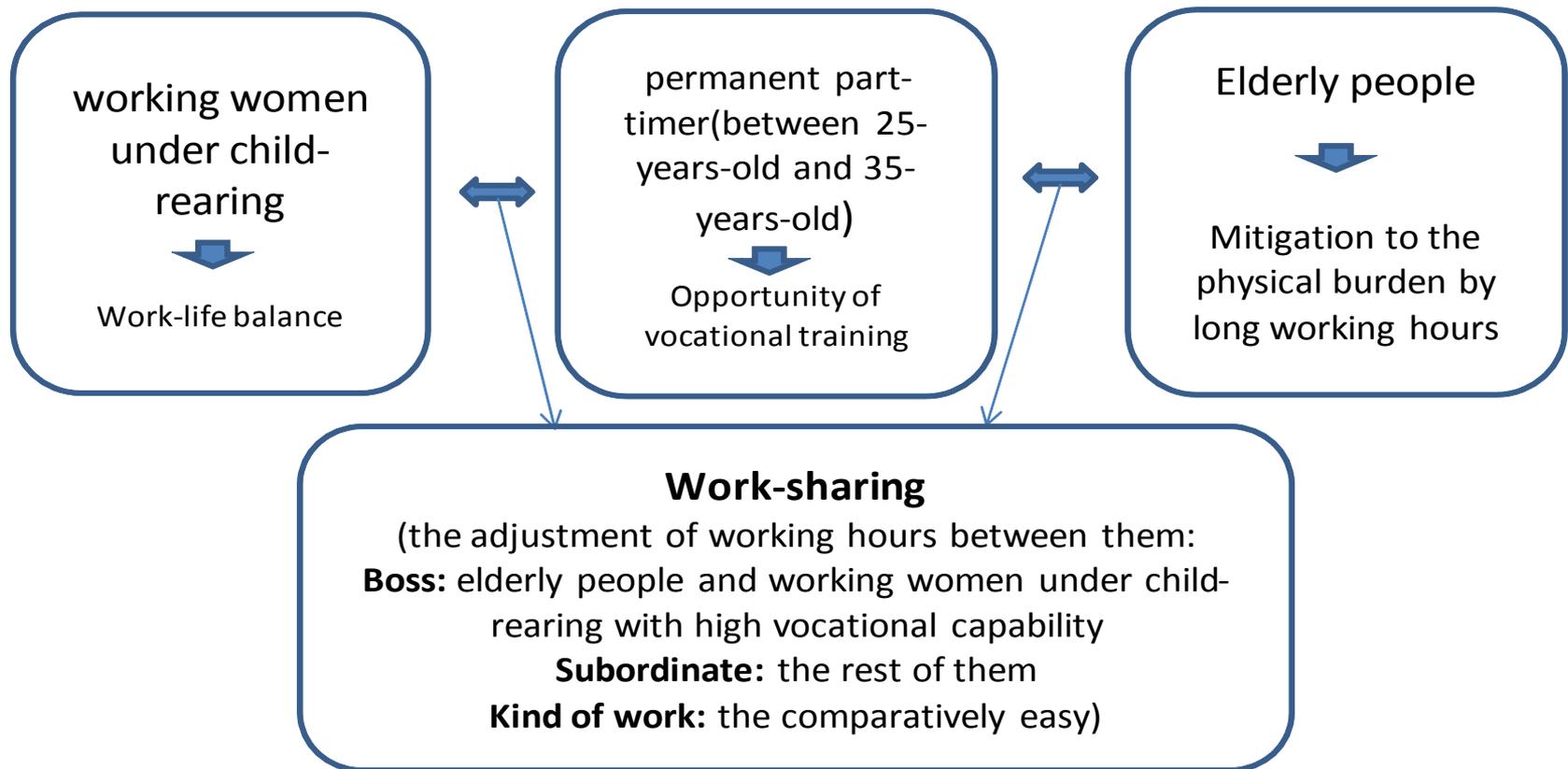
If equal pay for equal work is introduced in Japan, the structure of wage system will be changed as follows.



Elderly wage has been suppressed because the elderly are adopted as a non-regular employment, but the salary will increase by engaging in a difficult work in the future on the new system.

4.2 Work-sharing

In response to the decline of the working population in the future, it will be necessary to promote employment of women and the elderly.
⇒ Work-sharing(various service forms, such as working for a short time are accepted.)



5. Pension system which corresponds to the low birthrate and longevity

5.1 The point system

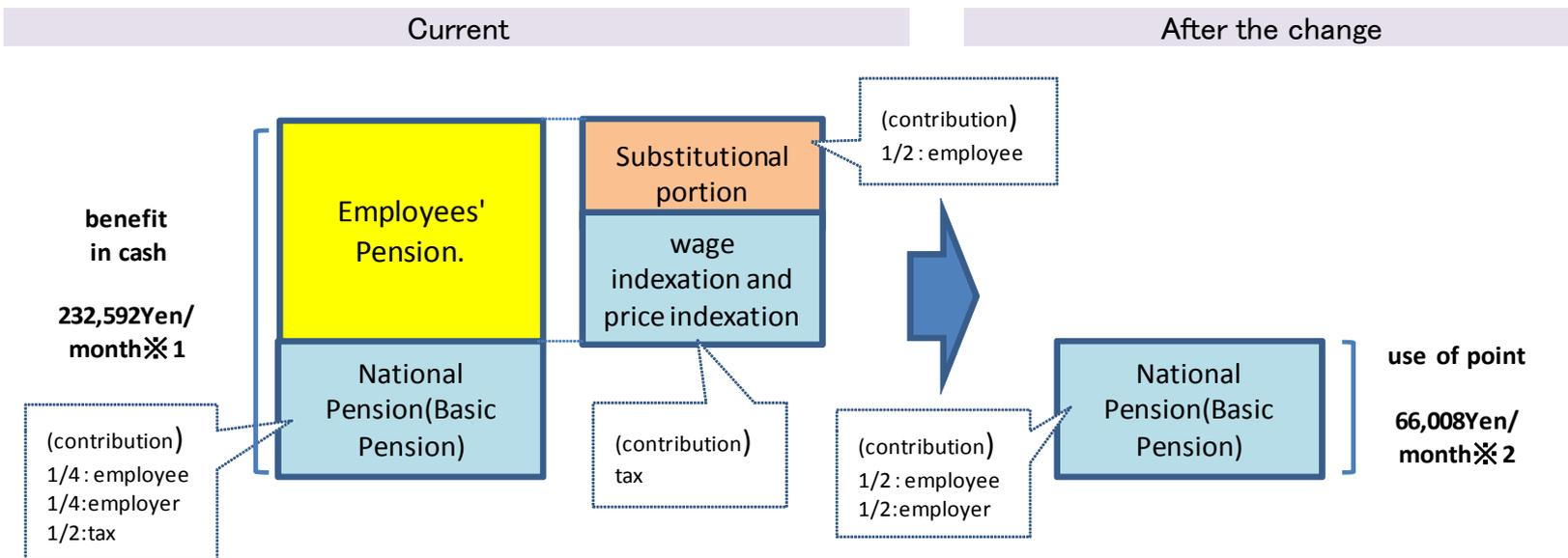
Aiming at a limited government to control the obligation fees of a country

Benefit level: The minimum level which can cover food, clothing and shelter

Pensionable age: Hike up to the 67 years old

Mutual help: Limits to a premium for exempt insurance and the extra benefit as countermeasures to the falling birthrate

<Benefit level>



※1: Married couple of private company workers (Employees' Pension is for 40 years of active participants with average wage)

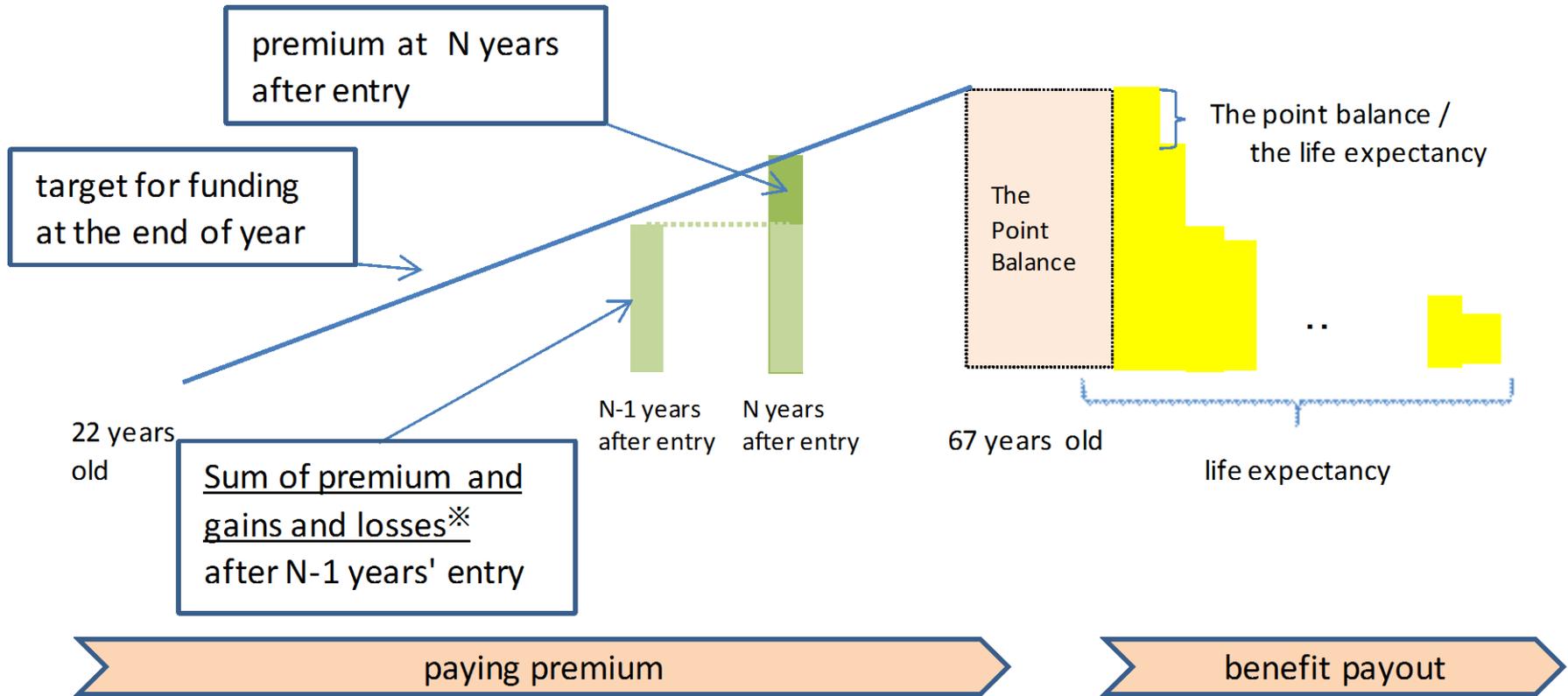
※2: Self-employed (For 40 years at the joining)

(Source: Ministry of Health, Labor and Welfare Report 2009-2010)

5.1 The point system

A financial system :

The similar unit funding method which set aside benefit funds according to the period by the present.



*The sum of what converted the premium you subscribed into the point (1 yen = one point), and summed up it ,and what allocated to you operational gains and losses occurred by summarizing your premium with funds of pension system and investing them in a market.

5.1 The point system

Current year's premium :

The difference between *the point balance at the beginning of the year* and benefit funds at the end of the year.

The amount of premium at N years after entry

$$= [(\text{expense of the elderly people concerning the food, clothing and shelter of the previous year (track record)} \times (1+\alpha)) \times \frac{\text{life expectancy} \times (1+\beta) \times N}{(67 - \text{entry age})} - (\text{the point balance at N-1 years after entry})] \times (1+\gamma)$$

α : (After year N) inflation rate for the previous year

β : future life expectancy predicted in N years after entry
/ life expectancy in N years after entry

γ : premium rate toward the necessary financial resources to support parenting and exempt insurance

Note:

The price increase from N-year after to the start time of a pension payout, and the discount by the assumed interest rate from N-year after to the start time of a pension payout, are offset.

5.1 The point system

Comparison with the current system - 1

The factors in which this system excels the present system proportional to the total salary are as follows.

(For employee)

Sense of reliability for receiving a pension is acquired:

- by promising benefits that meet the premium paid by the advance funding method
- by creating a mechanism to grasp the total benefits (point balance) in the future since you have entered the system.

(For plan)

- Margin occurs within the system since the point which was not used vanishes.
- The procedure of payment in the system is simplified by use of electronic money since the transfer to a bank account is eliminated,.

(For economy)

Economy is activated compared with a benefit by cash, since the money which is turning to neither savings nor consumption turns to consumption.

5.1 The point system

Comparison with the current system - 2

		Current pension plan	Point system
Premium	Period of payment	20~65	22~67
	Pensionary positioning	Mutual help	Self - reliance※
	Payer	1/4: Employer 1/4: Employee 1/2: Tax	1/2: Employer 1/2: Employee
Benefit	Period of benefit/ Usable period of point	From 65 to death	From 67 to death
	Amount which can be used in one year	Benefit for one year	Amount which divide the point balance by the life expectancy equally
	Benefit form	Cash (Divided into a few times a year, a cash transfer to bank account)	Point (Divided into a few times a year, point is granted, depending on the number of months)
	What can be bought or used	Everything	Principle, food, clothing and shelter. However, medical expenses, care expenses, and cost of transportation is available.
	Measure to inflation or deflation	Change of benefit	Change of point balance according to a price fluctuation

※except for the additional burden of a premium for exempt insurance and the extra benefit, such as the addition of the point to the delivery

5.2 The effect of system change

Double burden of the premium (for active participants)

- ① the expense concerning refund to unfunded liabilities
- ② the new system's premium.

Underfunding toward benefits to the past period is about 690 trillion yen according to the result of actuarial revaluation concerning the Employees' Pension in the 2009 fiscal year.

burden in case of change to new system (total : 35.7 trillion yen per year)

- ① amortization of unfunded liabilities to the past period with increasing consumption tax for 45 years :

30.9 trillion yen per year (15.5% in consumption tax rate)

- ② the premium for the future period is operated by a point system in FY 45 :
4.8 trillion yen

burden in case of continuing current system (total : 38.5 trillion yen per year)

- ✓ premium in fiscal 2055 :

28.5 trillion yen the result of actuarial revaluation

- ✓ tax increase which government consumption currently being promoted :
10 trillion yen (5% in consumption tax rate)

5.2 The effect of system change

The range of fluctuation of premium(the result calculated about how much premium go up by the change)

(thousand yen)

	Price increase rate(α)	Rate of return on plan assets for the balance point	Annual premium			Total premium	Point balance
			First year	20 fiscal year	45 fiscal year		
Case1	0.0%	0.0%	401	401	401	18,055	18,055
Case2	1.0%	1.0%	405	487	625	22,773	28,250
Case3	2.0%	2.0%	409	590	968	29,128	44,006
Case4	1.0%	3.2%	405	289	265	11,156	28,868
Case5	1.0%	4.1%	405	207	-222	6,331	29,125

【The premise of calculation】

- Amount of person benefit in first year is 792 hundred yen (an annual basis)
- A life expectancy is 22.8 years.(β)
- $\gamma = 0$

【2004 Fiscal recalculation result / Ministry of Health, Labour and Welfare : Case 4】

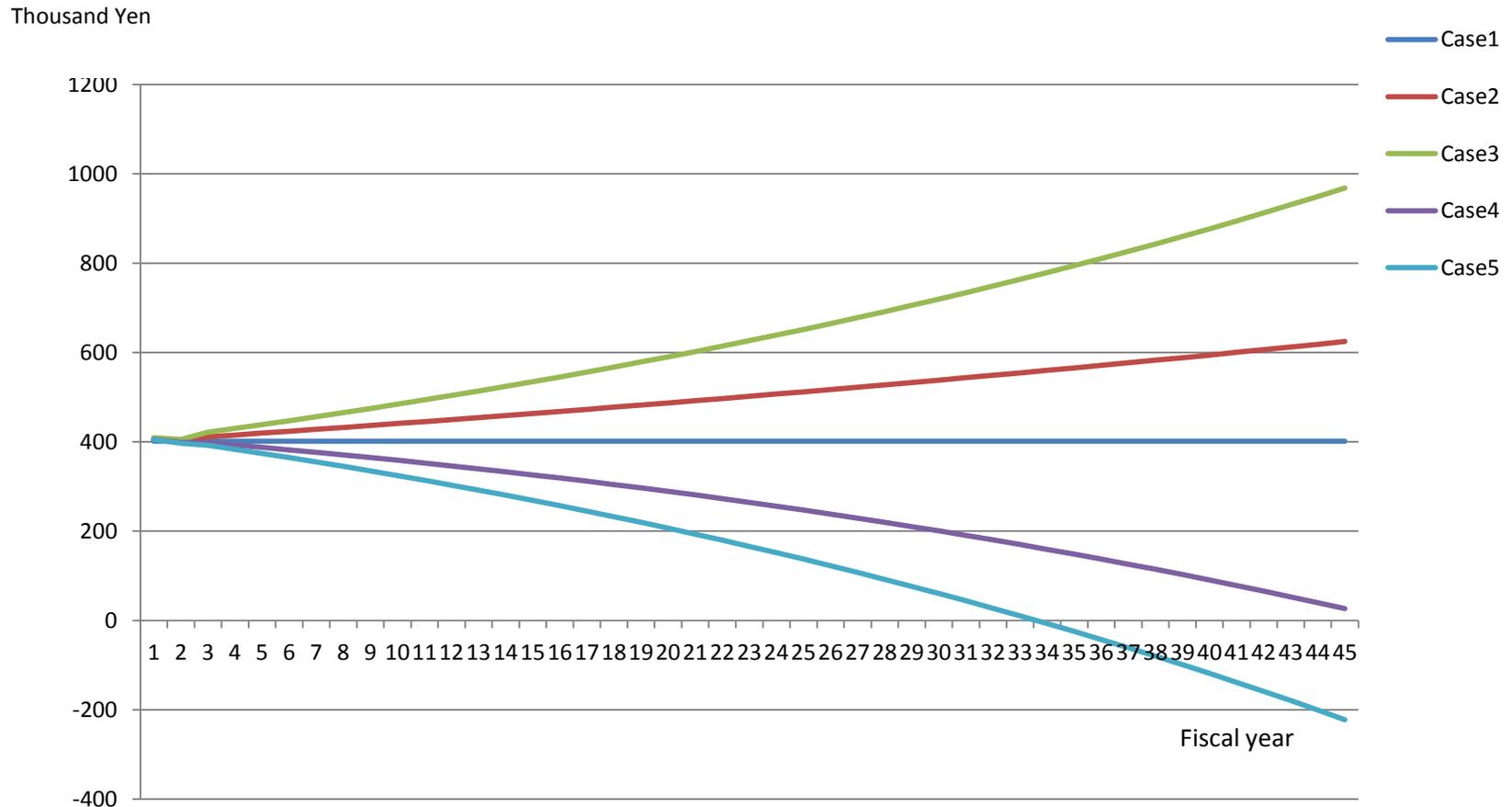
Wage growth rate:2.1%

Price increase rate:1.0%

Yield on investment:3.2% (In 2009 fiscal recalculation, 4.1% : Case 5)

5.2 The effect of system change

Contribution is possible since the salary increase is expected by a price increase, although the rise of premium is large in case 2, or case3.



5.2 The effect of system change

