

# FACILITATING THE PARTICIPATION AND IMPROVEMENT FOR THE ACCESSIBILITIES FOR THOSE WHO NEED A SOCIAL SUPPORT



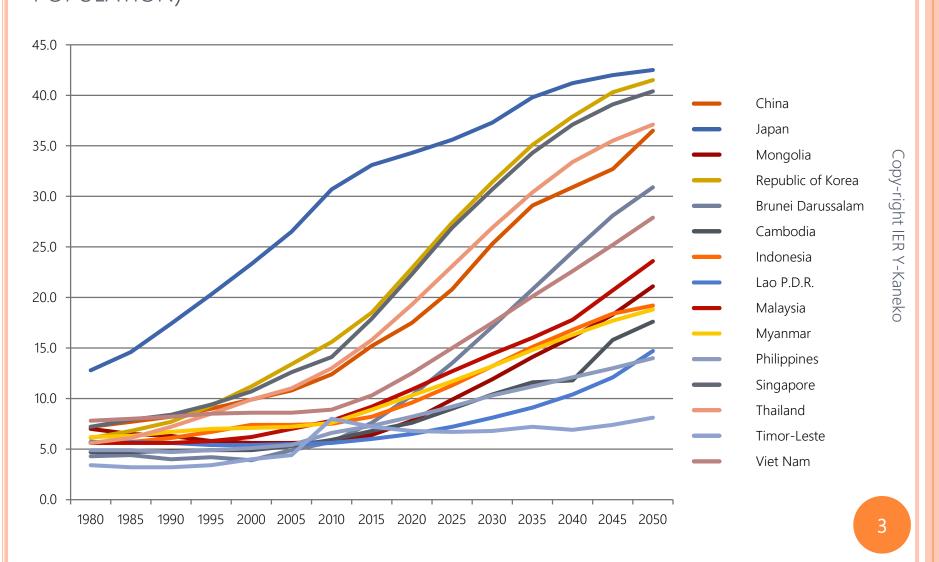
## The policy concerns of a social policy common to Asian nations



- Advance of Aging
- A rise of the necessity of developing social policies related to aging society such as employment of the elderly, pension and health and nursing services
- The ratification of United Nation's Convention of the Rights of person with Disabilities in Asian countries
- A rise of the necessity of promoting employment of the people with disabilities through the improvement of the barrier-free accessibility
- The purpose of the joint event: Sharing of knowledge and information and promotion of international cooperation about the policies for the participation and improvement for the accessibility for those who need a social support such as disabled and elderly people of Asian nations

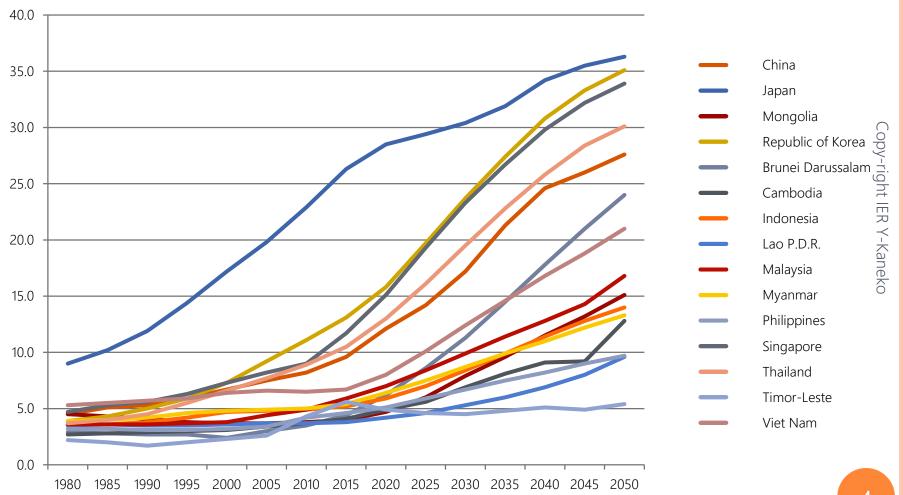
## Percentage of total population by age group(60+), both sexes of East Asia and ASEAN nations (per 100 total population)





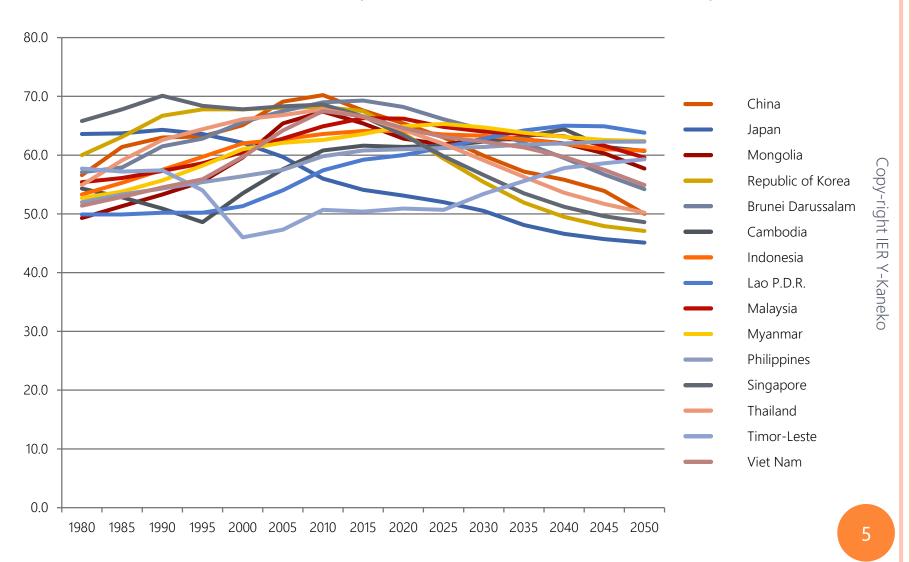
## Percentage of total population by age group (65+), both sexes of East Asia and ASEAN Nations (per 100 total population)





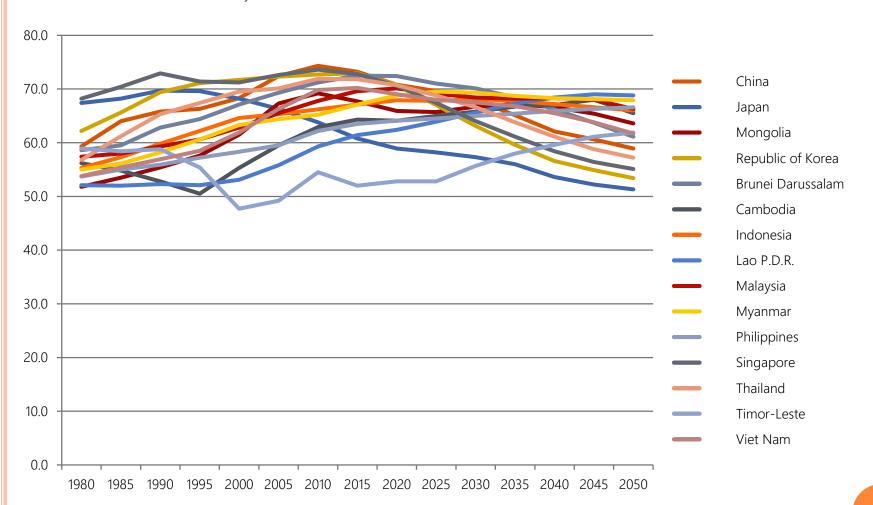
### Percentage of age group (15-59) to total population, both sexes (per 100 total population)





## Percentage of age group (15-64) to total population, both sexes of East Asia and ASEAN Nations (per 100 total population)

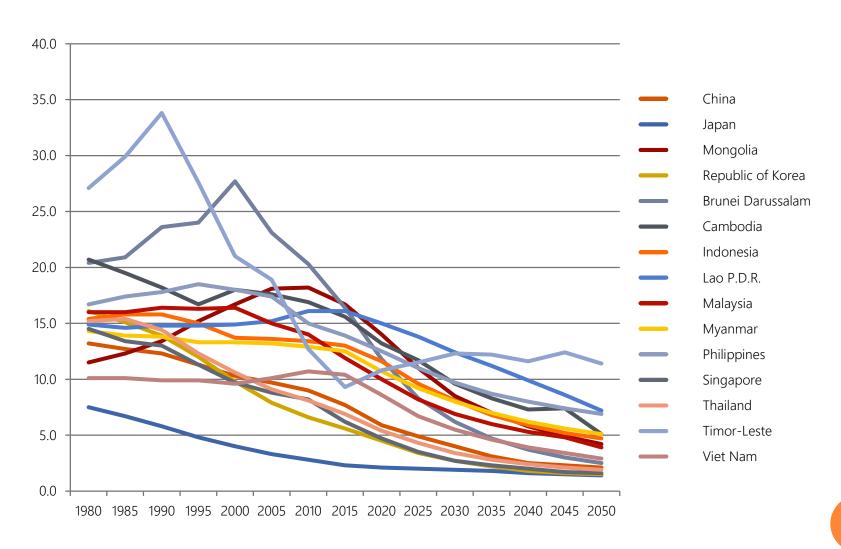




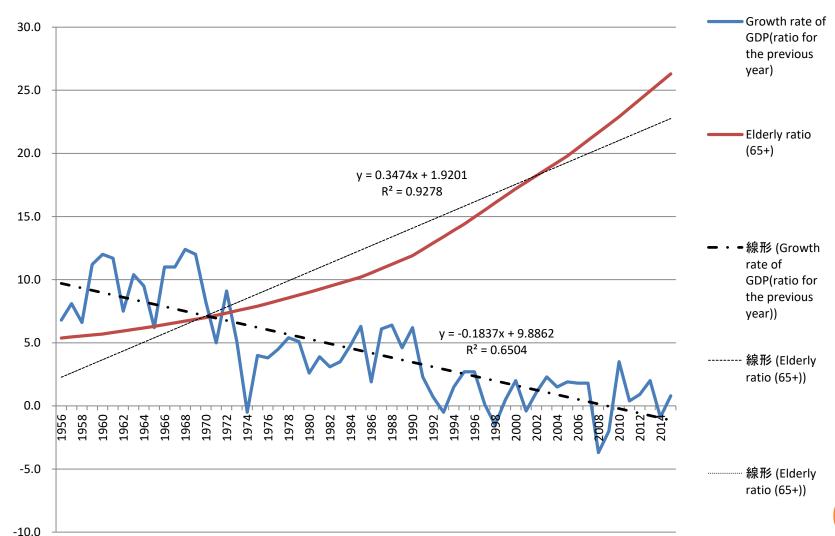
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### Potential support ratio by age group (15-64) (ratio of population by age group (15-64) per population 65+)





## ECONOMIC GROWTH RATE (GROWTH RATE OF GDP (RATIO FOR THE PREVIOUS YEAR))



### NUMBER OF PERSONS WITH DISABILITIES OF JAPAN (ESTIMATE)

		Total	Persons living at home	Persons accommodated in facilities	
	Younger than 18	78,000	73,000	5,000	
Children/adults with	18 or older	3,834,000	3,766,000	68,000	
physical disabilities	Unknown age	25,000	25,000	-	
	Total	3,937,000 (31)	3,864,000 (30)	73,000 (1)	
Children/adults with intellectual disabilities	Younger than 18	159,000	152,000	7,000	
	18 or older	578,000	466,000	112,000	
	Unknown age	4,000	4,000	-	
	Total	741,000 (6)	622,000 (5)	119,000 (1)	

		Total	Outpatient	Inpatient
Persons with mental disorders	Younger than 20	179,000	176,000	3,000
	20 or older	3,011,000	2,692,000	319,000
	Unknown age	11,000	10,000	1,000
	Total	3,201,000 (25)	2,878,000 (22)	323,000 (3)

#### Source:

"Children/adults with physical disabilities"

Persons living at home: "Survey on Persons with Disabilities at Home" (2011), MHLW

Persons accommodated in facilities: Dept. of Health and Welfare for Persons with Disabilities, Social Welfare and War Victims'
Relief Bureau, MHLW based on the "Survey of Social Welfare Institutions" (2009), MHLW, etc.

"Persons with intellectual disabilities"

Persons living at home: "Survey on Persons with Disabilities at Home" (2011), MHLW

Persons accommodated in facilities: Dept. of Health and Welfare for Persons with Disabilities, Social Welfare and War Victims' Relief Bureau. MHLW based on the "Survey of Social Welfare Institutions" (2011), MHLW

"Persons with mental disorders"

Outpatients: Dept. of Health and Welfare for Persons with Disabilities, Social Welfare and War Victims' Relief Bureau, MHLW based

on the "Patient Survey" (2011), MHLW

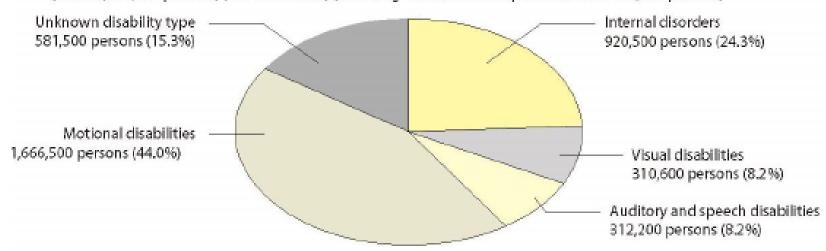
Inpatients: Dept. of Health and Welfare for Persons with Disabilities, Social Welfare and War Victims' Relief Bureau, MHLW based

on the "Patient Survey" (2011), MHLW

### Number of Persons with Physical Disabilities by type (IN-HOME)



(Total: 3,791,000 persons) (2011 estimates) (including those with multiple disabilities: 167,500 persons)



### CHANGES IN NUMBER OF PERSONS WITH PHYSICAL DISABILITIES BY TYPE AND BY AGE GROUP (PER 1,000 POPULATION)

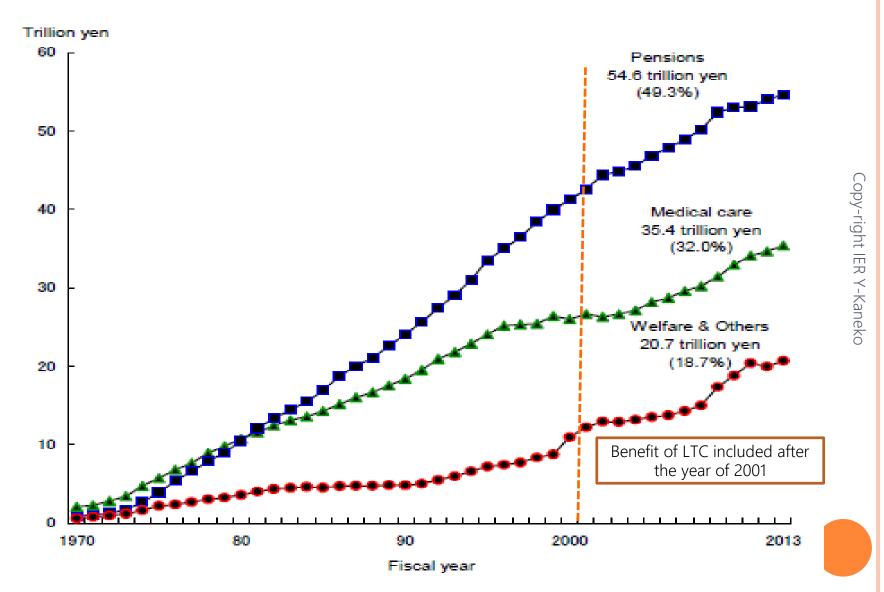
Year	Total	Age 18-19	Age 20-29	Age 30-39	Age 40-49	Age 50-59	Age 60-64	Age 65-69	70 or older
1955	14.5	5.3	7.1	14.5	16.0	20.6	25.4	25.4	29.4
1980	23.8	3.5	4.9	7.0	16.0	33.7	55.8	68.7	87.6
2006	32.7	4.5	4.1	6.1	11.6	24.4	48.9	58.3	94.9
2011	35.2	4.3	4.2	6.0	10.0	19.8	44.1	53.5	105.4

Source: "Survey on Persons with Physical Disability" and "Survey on Persons with Disabilities at Home", Department of Health and Welfare for Persons with Disabilities, Social Welfare and War Victims' Relief Bureau, MHLW

(Note) The population aged 18 or older taken from the National Census" and Population Estimate" of Statistics Bureau, Management and Coordination Agency was used as the base population for calculating the number of persons with physical disabilities per 1,000 population.

#### Social security Benefit, FY 1970-2013

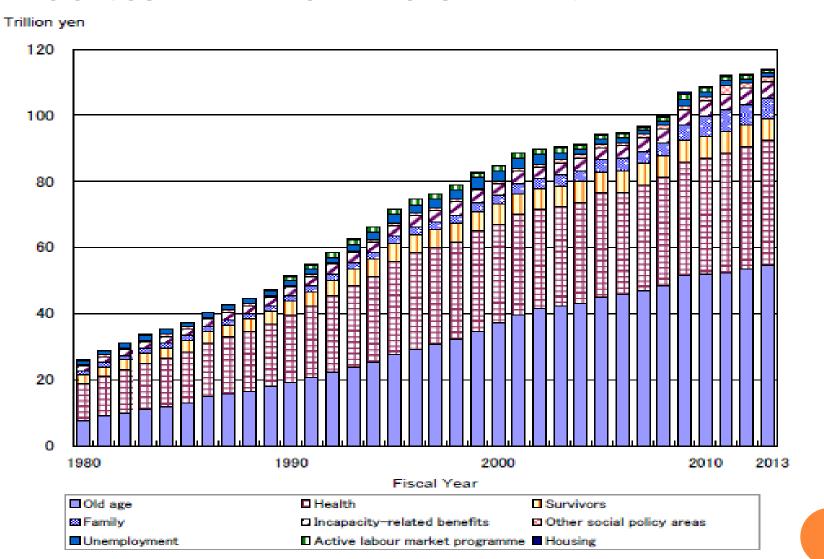




 Source: The Financial Statistics of Social Security in Japan FY 2013, National Institute of Population and Social Security, Japan



#### Trends of Social Expenditure by Policy Area in Japan



Source: The Financial Statistics of Social Security in Japan FY 2013, National Institute of Population and Social Security, Japan

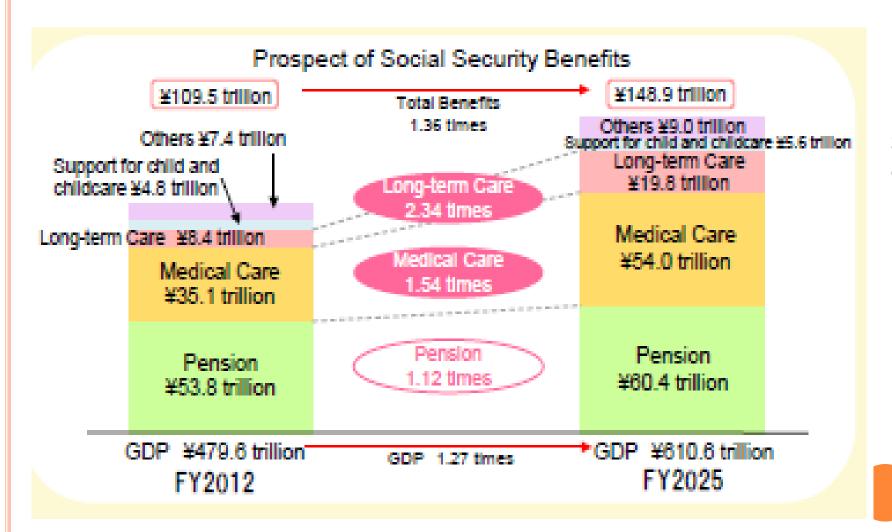


## Increase in the number of aged 75 and over and medical care and long-term care benefits per capita (estimation made by MHLW)

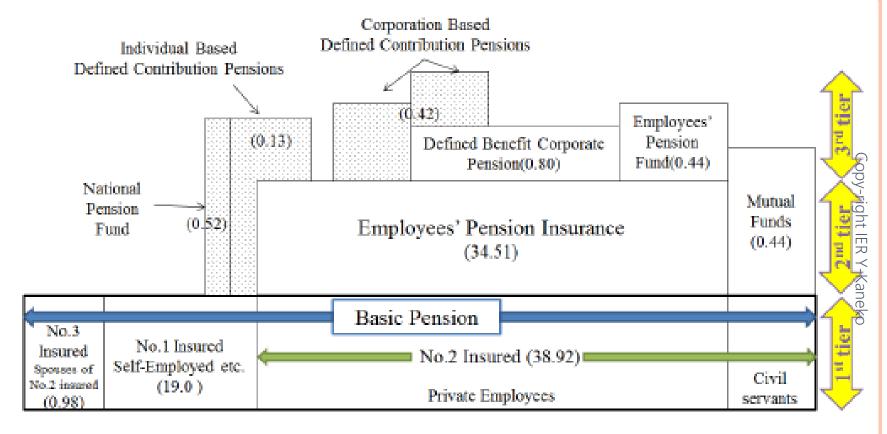
	Number and ratio to total population	Medical care (2011)	Long-term care (2012)		
	2012 2025  - 13.0 million people (Aged 64 and under: 96.7 million >84.1 million	Medical care benefits per capita Public aid per capita  Aged 64 and under:  ±175 thousand 27 thousand	Long-term care benefits per capita per capita  Certification rate		
Aged 65~74	- 1.0 million people 15.6 million 14.8 million (12.2%) (12.3%)	¥553 thousand ¥85 thousand	¥50 thousand ¥14 thousand		
Aged 75 and over	+7.0 million people 15.2 million 21.8 million (11.9%) (18.1%)	¥892 thousand ¥326 thousand	¥461 thousand ¥131 thousand		



### PROSPECTS OF SOCIAL SECURITY BENEFITS IN JAPAN (2012 MARCH ESTIMATION PROVIDED BY MHLW)



#### PENSION SYSTEM IN JAPAN



Note: 1) Shaded boxes indicate optional Defined-Contribution pensions.

Numbers in () are the number of subscribers in millions. All numbers are as of March 2012.

Source: Web-site of Ministry of Health, Labour and Welfare (MHLW)

(http://www.mhlw.go.jp/topics/nenkin/zaisei/01/01-01.html in Japanese Access Aug. 25th 2013)

 Source: Social Security in Japan 2014, National Institute of Population and Social Security Research, Ch.3, Pension

## CONTROL OF AN INCREASE IN PENSION BENEFITS ACCORDING TO AGING IN JAPAN INTRODUCTION OF MACRO-ECONOMIC SLIDE FORMULA IN 2004 PENSION REFORM



#### New System of Adjusting the Amount of Pension (Macro-Economic Slide Formula)

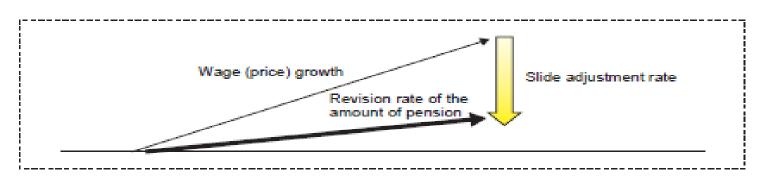
People who newly start receiving pension (new decision recipients): wage growth - slide adjustment rate\*

People who are currently receiving pension (previous decision recipients): 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 (total of approx. 0.8%)

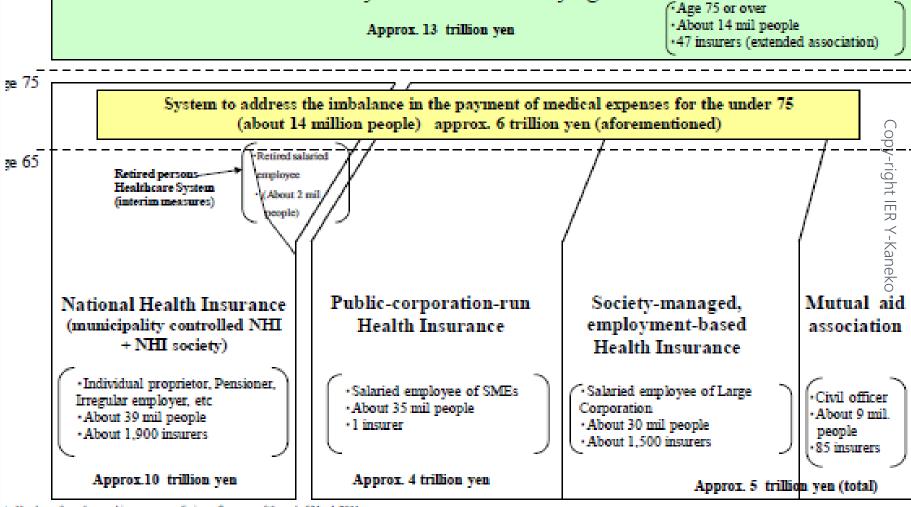
\* Annual average from FY2012 to FY2038



- O Start the adjustment of the amount of benefits in the case where it is anticipated, in the actuarial verification that is held at least once every five years, that keeping the financial equilibrium of pension is difficult throughout the financial equilibrium period, even though keeping necessary amount of pension reserve (approximately one year of the amount of benefit) so as not to be detrimental to pension payment at the end of the approximately 100 years of the financial equilibrium period.
- O The amount of pension <u>usually</u> increase in response to wage and price increase. However <u>during adjustment period of pension benefit</u>, the revision of pension benefit will be reflected in the decrease of the force that bears pension system and growth of average life expectance so that the increase of the amount of pension shall be suppressed to be lower than the increase of wage and prices. (This system is called as "Macro-Economic Slide Formula")
- O In subsequent actuarial verification, at a time when the financial equilibrium of pension is anticipated to be sustainable, those adjustment of the amount of benefits shall be concluded.
- Source: Policy Information, Pension, Pension Security, Ministry of Health Labour and Welfare, Japan. http://www.mhlw.go.jp/english/wp/wp-hw6/dl/11e.pdf

### OUTLINE OF THE HEALTHCARE INSURANCE SYSTEM OF JAPAN





Medical care system for the elderly aged 75 and over

Numbers of members and insurers are preliminary figures as of the end of March 2011

Amounts are benefits based on the budget for FY2012.

Source: Overview of Medical Service Regime in Japan, Ministry of Health, Labour and Welfare, Japan, www.mhlw.go.jp/bunya/iryouhoken/iryouhoken01/dl/01\_eng.pdf



### CONTROLLING INCREASE IN MEDICAL EXPENDITURES AND STABILIZING REVENUE OF HEALTH CARE SYSTEM FOR THE FLORRLY PEOPLE

OIn anticipation of increasing medical expenditure with aging of society, from the viewpoint to clarify the burden between aged and young generations, the medical insurance system for the elderly aged 75 and over was enacted in April 2008.

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

<Number of eligible people>
Elderly aged 75 and over:
approximately 15 million people

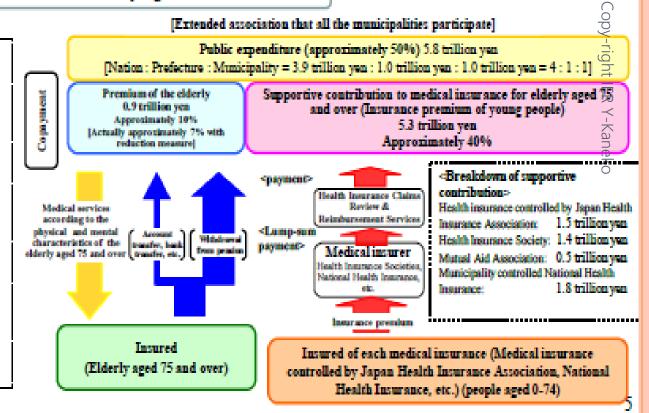
<Medical expenditure for the elderly aged 75 and over>

13.4 trillion yen (FY2011 budget basis)
Benefit payment: 12.3 trillion yen
Copayment: 1.1 trillion yen

(Amount of insurance premiums (FY2011)> Nationwide average:

approximately 63,300 yen /year

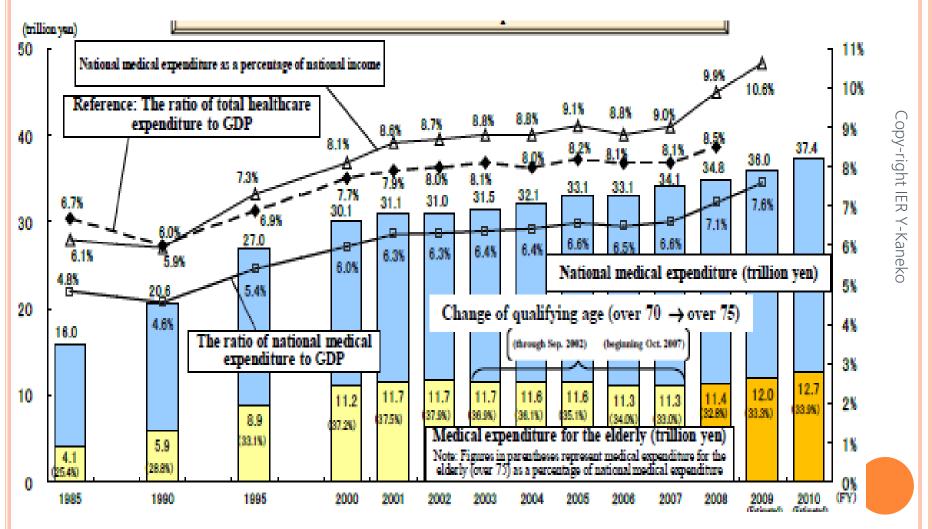
 For those who receive only the basic pension: approximately 4,200 year / year



Source: Overview of Medical Service Regime in Japan, Ministry of Health, Labour and Welfare, Japan, www.mhlw.go.jp/bunya/iryouhoken/iryouhoken01/dl/01\_eng.pdf

## TRENDS OF MEDICAL EXPENDITURES IN JAPAN: CONTROL OF AN INCREASE IN MEDICAL EXPENDITURES FOR THE ELDERY PEOPLE

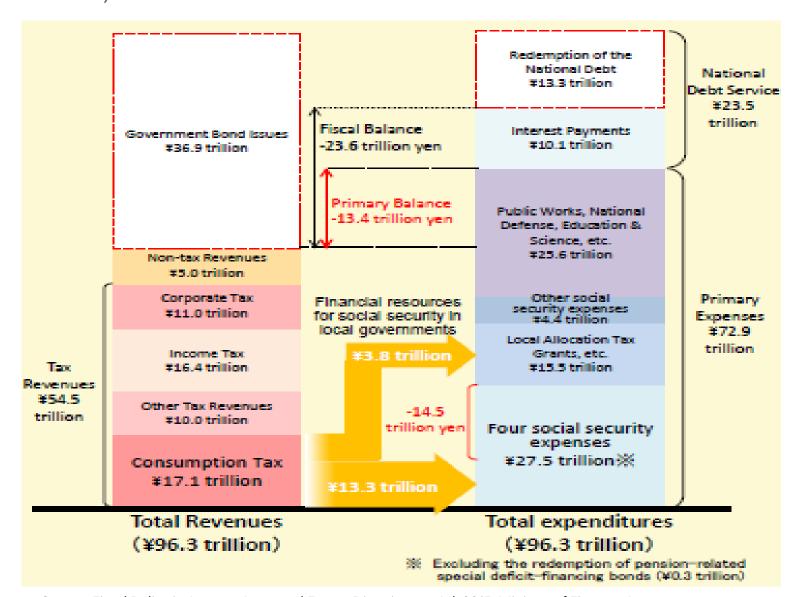




 Source: Overview of Medical Service Regime in Japan, Ministry of Health, Labour and Welfare, Japan, www.mhlw.go.jp/bunya/iryouhoken/iryouhoken01/dl/01\_eng.pdf

### Consumption tax revenues for social Security (FY2015 BUDGET)

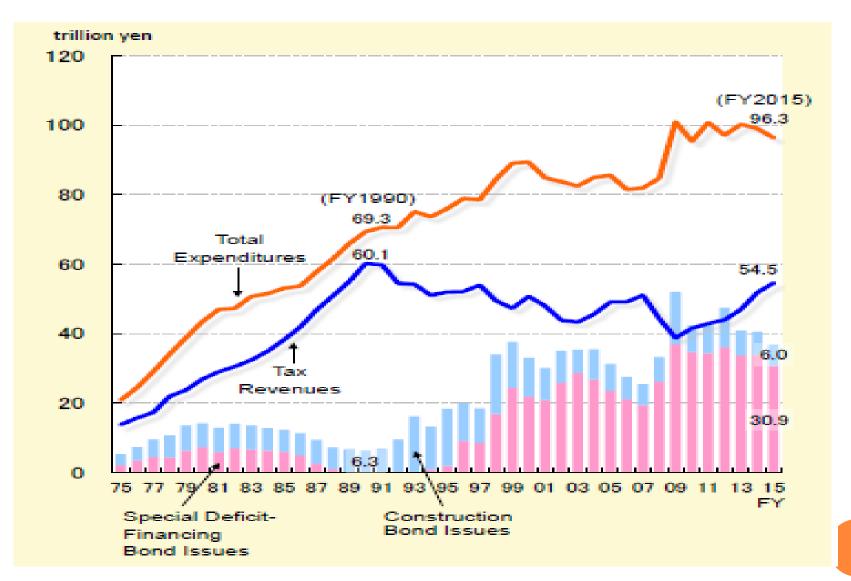




Source: Fiscal Policy in Japan - Issue and Future Directions - , July2015, Ministry of Finance, Japan

### Trends in expenditures & Revenues, and the Government bond issues in Japan

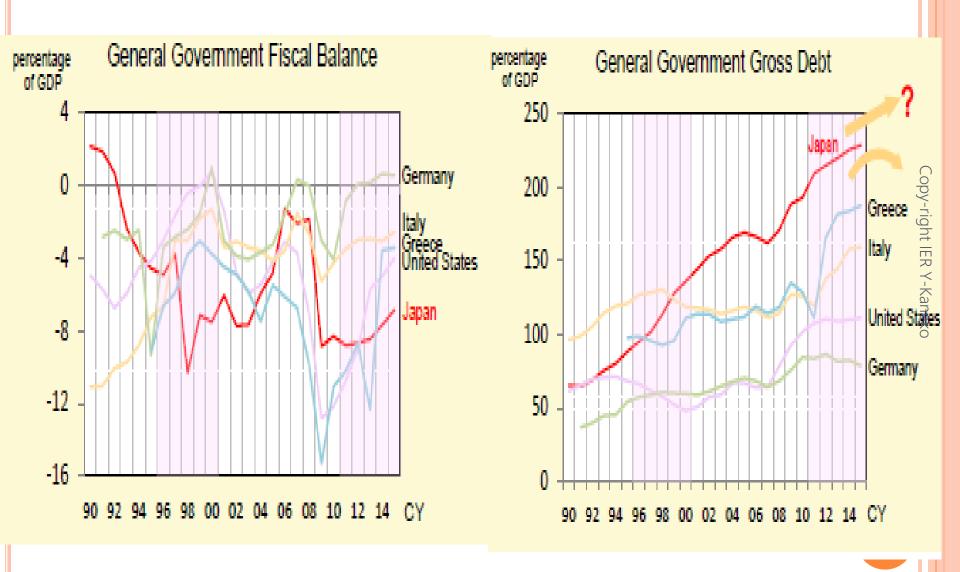




Source: Fiscal Policy in Japan - Issue and Future Directions - , July2015, Ministry of Finance, Japan

### INTERNATIONAL COMPARISON OF FISCAL BALANCE AND GROSS DEBT





Source: Fiscal Policy in Japan - Issue and Future Directions - , July2015, Ministry of Finance, Japan



### THE JAPAN'S PLAN FOR DYNAMIC ENGAGEMENT OF ALL CITIZENS CABINET DECISION ON JUNE 2, 2016

HTTP://WWW.KANTEI.GO.JP/JP/SINGI/ICHIOKUSOUKATSUYAKU/PDF/GAIYOU\_E.PDF

- (Summary) Toward a society participated by all citizens, whether they are women or men, the elderly or youths, people who have experienced a failure, people with disabilities and people fighting an illness, can play active roles in their respective homes, workplaces and local communities or any other places.
- The Doctrine of a Mechanism of a Virtuous Cycle of Growth and Distribution
- On the second stage of Abenomics, we will tackle the issue of the declining birthrate and aging population, which is at the root of the obstacles in economic growth, head on. In order to try to build a new system of our economic society where we enhance childcare supports and social security as a broader economic policy, which will lead to a more robust economy.
- We will realize a society where diversity is accepted and all citizens are included, which will lead to more certain prospects for the future, a boost in consumption and the expansion of investment. We will encourage all citizens to fully show their own various talents, which will lead to improvement in the labor participation rate and creation of innovation, in order to further accelerate the economic growth.
- We cannot continue "distribution" without the fruits of "growth". We will enhance
  the foundation of childcare and social security, utilizing achievements of
  Abenomics. People can be engaged in growth when they are provided supports
  for childcare and nursing care.
- A set of the new three arrows combined altogether itself can be called as the ultimate growth strategy.

### (1) Working Style Reforms



- Improvement in working conditions of non regular workers (account for approximately 40% of the whole workers in Japan) including realization of "equal pay for equal work" should be conducted urgently. Through formulation of guidelines, we will indicate what kind of treatment gaps are unreasonable and should be corrected and in order to let them smoothly be corrected, we will submit the related bills.
- Practices of long working hours make it difficult to balance work and family life including childcare, which leads to the declining birthrate and prevention of career formation of women. We will enhance <u>enforcement of legal regulations</u> and as for the Labor Standards Act, we will once again consider the state of regulations contained in Article 36.
- As for <u>promotion of employment of the elderly</u>, it is necessary to prepare the environment for raising the retirement age and extending employment beyond the age of retirement. We will provide supports for businesses raising the retirement age to 65 and extending employment beyond the age of 65 while encouraging other businesses to do so.

### (2) IMPROVEMENT IN THE ENVIRONMENT FOR CHILDCARE



- We raised the target for additional childcare arrangements from for 400,000 children to 500,000 children, which is to be accomplished by the end of FY2017.
- As for working conditions of childcare providers, we will newly implement a pay rise equivalent to 2% (about 6,000 yen per month). We will additionally improve working conditions for childcare providers with skills and experiences in order to eliminate a wage gap between childcare providers and female workers across all industries, which is currently around 40,000yen, making budgetary steps be reflected in actual wages appropriately in execution processes. We will also reduce a wage gap between male workers and female workers across industries as a whole, promoting efforts based on the Act of Promotion of Women's Participation and Advancement in the Workplace and toward "equal pay for equal work". We will further improve working conditions of childcare providers as needed.
- In order to ensure and develop various childcare providers, we will make comprehensive efforts including enhancement of a scheme of a forgivable loan and improvement in productivity by utilizing ICT.
- We will prepare additional arrangements of "After school Kids' Clubs" for 300,000 children by the end of FY2019. While promoting improvement in working conditions of childcare providers and reduction in labor burdens shouldered by them, we will discuss the way to bring forward preparation of additional arrangements and complete it by the end of FY2018. As for improvement in working conditions, we will make sure that related budget actions will be appropriately reflected to wages in budget implementing

### (3) IMPROVEMENT IN THE ENVIRONMENT FOR NURSING CARE



- We will accelerate preparation of additional nursing care arrangements for more than 380,000 people (expected increase in arrangements in FY2015 FY2020). Furthermore, we raised this target to for more than 500,000 people, which is to be accomplished by early 2020s.
- As for working conditions of nursing care providers, in order to eliminate a wage gap between nursing care providers and workers in other competing industries, we will build a career development scheme from FY2017 and improve their wages by 10,000 yen per month on average.
- In order to ensure and develop various nursing care providers, we will make comprehensive efforts including enhancement of a scheme of a forgivable loan, utilization of senior human resources and improvement in productivity by utilizing nursing care robots and ICT related technologies.

## STRUCTURE OF FY 2015 EMPLOYMENT MEASURES FOR THE ELDERLY



- Obligation to implement employment security measures for the elderly (Securing employment opportunities up to 65 years)
- O Based on the Elderly Employment Security Law, education instructions, etc. were implemented at Hello Work etc. Measures included such education instructions are securing employment measures for all the people wishing to work until they reach 65.
  - [2] Enhancement/strengthening of reemployment support for the elderly (People over 65 are included.)
- O Enhancement/improvement of reemployment support through implementation of support regarding the review of work-life plans and employment support by employment support teams at major Hello Work branches nationwide and the holding of skills training in neighborhoods, thereby enabling the elderly to receive reemployment support without undue worry.
  - Implementation of general employment support projects for the elderly
     (Implementation of employment support toward redesigning work-life plans and support by employment support teams, etc. through establishment of consultation desks for employment of the elderly at major Hello Works nationwide)
  - Implementation of senior work programs
     (Implementation of skills training and job-interviews, etc. in a unified manner in cooperation with business operator organizations and public employment security institutions, etc.)
  - Provision of various subsidies, including subsidies for the employment development of designated job seekers (Providing support for business operators employing the elderly, or employing the elderly over 65.)
  - [3] Employment promotion for the elderly aiming at the realization of an "ageless society" (the approach to secure working opportunities after 65)

HITOTSUBASHI

## [SUPPORT FOR ENTERPRISES] PROMOTION OF EMPLOYMENT OF THE ELDERLY TOWARD REALIZING AN "AGELESS SOCIETY" IN WHICH PEOPLE CAN WORK ACCORDING TO THEIR MOTIVATION AND ABILITY TO WORK AND REGARDLESS OF AGE

- O Improving support for increasing the number of companies willing to employ people according to their motivation and ability to work regardless of their age and aiming at realizing increasing social opportunities toward realizing an "ageless society".
  - Implementing/improving projects designed to realize an "ageless society" (creating an industry-based business realizing an "ageless society") [Improvement]
     (Developing social sentiment in a community through creation of a manual designed to introduce an "ageless society" by an industry-based organization)
  - Provision of subsidies for improved employment security for the elderly [Improvement]
     (Provision of subsidies for business operators contributing to development of the employment environment for the elderly. Increasing the amount of subsidy per person especially for construction companies with chronic manpower shortages)
  - Provision of counseling and support for business operators realizing an "ageless society" in which people can
    continue to work regardless of age.
     (Focusing support on business operators realizing an "ageless society" for the elderly, the disabled and job
    seekers by advisors for the elderly employment at the Japan Organization for Employment of the Elderly, Persons
    with Disabilities and Job seekers.)
  - Enforcement of the "Act on Special Measures for fixed-time employees with expertise etc. [New]
     (Creation of a special case for indefinite-term employment rules under Labour Contract Law for the elderly being hired continually after retirement.)

### [REGIONAL SUPPORT FOR THE ELDERLY] EXPANDING THE PLACES WHERE THE ELDERLY CAN WORK OR ENGAGE IN ACTIVITIES TO SUPPORT SOCIETY



- O Expanding members and employment opportunities and securing employment opportunities that suit the various employment needs of the elderly after they have retired at the mandatory retirement age, etc. through utilization of the Silver Human Resource Centers' Project toward the realization of an ageless society in which the elderly play active roles as supporters of society.
  - Promotion of Silver Human Resource Center Projects [Improvement]
     (Enhancement of Silver Human Resource Centers' activity range focused on an area contributing to support for child raising, housework, etc. and areas with personnel shortage.)
  - Implementation of projects designed to realize an "ageless society" (projects developing an environment realizing an "ageless society")
     (Holding seminars on work-life plans for the elderly, etc.)

HITOTSUBASHI UNIVERSITY

#### FY 2015 PROMOTION OF EMPLOYMENT SUPPORT FOR PERSONS WITH DISABILITIES — OUTLINE OF MEASURES RELATED TO THE EMPLOYMENT OF Persons with Disabilities –

- 1 Enhancement of employment support for persons with mental disabilities
  - (1) Enhancement of specialized support for persons with mental disabilities at Hello Works In response to a rapid increase in the number of new job seekers with mental disabilities visiting Hello Works, comprehensive and continued support will be provided through the placement of "comprehensive supporters for the employment of persons with mental disabilities" who can provide consistent support for persons with mental disabilities, including counseling, raising the awareness of enterprises, implementation of on-the-job training, and follow-ups after employment, etc.
  - (2) Dissemination of employment support know-how for persons with mental disabilities to medical institutions Implementing counseling support and dissemination of employment support know-how for persons with mental disabilities to medical institutions regarding model programs implemented in FY2013 and FY2014, to promote employment from medical treatment for persons with mental disabilities.
  - (3) Implementation of model programs to promote accumulation of know-how on employment of persons with mental/developmental disabilities.
    - Model programs, in which enterprises with insufficient experience and know-how on employment of persons with mental/developmental disabilities are entrusted with employment promotion efforts to build know-how will be implemented after taking into consideration the balance of region, scales, and industries, etc.

  - (4) Implementation of trial employment programs for persons with disabilities

    With regard to "trial employment programs for persons with disabilities", in which business operators employ persons with disabilities on a trial basis through referrals made by Hello Work etc. (3 month fixed based employment. As for persons with disabilities, trial employment period shall be extended up to 12 months at maximum) and promoting their transfer to regular employment after the completion of trial employment by trial employment programs for persons with disabilities shall be made, and further promotion of employment will be implemented.

HITOTSUBASHI

UNIVERSITY

## FY 2015 PROMOTION OF EMPLOYMENT SUPPORT FOR PERSONS WITH DISABILITIES — OUTLINE OF MEASURES RELATED TO THE EMPLOYMENT OF PERSONS WITH DISABILITIES —

- 2 Steady implementation of employment support for persons with developmental disabilities/intractable diseases
- (1) Steady implementation of support measures according to the characteristics of persons with developmental disabilities. As for "employment support navigators" (for persons with developmental disabilities)" placed at Hello Work branches, "employment support navigators" for students will be placed at Hello Work branches supporting would-be new graduates, in order to implement tailor-made support for individuals who have communication problems due to developmental disabilities and introduce special support agencies according to their needs. Also, we will hold seminars about employment for persons with developmental disabilities targeted at university personnel in charge of employment. In addition, we will aim at the promotion of steady employment for persons with disabilities and support business operators who employ persons with disabilities and did appropriate employment management for them.
- (2) Steady implementation of support measures for persons with intractable diseases In view of heightened needs of supporting employment for persons with intractable diseases and enacting "medical treatment, etc. for patients with intractable diseases", we will increase personnel at "employment supporters for persons with intractable diseases" at Hello Work branches. We will support special employment counseling for persons with intractable diseases, thereby strengthening cooperation between Hello Work branches and Intractable Disease Consultation and Support Centers, and by the provision of subsidies for business operators employing persons with intractable diseases, along with the implementation of appropriate employment management, etc.
- 3 Promotion of transfer from "welfare", "education", and "medical care" to "employment" through cooperation with relevant institutions in regions
  - (1) Implementation of programs for promoting transfer from welfare, education, medical care to employment In order to eliminate the worries persons with disabilities may have about employment and those of small-and medium-sized enterprises about employing persons with disabilities, specialized coordinators will be placed at the Labour Bureau to comprehensively and effectively promote on-the-job training in cooperation with the relevant institutions, including welfare facilities, schools for special needs education, and medical institutions, etc., and the transfer from welfare, education, medical care to employment promoted through the holding employment support seminars and implementing tours of recruiting workplaces, etc.
  - (2) Strengthening job-matching functions of Hello Work branches
    Job-matching functions of Hello Work branches will be strengthened by strengthening the implantation system of "team support" that provides consistent support from employment through to workplace adaptation through cooperation between Hello Work branches and relevant institutions in regions, actively holding "job-placement interview sessions" in which persons with disabilities and recruiting enterprises get together, and active implementation of "employment guidance" to provide persons with disabilities who need to be more prepared for employment with information on job seeking activities and mental preparation/required know-how for regular employment etc.

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## AN EMPIRICAL STUDY OF THE EFFECT OF INTEGRATED COMMUNITY BASED CARE SYSTEM OF LTCI ON MEDICAL EXPENDITURE AND LABOR FORCE PARTICIPATION OF THE ELDERLY HOUSEHOLD

- After the introduction of Long-term care insurance, the need and demand for long-term care services provided by LTCI increased .more than the expectation. With such circumstances, the long-term care insurance was reviewed and several reforms were put in place.
- The long-term care insurance system initially aimed to support the independent living of the elderly, and even if the elderly entered a state that required long-term care, it aimed to develop an environment where the elderly could receive treatment in the community with which they were familiar.
- To this end, the 2005 revision in the law established community-based care services and Integrated Community Care Support Centers to ensure enhanced services and coordination at the municipality level.
- It is expected that the Integrated community based care system decreases the medical expense of the household where the needing care senior citizen exists (amount of expense of the medical treatment a month) by strengthening the cooperation between the medical treatment and long term care services.

• We shall make an empirical study of the effect of Integrated community

#### ESTIMATION METHOD AND DATA



- We shall make a regression analysis by making use of the estimation of the difference in difference method (DID) of OLS estimation. In this estimation, we shall treat the home where there exists senior citizen receiving the certification for long-term care with a treatment group, and treat the home where there does not exist senior citizen receiving the certification for long-term care with a comparison group.
- Copy-right IER The data that we use is the National Survey of Family Income and Expenditure (Statistics Bureau, Ministry of Internal Affairs and Communication) (2004, 2009, 2014) classified by 47 prefectures and by the household structures: the home where there exists senior citizen receiving the certification for long-term care and the home where there does not exist senior citizen receiving the certification for long-term care and the home where there does not exist senior citizen receiving the certification for long-term.
- The number of samples used for this regression analysis is 282 = 47x3x2.
- The estimation method used for the regression analysis is the difference in difference method (DID) of OLS estimation.
- The description of this section (the estimation method, the data and the estimation result ) is based on the presentation for the Japanese Economic Associátion 2016 Autumn Meeting.

#### SPECIFICATION OF ESTIMATED EQUATION



- $Y_{ijt} = \beta_0 + \beta_1$ \*needed\_ltc +  $\beta_2$ \*d\_icbcare +  $\beta_3$ \* needed\_ltc\* d\_icbcare +  $\gamma X + c_{it} + u_{iit}$
- The explained variable is medical treatment expense of one month per the elderly household.
- Affixing character I indicates prefectures (i=1 to 47), j =1 indicates a treatment group and j=0 indicates a comparison group, d indicates a dummy variable that takes one after the introduction of integrated community based care system (that is after the period over 2006). βs and y indicate coefficients and a vector of coefficient to be estimated respectively.
- Explanatory variables that included in a vector X: n\_household: number of household members, hh\_age: age of household head, poprate75: the proportion of the elderly people aged 75 and over, drate\_cancer: drate\_diab~s: drate\_cere~r: wage\_f5564: wage rate of women, employment~c: the dummy variable that shows the period after the enforcement of extended employment of the aged between 60 and 64 years of age,, metropolit~a: the dummy variable for the existance of large population city in the prefecture, unemprate: unemployment rate of the prefecture, h\_savings: amount of household savings
- c<sub>jt</sub>and u<sub>ijt</sub> indicate the error term classified by group and the error term of individual respectively.

## BASIC STATISTICS OF THE NATIONAL SURVEY OF FAMILY INCOME & EXPENDITURE (STATISTICS BUREAU, MINISTRY OF INTERNAL AFFAIRS AND COMMUNICATION) (2004, 2009, 2014)



year	n_work~g	d_icbc~e	needed~c	intera~n	n_hous~d	hh_age	h_income	h_savi~s	year	n_work~g	n_hous~d	hh_age	h_medi~t	popra~75	drate~er	drate_~s	drate~ar
2004	1.535106	0	.5 .502681	0				17621.83 5335.63	2004	1.535106	3.465957			9.86383 1.811365			110.6723 24.11111
2009	1.442553	1	.502681		3.205319			17469.48 5019.585	2009	1.442553				12.14043 2.093272		12.06809 2.06581	110.6723 A.11111
2014	1.344681	1 0	.502681	.502681	3.145745			16376.57 5103.777	2014		3.145745			13.87021 2.066311		12.01064 2.385281	1.49255 24.49132
Total		.6666667 .4722426		.3333333				17155.96 5166.314	Total	1.44078	3.27234			11.95816 2.578867		12.04894 2.169921	34
year	n_wor	rk~g n_	hous~d	hh_age	wa~m55	64 wa~f	5564 u	nempr~e	employ~c								
2004	1.535	3106 3. 0453 .		56.87766 3.918557	357.07 43.0		4337 4 9761 .	.461702 9597386	0								
2009	1.442	2553 3. 7991 .2		59.09149 4.478735			-	.812766 8089864	0								
2014	1.344			61.72979 5.293552				.310638 6243221	1 0	•				rs tabl onal S		of	
Total	.2381			59.23298 4.994261				.195035	.3333333		Family	/ Incor	ne and , 2014)	d Expe	enditur	e e	35

### ESTIMATION RESULT OF THE EFFECT OF INTEGRATED COMMUNITY BASED CASSISTEM ON MEDICAL EXPENDITURE OF THE FLDERLY HOUSEHOLD

HITOTSUBASHI UNIVERSITY

(THE EXPLAINED VARIABLE: MEDICAL TREATMENT EXPENSE OF ONE MONTH PER THE ELDERLY HOUSEHOLD)

Variable	ql	q2
needed_ltc	5800.5165	5431.2170*
d_icbcare	761.2355*	537.1956
interaction	-1.83e+03*	-1.75e+03***
n_household	1337.3767	1282.9102
hh_age	221.8277	198.6574
poprate75	-98.9859	-48.8783
drate_cancer	-23.4378	-24.3133
drate_diab~s	-166.7747	-177.5049
drate_cere~r	23.9843	27.9632
wage_f5564	0.0963	0.0376
unemprate	-711.6328	-387.6384
employment~c	-1.63e+03	-1.03e+03
metropolit~a	215.1557	168.7025
h_savings		0.0952
_cons	6380.4673	4465.0022
Nr2		

legend: \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

- The dummy variable in which the home where the needing care senior citizen exists is positive, but the coefficient of the intersection of the integrated community based care system is negative and statistically significant.
- Implication of the Result: Integrated community cased care system exerted the influence that decreased the medical expense a month of the home where the senior citizen receives certification of LTC service with coordination of medical care and LTC enabled to be done more efficiently compared with before the

Sour syrstem on estimate in the rain the rain the rain of Family Income and Expenditure (2004, 2009, 2014)

#### ESTIMATION RESULT OF THE EFFECT OF INTEGRATED COMMUNITY BASED CA SYSTEM ON LABOR FORCE PARTICIPATION OF THE ELDERLY HOUSEHOLD

HITOTSUBASHI UNIVERSITY

(The explained variable: medical treatment expense of one month per the elderly household)

Variable	m1	m2
needed_ltc	-0.1170	-0.1299
d_icbcare	0.1339	0.1241
interaction	-0.0715	-0.0688
n_household	0.5124*	0.5109*
hh_age	-0.0115	-0.0125
h_medicalc~t	-0.0000	-0.0000*
poprate75	-0.0089	-0.0066
drate_cancer	-0.0004	-0.0005
drate_diab~s	0.0076	0.0069
drate_cere~r	0.0016**	0.0018**
wage_f5564	-0.0000	-0.0000
unemprate	-0.0347	-0.0203
employment~c	-0.0552	-0.0287
metropolit~a	-0.0283	-0.0303
h_savings		0.0000
_cons	0.5965	0.5131
Nr2		

- The dummy variable in which the home where the needing care senior citizen exists is negative, and the coefficient of the intersection of the integrated community based care system is negative but it is not statistically significant.
- Implication of the result: Integrated community cased care system did not exert the influence that increased the labor force participation of the home where the senior citizen receives certification of LTC service with coordination of medical care. In order to promote the labor force participation of the elderly of the home where the senior citizen receives certification of LTC service, the coordination of employment policy and integrated community based care system is necessary.

legend: \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

Source: the authors estimation based on the National Survey of Family Income and Expenditure (2004, 2009, 2014)