

# **Analysis of the Labour Economy**

**2016**

**(White Paper on the Labour Economy 2016)**

**— Realization of a Society Where Everyone Can Play an Active Role and  
Challenges for Enhancement of Labour Productivity —**

**[ Summary ]**

**September 2016**

**Ministry of Health, Labour and Welfare**



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**— Realization of a Society Where Everyone Can Play an Active Role and  
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**[ Outline ]**

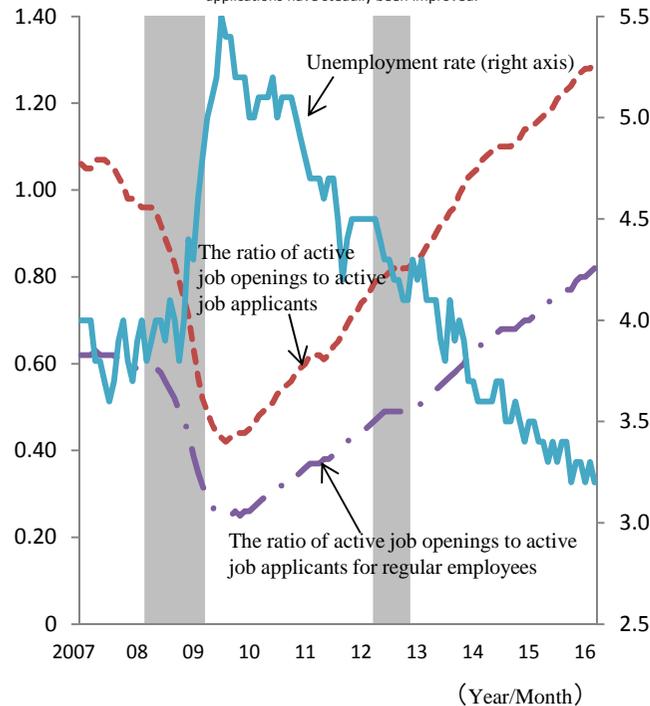
# Outline of the Analysis of the Labour Economy 2016

With our recognition of requiring environmental improvement to boost labour productivity and making it possible for those who are willing to work to play an active role, the white paper was titled “Realization of a Society Where Everyone Can Play an Active Role and Challenges for Enhancement of Labour Productivity” and analyzed on challenges for the improvement of labour productivity and measures for the way of working with which everyone can play an active role for overcoming supply limitations caused by the decline in birthrate and demographic aging.

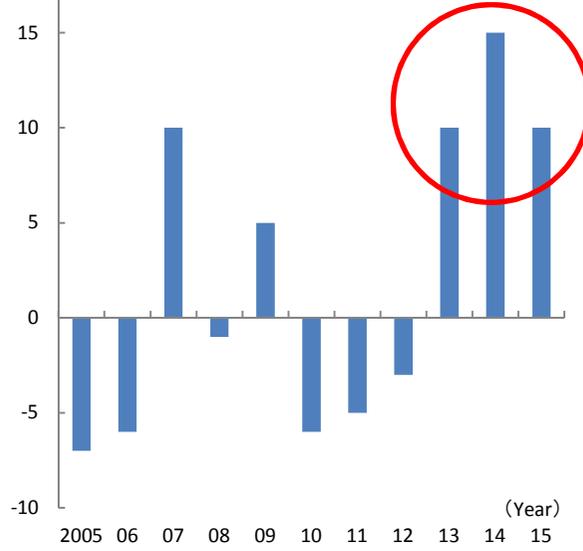
## Chapter 1 Trends and Features of the Labour Economy

Employment conditions are steadily improving: the FY2015 average unemployment rate was 3.3%, the lowest rate in 19 years, and the FY2015 average ratio of active job openings to active job applicants was 1.23, the highest ratio in 24 years and it reached the record high of 0.82 times in March 2016 and so forth. Moreover, transfer from irregular employment to regular employment has been increasing for 3 years in a row since 2013; pertinent to involuntary irregular employment, it has been decreasing for 9 quarterly periods in a row by year-to-year comparison.

(Time(s)) Fig.1 Unemployment rate and the ratio of active job openings to active job applications have steadily been improved.



(10,000 persons) Fig. 2 Number transferred from irregular employment to regular employment has been increased in the latest 3 years . (15 to 54 years old)



※The “number of transferred persons from irregular employment to regular employment” minus the “number of persons transferred from regular employment to irregular employment.”

(%) Fig. 3 The ratio of involuntary irregular employment has been on a declining trend.



## Chapter 2: Japan's Current Status and Challenges for Enhancement of Labour Productivity

- ◆ In view of the condition of added value in Japan, (1) The contribution of capital input including IT investments has been diminishing since the latter half of 1990s; (2) The contribution of TFP (Total Factor Productivity) has been decreasing as compared with the 1970s and 1980s, due largely to decreased contribution of TFP, and added values have not increased since the latter half of 1990s. [Fig. 4]
- ◆ For Japan, to overcome supply limitations caused by the decline in birthrate and demographic aging is an urgent issue, and toward this particular goal, in addition to an increase in capital input, an enhancement of added value generation by each person, i.e., an improvement in labour productivity, is indispensable.
- ◆ If we look at Japan's TFP contributions, these are correlated with the increased rate of intangible asset investment in the international comparison, but because Japan's increased rate of intangible assets is weak, the TFP increase rate is weak. [Fig. 5]
- ◆ In particular, of the intangible asset investments, among major countries, (1) Japan's investment in information assets concerned with IT for software, etc., is weak [Fig.6]; (2) Japan is weak in human investment including off-the-job training [Fig. 7]. These are considered to be major factors of weakness in the increased rate of intangible asset investment, so in this respect, an increase in investments for information assets and human capital are tasks for Japan.
- ◆ Further, taking account the impact of an increase in labour productivity on labourers, an increase in labour productivity links to an increase in wages to contribute to a major positive effect, moreover, in terms of employment, it is not linked to a decrease in labour employed nor an increase in the number of the unemployed.[Fig.8/Fig.9]

Fig. 4 Decreases in Japan's GDP growth are attributed to decreases in capital input, labour input and to TFP.

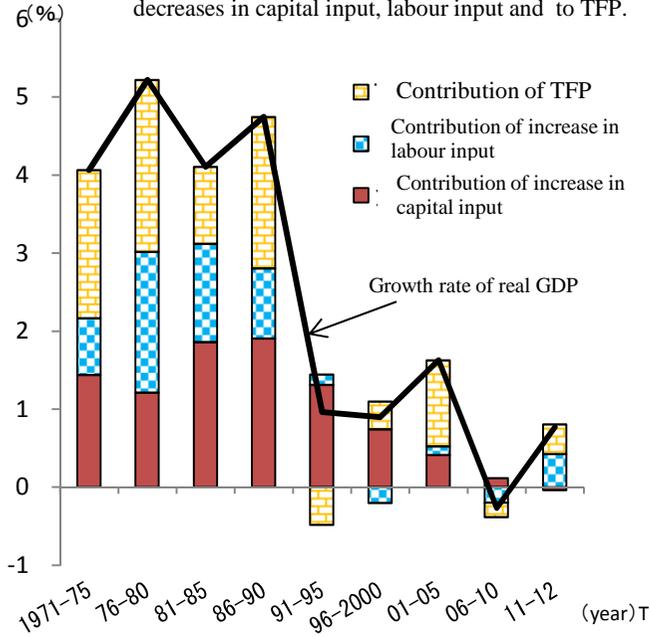


Fig. 6 Increased rate of information assets (※) is weak. (International comparison)

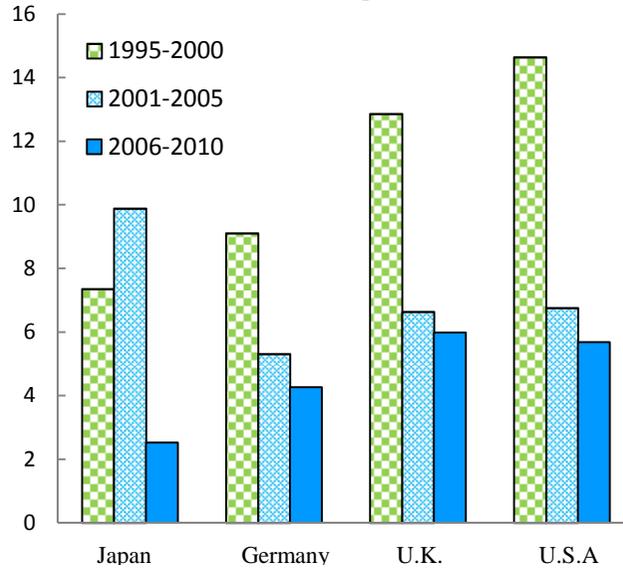


Fig. 8 Increase in labour productivity links to increase in wages (OECD countries/2008-14 average)

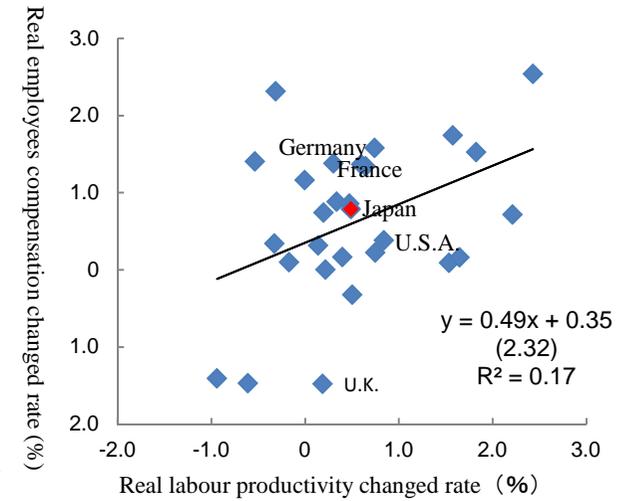


Fig. 5 Countries, whose intangible assets are increasing, have High TFP appreciation rate.(1995→2010)

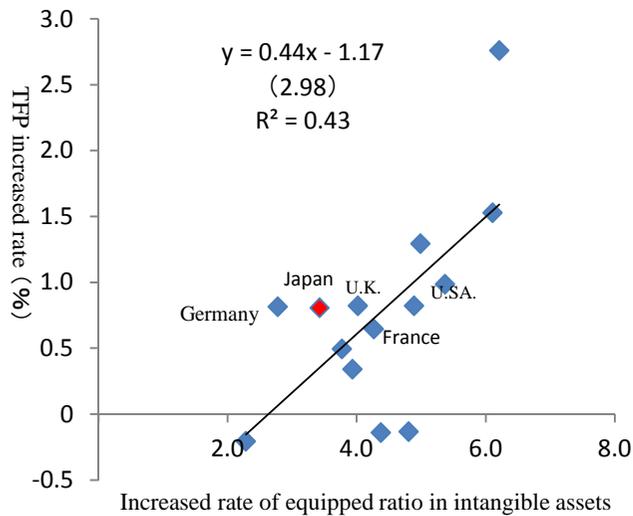


Fig. 7 Japan's human capital is on a diminishing trend. (International comparison)

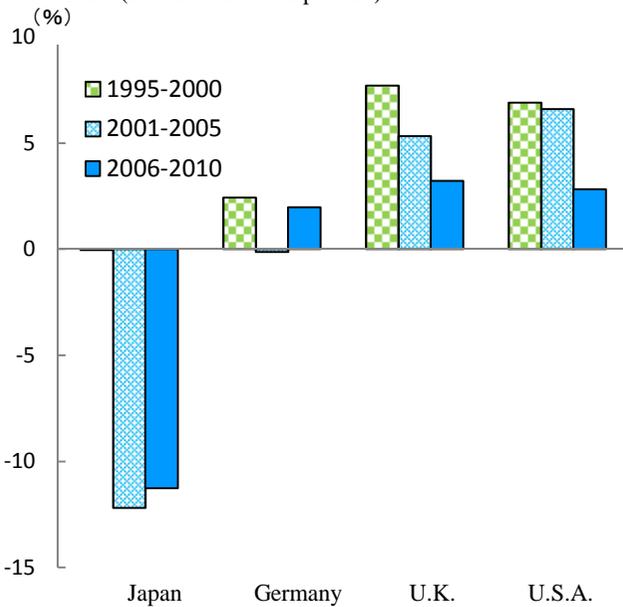
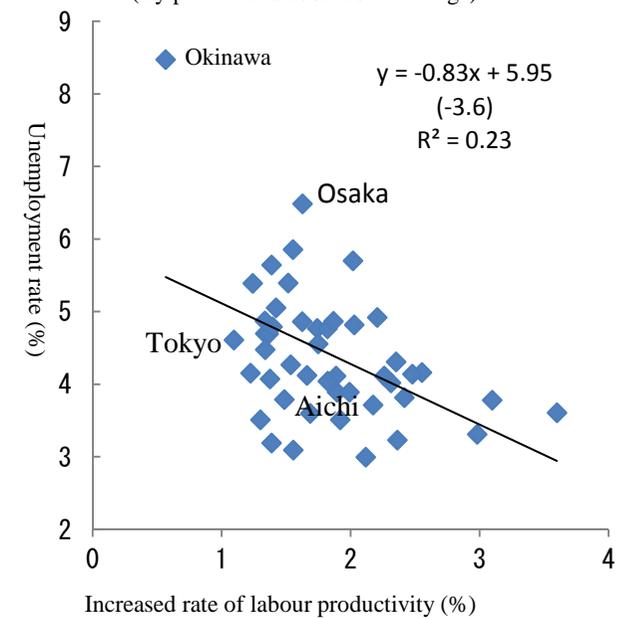


Fig. 9 Increase in labour productivity reduces unemployment rate. (By prefectures/2002-2012 average)



Note: (※) Information assets indicate acceptance of order/ package software, self-developed software, etc., human capital indicates spending to OFF-JT.

## Chapter 3: Toward for a Society where everyone can play an active role in the face of Population Decline

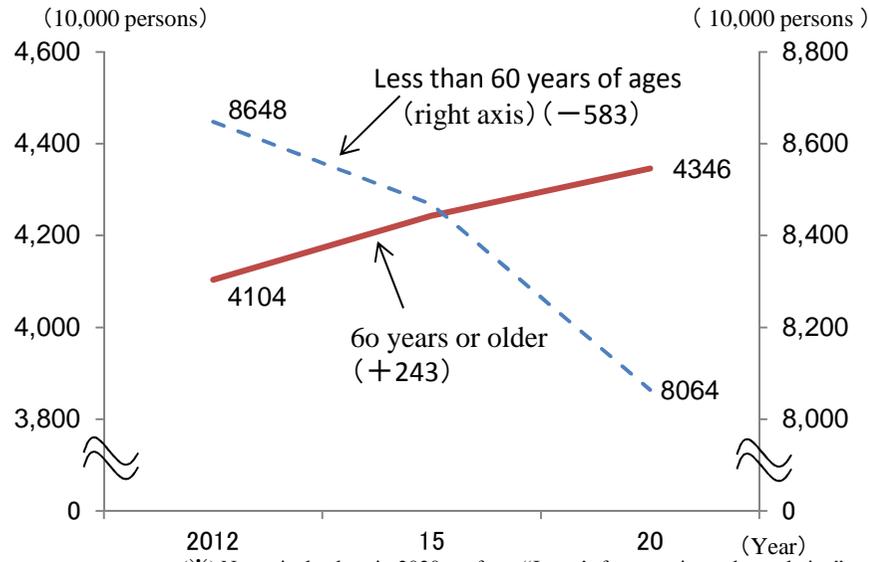
### 【Environmental improvement for the Elderly on How to Work and Play an Active Role】

- ◆ Although a decrease in population is expected in Japan in the future, in view of the elderly, an increase in population is expected. In the elderly, while numbers of persons employed are slightly increasing, there are still plenty of elderly people who have not yet been employed irrespective of their willingness to work. In this regard, environmental improvements enabling them to select a variety of working ways is necessary. 【Fig.10/Fig.11】
- ◆ As an alternative for work, “starting a business” is also considered in addition to employment. Those aged 60 or older who wish to start a business are increasing. Taking account of the elderly’s experiences cultivated during their long career, support for starting a business for them as a venue to play an active role is necessary. 【Fig.12】

### 【Challenges of companies/Labourers aiming to Play an Active Role for Limited Human Resources】

- ◆ While the employment situation is improving, the decline birthrate and demographic aging are continuing to develop, and labour shortages are emerging. Amid the labour shortages, finite human resources exert abilities obtained by their experiences, and it is significant to establish a society, in which everyone can actively participate.
- ◆ Companies are faced with situations offers of work result in no applicants, or no applicants are found suitable for the work. Reexamining the consolidation of support for the enhancement of applicant qualifications, wage levels, treatment/labour conditions, proposing better job recruitments and endeavoring to secure human resources are crucial. 【Fig. 13】

Fig. 10 While the population of less than 60 years of ages decreases, 60 years or older population increases (※)



(※) Numerical values in 2020 are from "Japan's future estimated population" prepared by the National Institute of Population and Social Security Research. (Estimated in January 2012.)

Fig. 11 In addition to occupied population of 60 years or older, considerable number of wishing to work exist, it tends to be increasing.

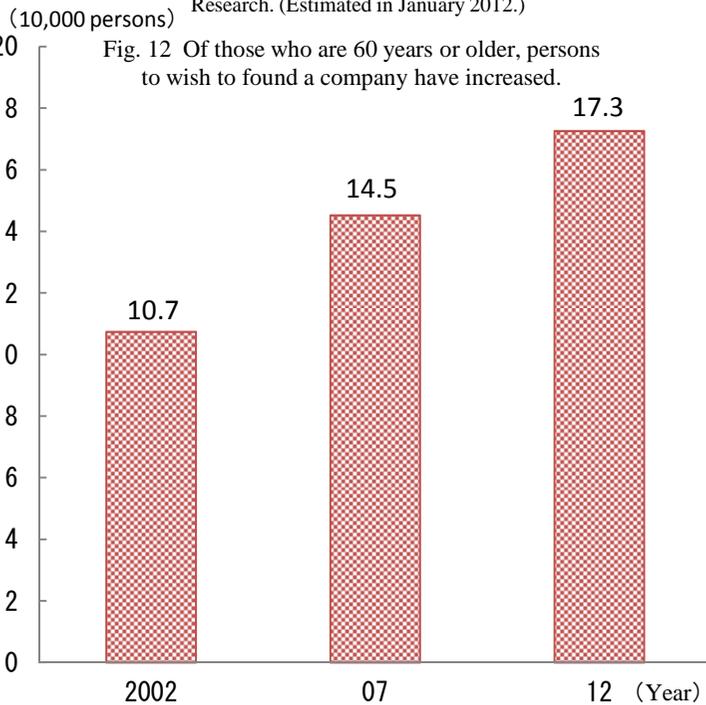
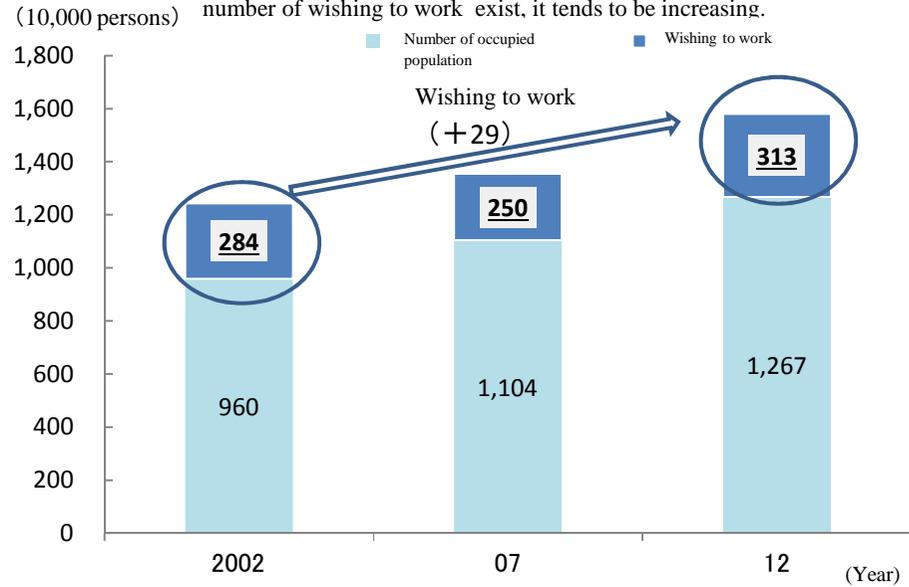
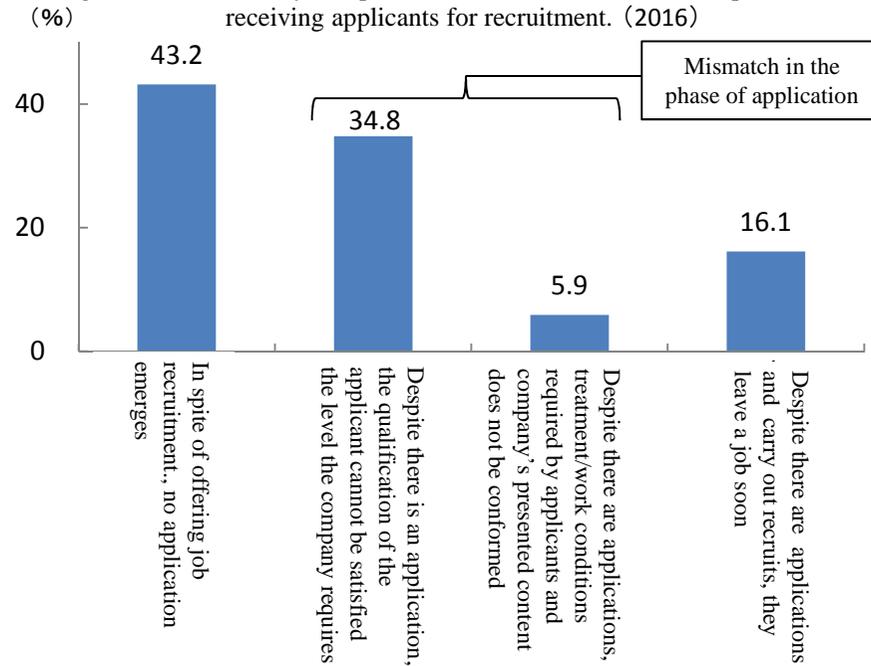


Fig. 12 Of those who are 60 years or older, persons to wish to found a company have increased.

Fig. 13 There are many companies which do not reach the acceptance even though receiving applicants for recruitment. (2016)



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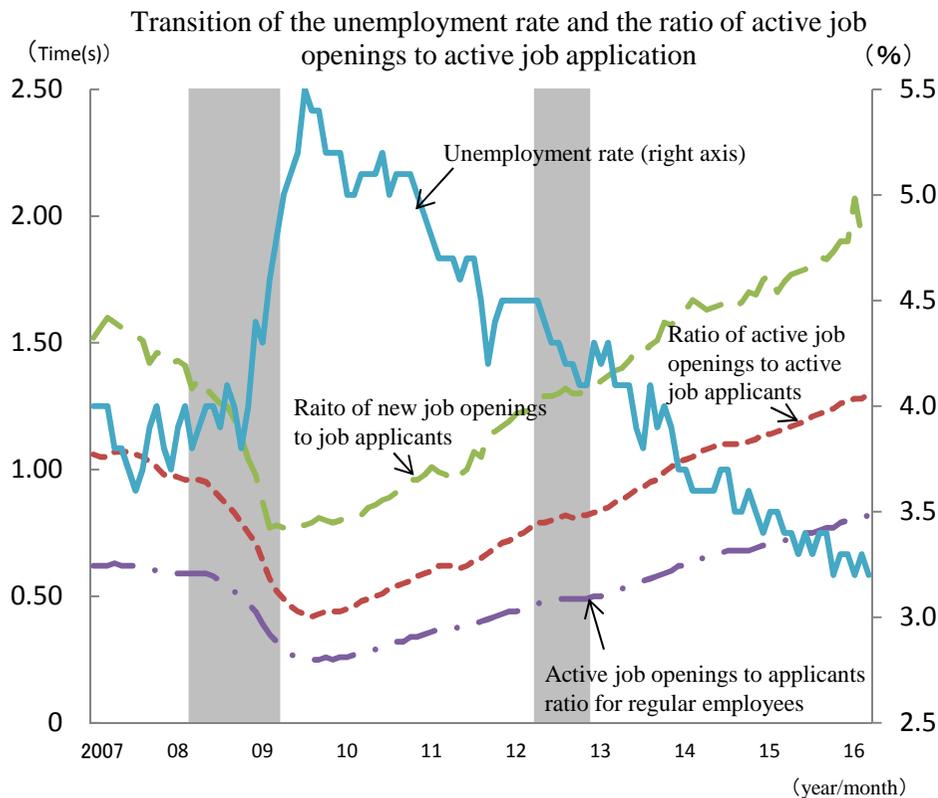
**— Realization of a Society Where Everyone Can Play an Active Role and  
Challenge for Enhancement of Labour Productivity —**

**[ Overview ]**

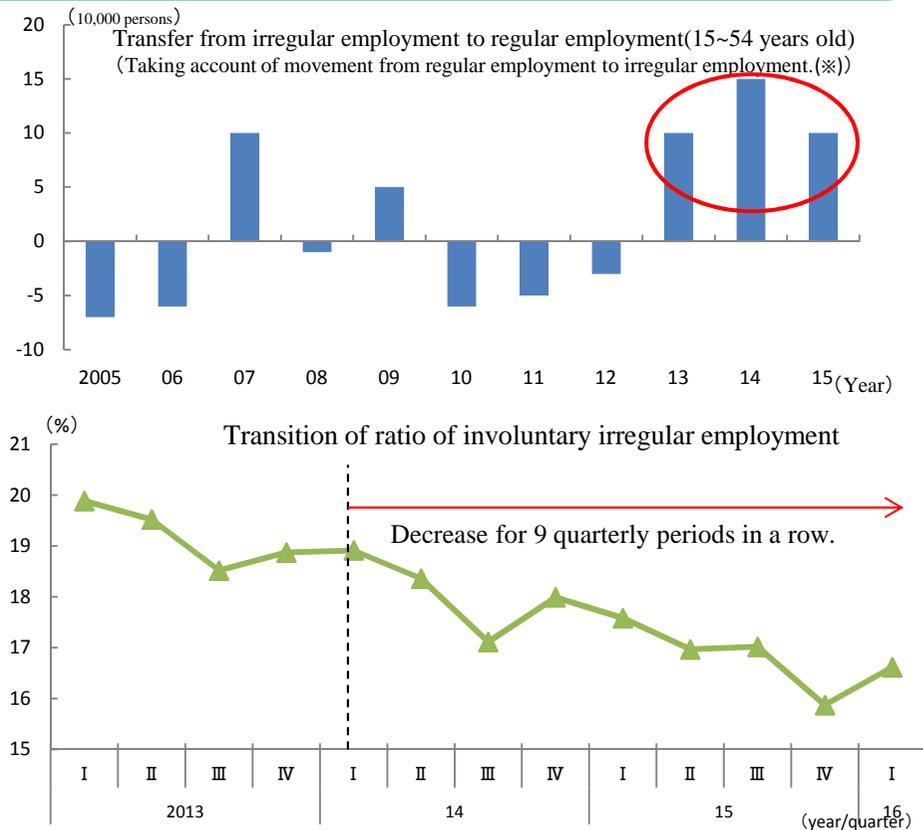
# Chapter 1: Trends and Features of the Labour Economy

## — Trends of Employment, Unemployment, etc. —

- Employment conditions are steadily improving: the FY2015 average unemployment rate was 3.3%, the lowest rate in 19 years, and the FY2015 average ratio of active job openings to active job applicants was 1.23, the highest ratio in 24 years and it reached the record high of 0.82 times in March 2016 and so forth.
- Transfer from irregular employment to regular employment has been increasing for 3 years in a row since 2013, pertinent to involuntary irregular employment, it has been decreasing for 9 quarterly periods in a row by year-to-year comparison.



Source: Prepared based on "Report on Employment Services," MHLW, "Labour Force Survey" and "Labour Force Survey (detailed tabulation)". Statistics Bureau, Ministry of Internal Affairs and communications(MIC)



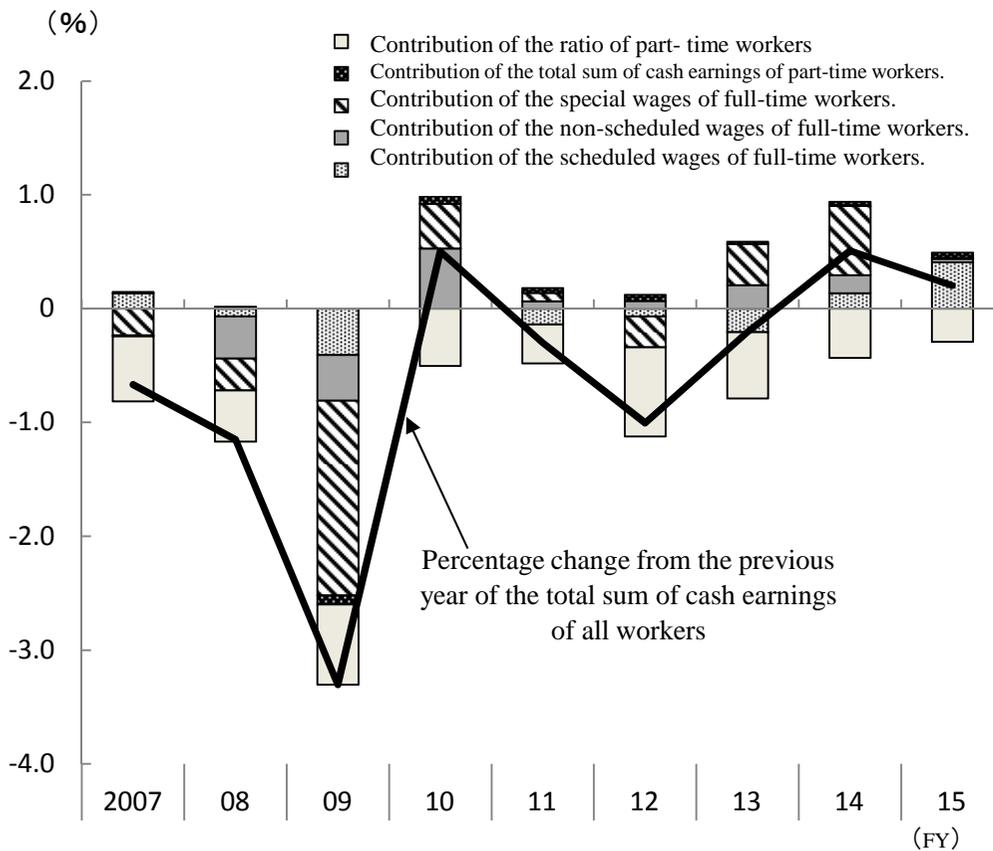
※The "number of persons transferred from irregular employment to regular employment," minus the "number of persons transferred from regular employment to irregular employment."

# Chapter 1: Trends and Features of Labour Economy

## — Trends of wages —

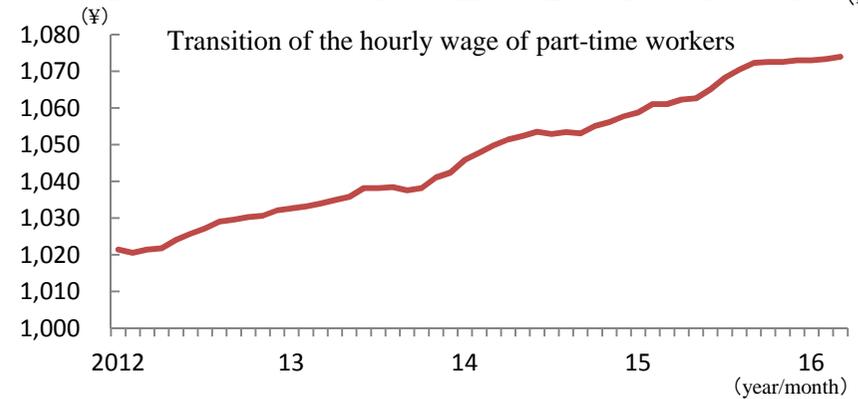
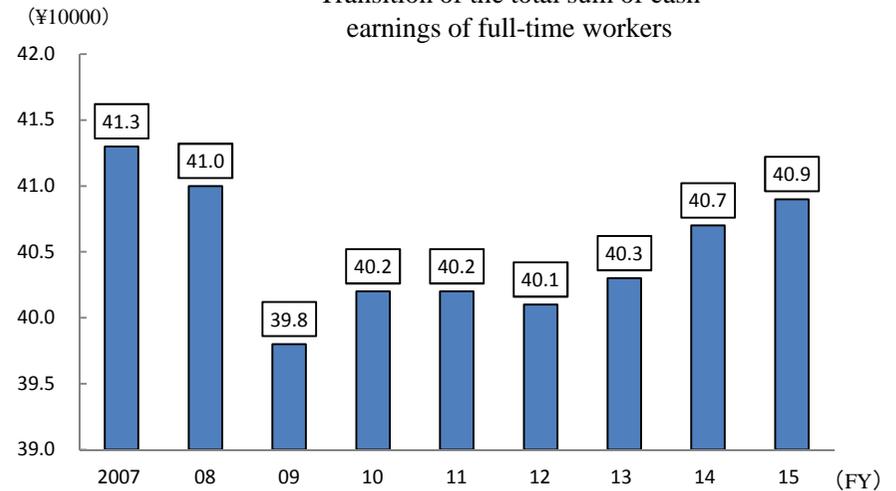
- Nominal wages in FY 2015 increased for 2 years in a row mainly due to the increase in full-time workers' scheduled wages.
- Further, full-time workers' nominal wages increased for 3 years in a row and the hourly wage of part-time workers is the highest level, ever, at 1,069 yen on average in 2015.

Transition of the total sum of cash earnings



FY2012	FY2013	FY2014	FY2015
▲1.0%	▲0.2%	0.5%	0.2%

Transition of the total sum of cash earnings of full-time workers



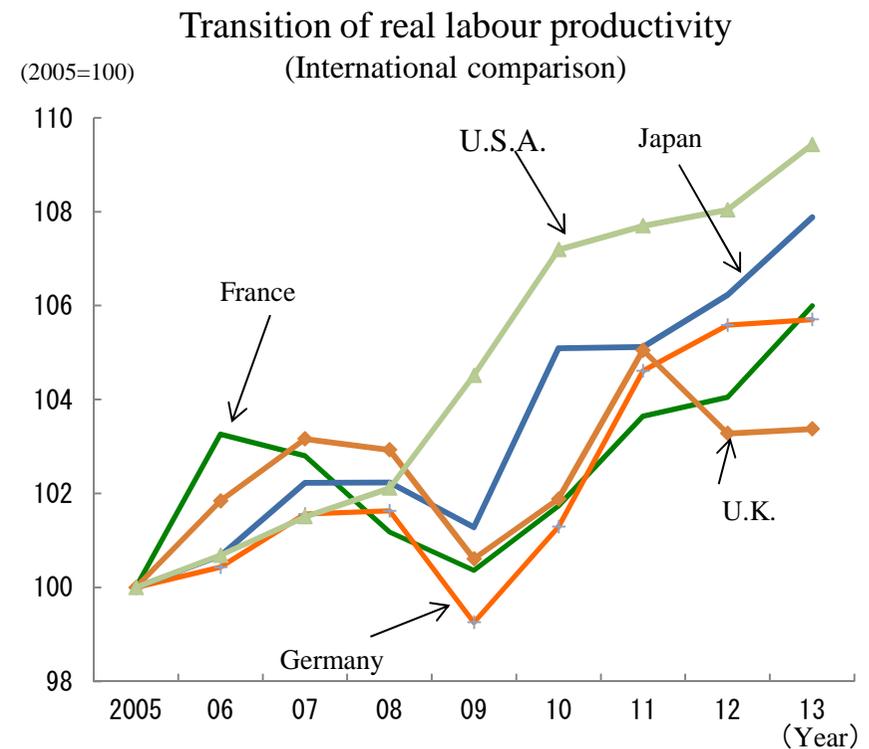
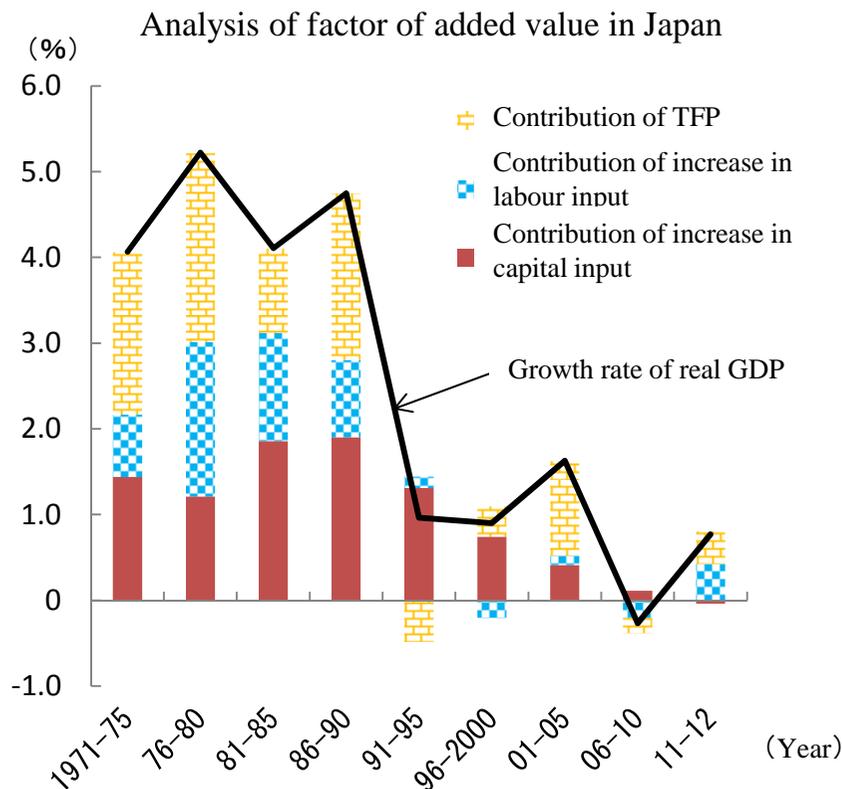
2012 average	2013 average	2014 average	2015 average
¥1,027	¥1,038	¥1,054	¥1,069

※FY averages : 2012: ¥1,031; 2013: ¥1,041; 2014: ¥1,055; 2015: ¥1,070

## Chapter 2: Japan's Current Status and Challenges for Enhancement of Labour Productivity

### – Current Status of Labour Productivity in Japan (1) –

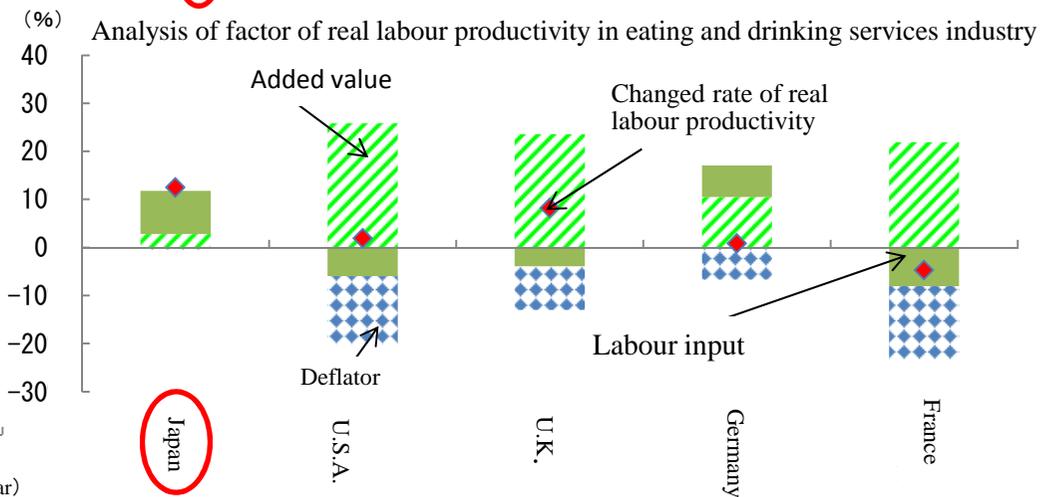
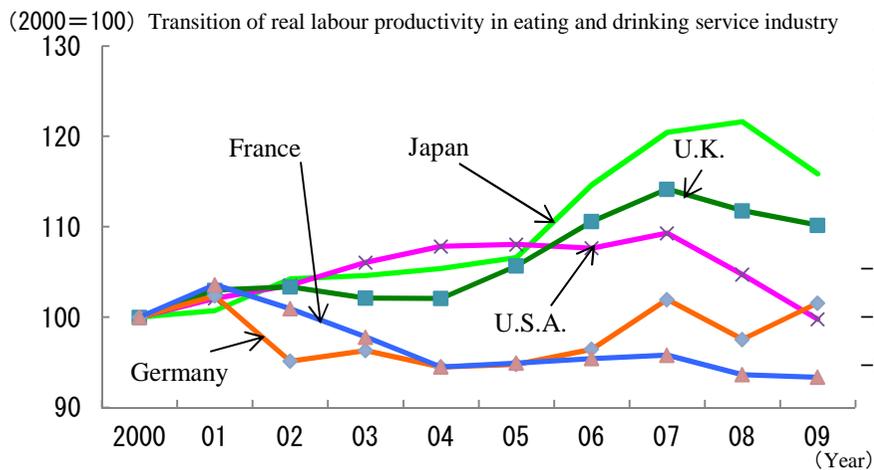
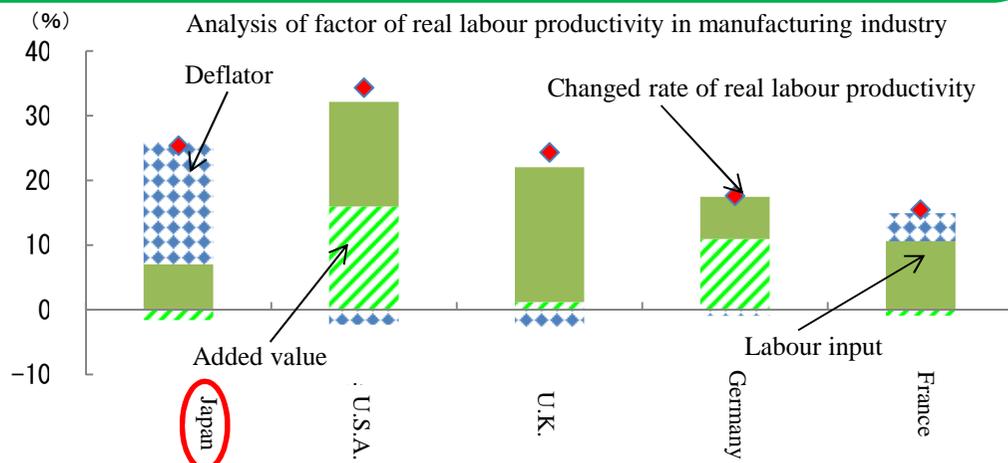
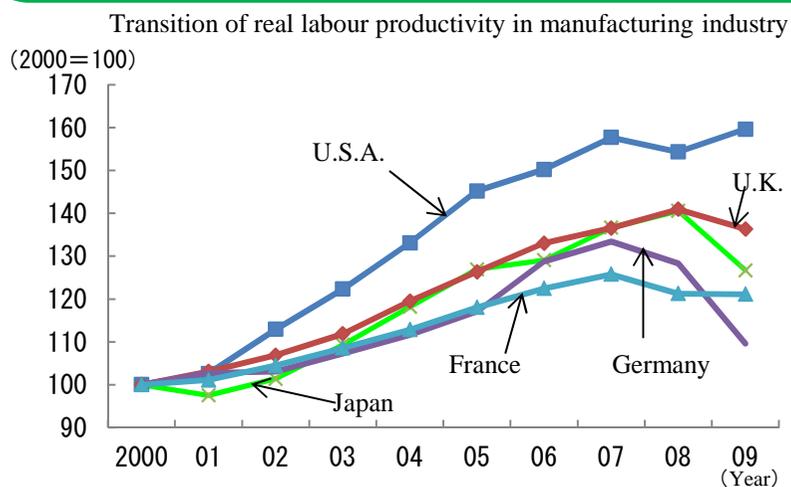
- In view of the condition of added value in Japan, (1) The contribution of capital input including IT investments has been diminishing since the latter half of the 1990s; (2) The contribution of TFP (Total Factor Productivity) has been decreasing as compared with the 1970s and 1980s, due largely to decreased contribution of TFP, and added values have not increased since the latter half of 1990s.
- For Japan, to overcome supply limitation caused by the decline in birthrate and demographic aging is an urgent issue, and toward this particular goal, in addition to an increase in capital input, an enhancement of added value generation by each person, i.e., an improvement in labour productivity is indispensable. Incidentally, the increased rate of labour productivity in Japan has been at the average level in the OECD countries.



Source: Prepared based on (Ind.) Research Institutes of Economy, Trade and Industry "JIP Database 2015"(Left Fig.) and OECD Stat (Right Fig.).

## Chapter 2 Japan's Current Status and Challenges for Enhancement of Labour Productivity — Current Status of Labour Productivity in Japan (2) —

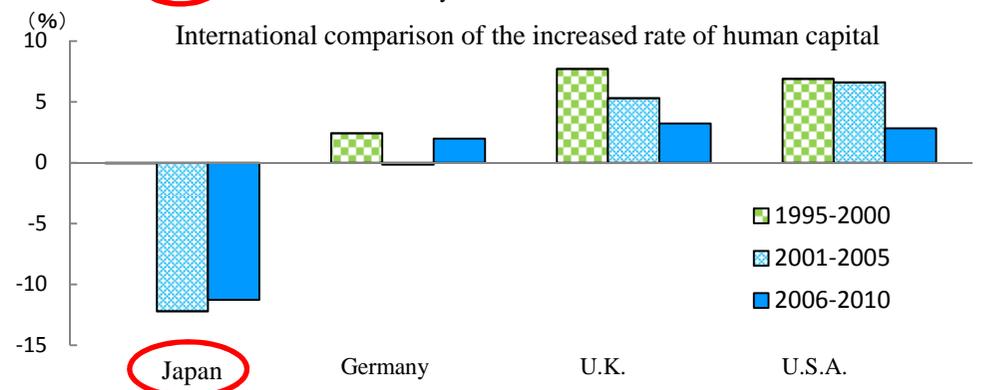
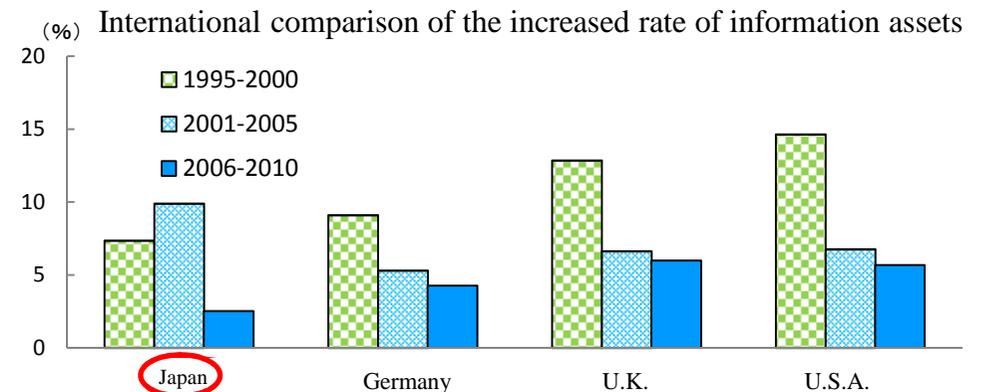
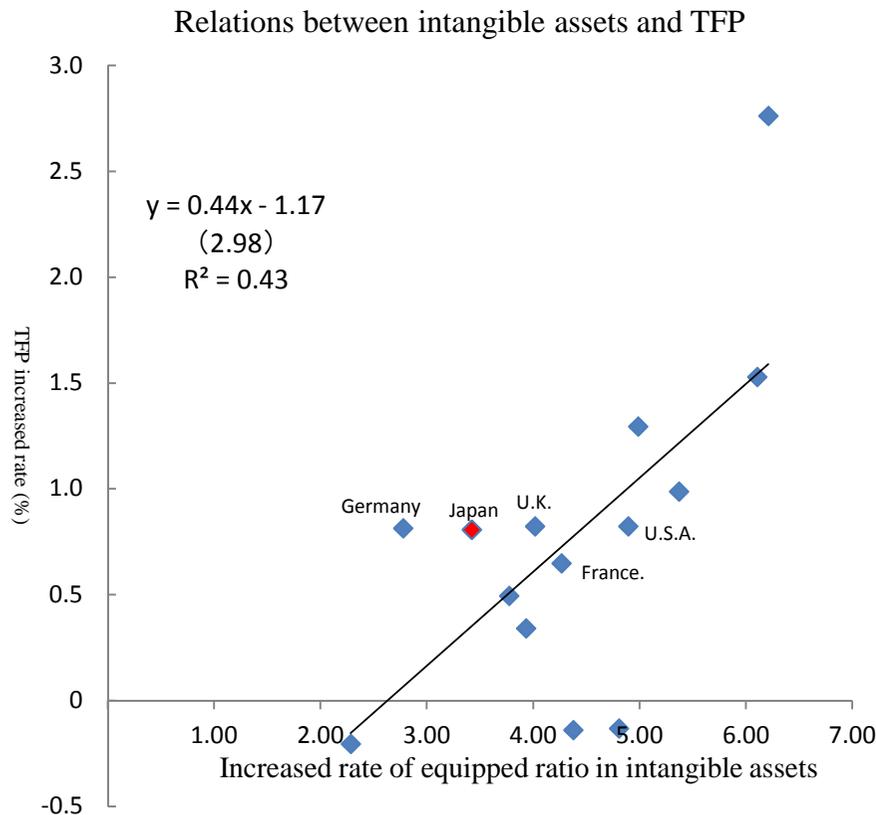
- When looking at the trends of labour productivity by industry, the increased rate of real labour productivity in the manufacturing industry in Japan is comparable to major countries. Meanwhile, although the increased rate of labour productivity in the eating and drinking services industry is the highest in major countries, its level is the lowest.
- When conducting analysis of factors, the added value factor is weak in both the manufacturing and the eating and drinking services industries. Factors of increase in labour productivity are due to decreases in the deflating factor in the manufacturing industry and to decreases in labour input in the eating and drinking service industry.
- In order for Japan's labour productivity to be increased even further, an increase in added value is required.



Source: Prepared based on EU KLEMS Database.

## Chapter 2: Japan's Current State and Challenges for Enhancement of Labour Productivity- — Current State of Labour Productivity in Japan (3) —

- If we look at Japan's TFP contributions, these are correlated with an increased rate of intangible asset investment in the international comparison, but because Japan's increased rate of intangible assets is weak, the TFP increase rate is weak.
- In particular, of the intangible assets investments, among major countries, (1) Japan's investments in information assets concerned with IT for software, etc., is weak, (2) Japan is weak in human investments including off-the-job training. These are considered to be major factors of weakness in the increased rate of intangible asset investment.

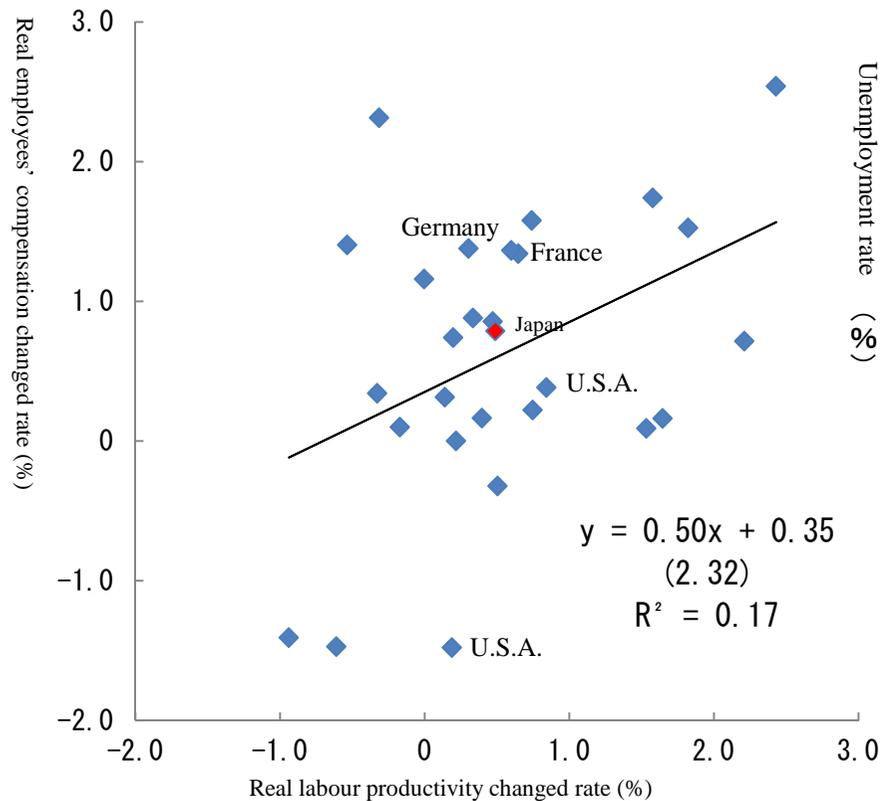


Source: Prepared based on (Ind.)Research Institute of Economy, Trade and Industry “JIP Database 2013”, INTAN-Invest, Corrado, Haskel, Jona-Lasinio, Iommi (2012) “Intangible Capital and Growth in Advanced Economies”, Miyagawa/Hisa (2013) “Intangible asset investment by industry and Japan’s economic growth”, EU KLEMS database.  
 Note : (1)TFP (Total Factor Productivity) is comprehended as a part (residual error) incapable of measuring by an increase in input by production factors such as capital/labour and understood that it reflects innovation and management efficiency. (2)Intangible assets are classified into (a) “Information Assets” like software, etc., (b) “Innovative Property” of R&D, etc., (c) “Economic Competences” like investments in brand equity/organizational structure and human capital.

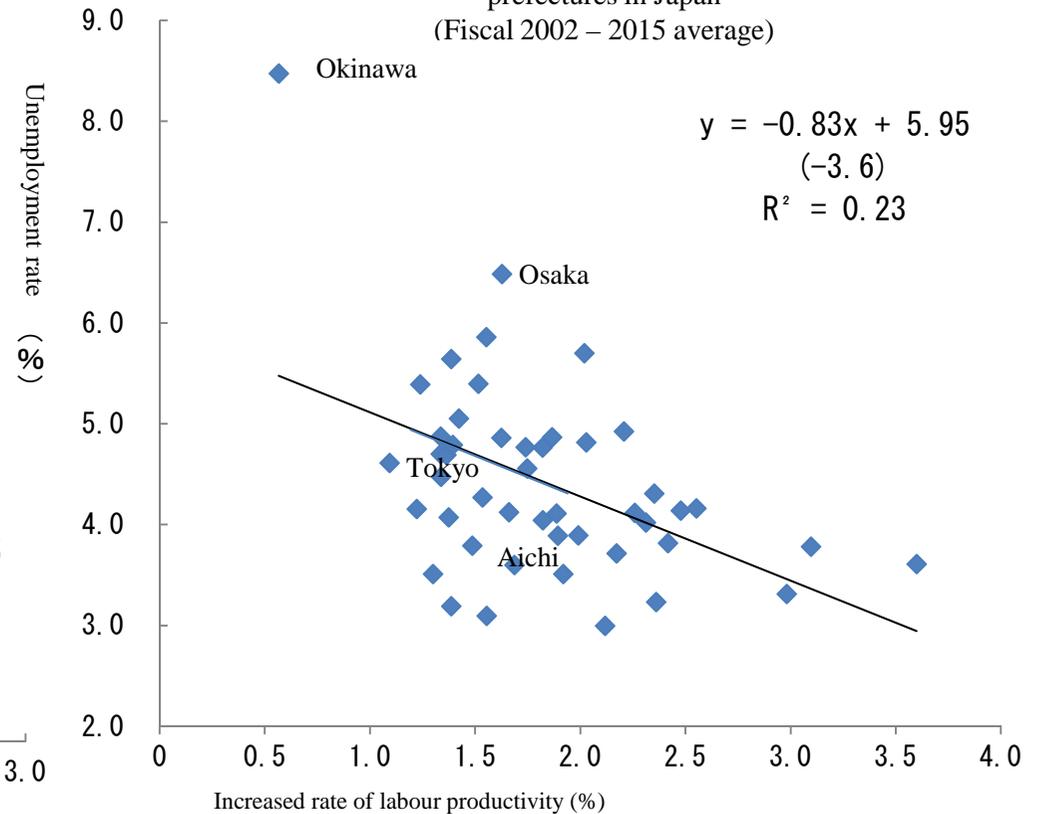
## Chapter 2: Japan's Current Status and Challenges for Enhancement of Labour Productivity —Fruits of an Increase in Labour Productivity from the Perspective of Wages/Employment (1)—

- When looking at the relationship between labour productivity and wages with international points of view, as real labour productivity increases, the relationship in which real employees' compensation increases can be seen.
- When looking at the relationship between labour productivity and the unemployment rate by prefectures in Japan, an inverse correlation is recognized between an increase in labour productivity and unemployment rates, and the relationship of if labour productivity increases, the number of the unemployed increases cannot be seen.

Relations between labour productivity and wages in OECD countries  
(2008-2014 average)



Relations between labour productivity and unemployment by prefectures in Japan  
(Fiscal 2002 – 2015 average)



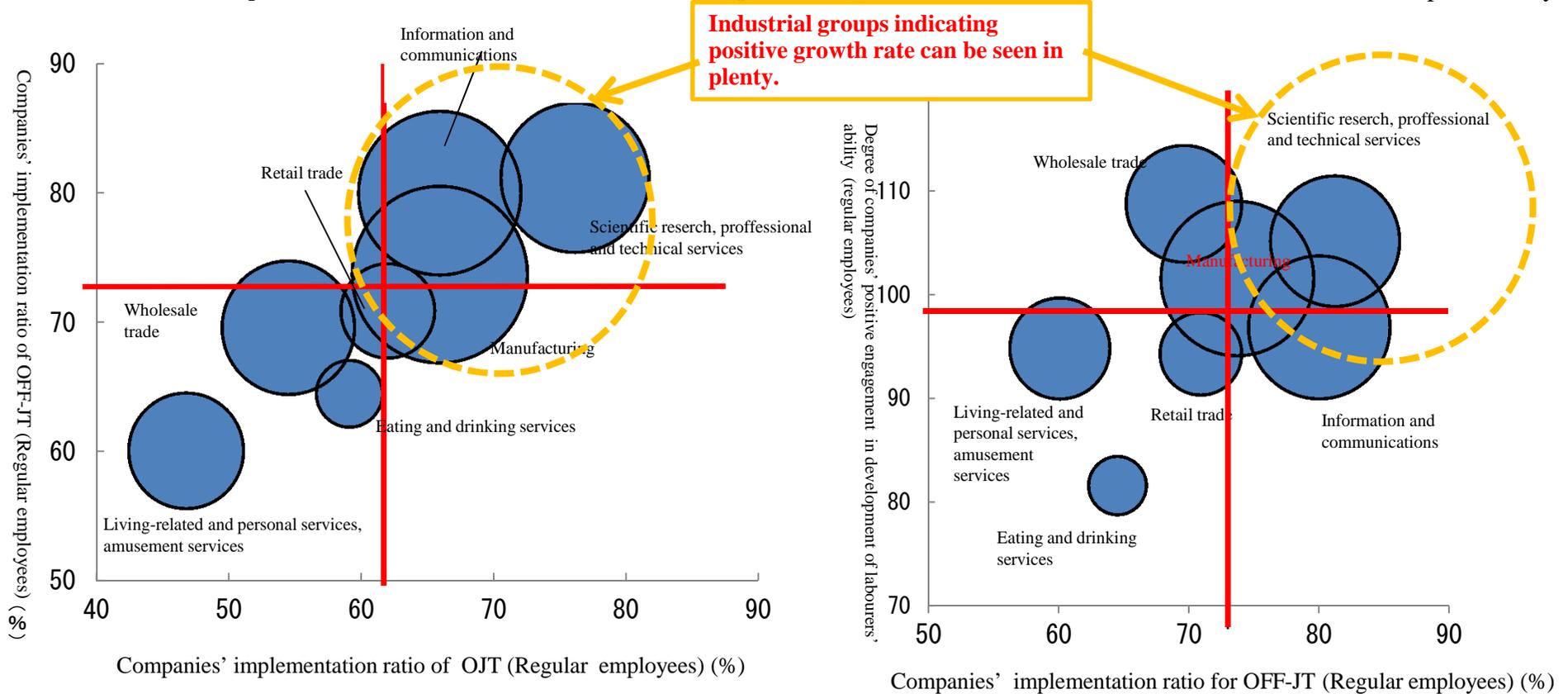
Source: Prepared based on OECD.Stat(Left Fig.) ,“Basic Statistical Survey on Employment Structure”, Statistics Bureau(MIC), “Prefectural Accounts,” Cabinet Office (Right Fig.), “Monthly Labour Survey (regional),” MHLW(Right Fig.)

## Chapter 2: Japan's Current State and Challenges for Enhancement of Labour Productivity — Japan's Challenges and Policies Aiming for an Increase in Labour Productivity(1) —

- Although an increase in ability development expenditure is effective for an increase in labour productivity, when companies are tackling ability development, to carry out both implementation of on-the-job training and off-the-job training are significant in terms of an increase in labour productivity.
- Other than these initiatives, to independently promote labourer ability development in compliance with companies' policy such as the enhancement of added value and toward self-development for labourers.

Relations between implementation ratio of OJT/OFF-JT and labour productivity

Relations between carrier formation and labour productivity



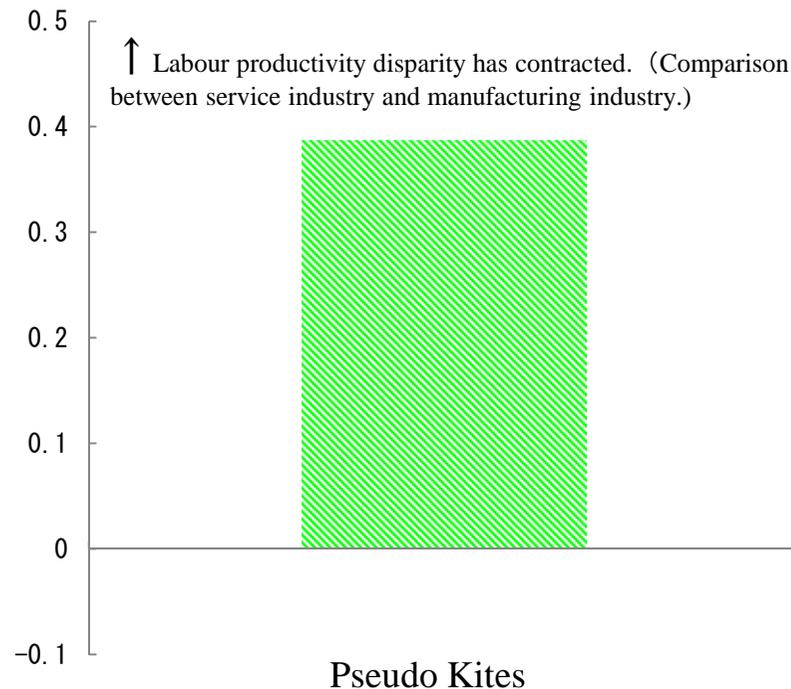
Source: Prepared based on “Ability Development Basic Investigation,” MHLW

Note: The scale of bubbles illustrates the comparative scale of labour productivities with other industries.

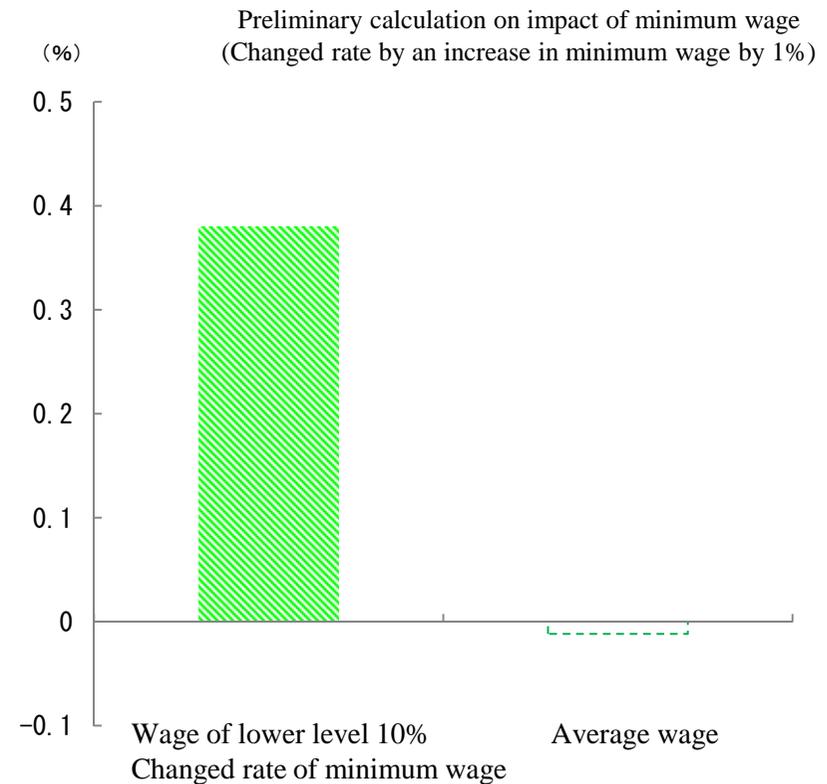
## Chapter 2: Japan's Current Status and Challenges for the Enhancement of Labour Productivity —Japan's Challenges and Policies for an Increase in Labour Productivity (2)—

- With reference to Pseudo-Kites Index, viewing it from an international perspective, an increase in the relative minimum wage will link to contraction of labour productivity disparity, as a result, it may be a possibility to be connected to an increase in nationwide labour productivity.
- In Japan, even as an increase in the minimum wage cannot be said effective in an increase in the average wages, it has an impact on pay hikes for people whose wages correspond to the lower level of 10%.

Pseudo-Kites Index and labour productivity disparity  
(International comparison)



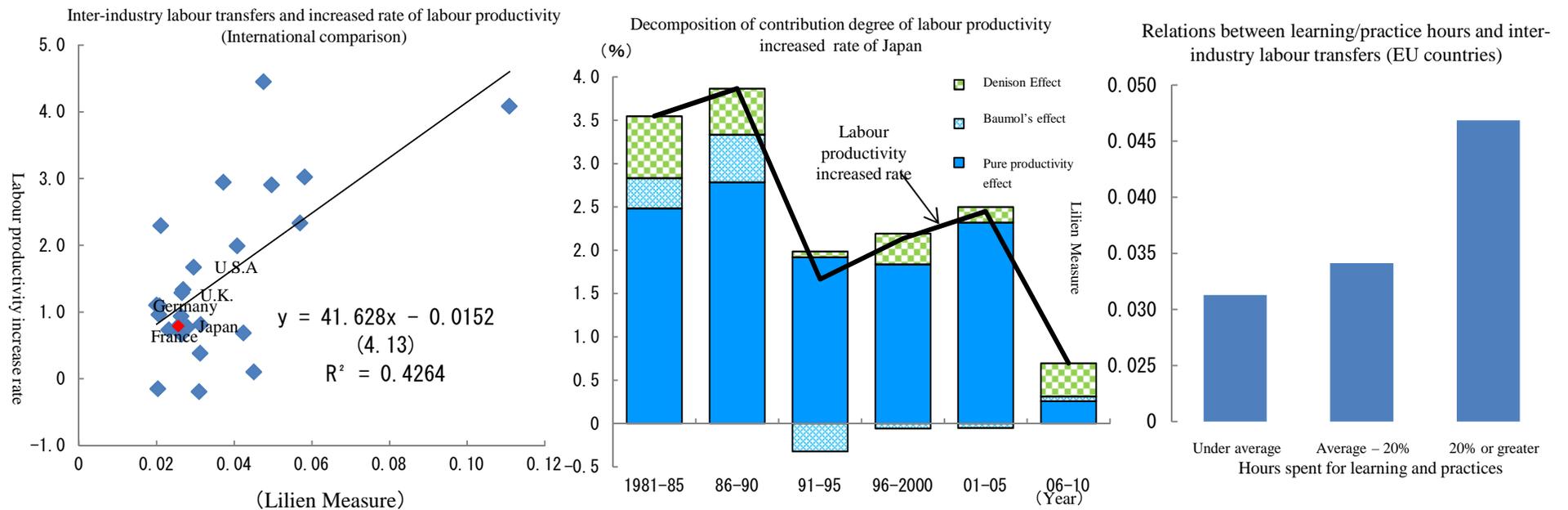
Japan's minimum wage and its level raise



Source: Prepared based on OECD. Stat (left fig.,) “All member Consultative meeting on the concept of indication system” Central Minimum Wage Council ,MHLW(Right fig.)  
 Note: Pseudo Kites Index is the value obtained by dividing the first quantile income in the labourers' 10 income quantile class by the median value of the income.

## Chapter 2 Japan's Current Status and Challenges for the Enhancement of Labour Productivity —Japan's Challenges and Policies for an Increase in Labour Productivity (3)—

- When viewed from an international perspective, countries whose labour transfers among industries more actively (countries with higher Lilien Measure) tend to become higher in the increased rate of labour productivity.
- When implementing analysis of factors for the changed rate of Japan's labour productivity, what contributes the most to the increase among factors for boosting it are genuine productivity factors followed by the Denison Effect (effects by labour transfer among industries) and it is recognized that the labour transfer to the industries with higher labour productivity is one of factors for boosting labour productivity.
- Moreover, when viewed from an international perspective, the longer the hours spent for learning and training, the more active trend can be seen in labour transfer among industries; for inter-industrial labour transfers, it will be necessary for each person to enhance own abilities through spontaneous learning and training.

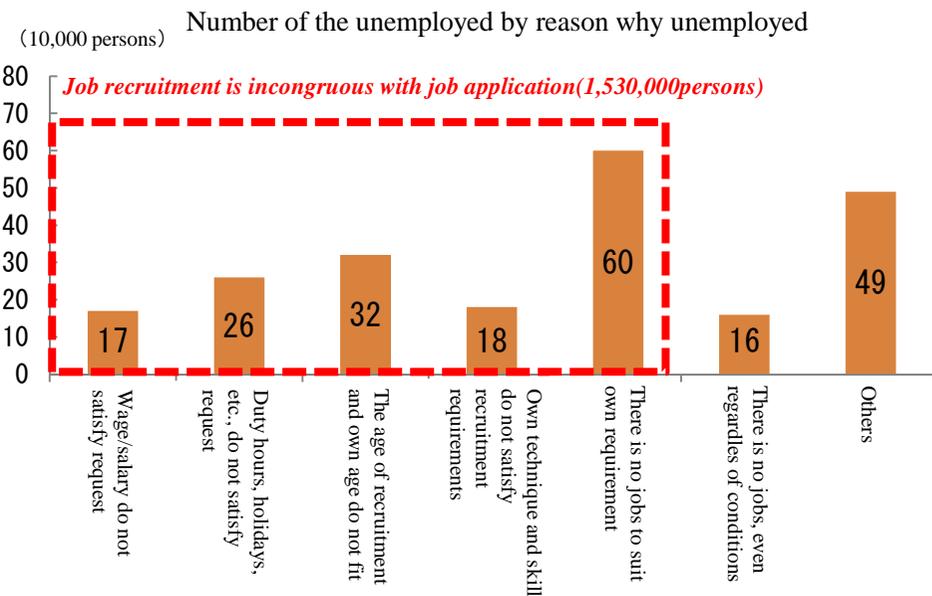
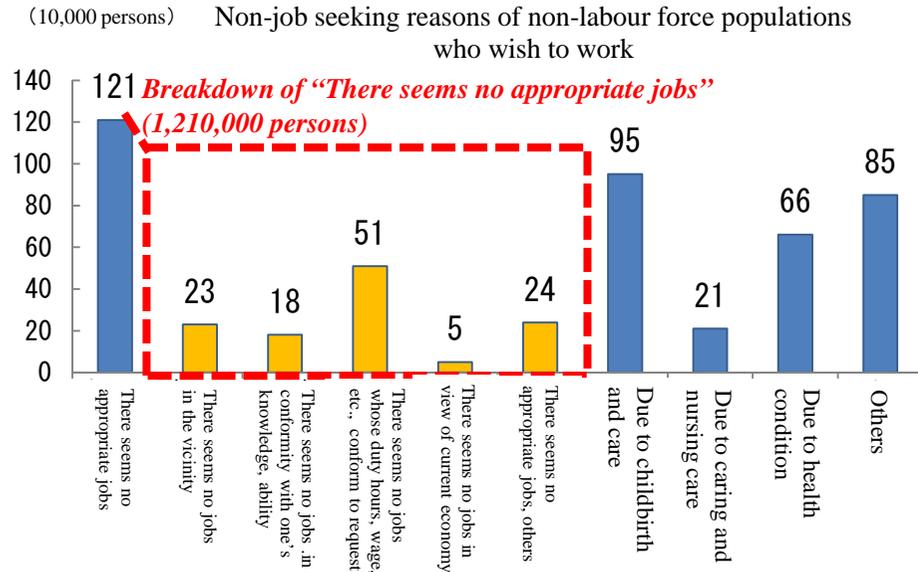
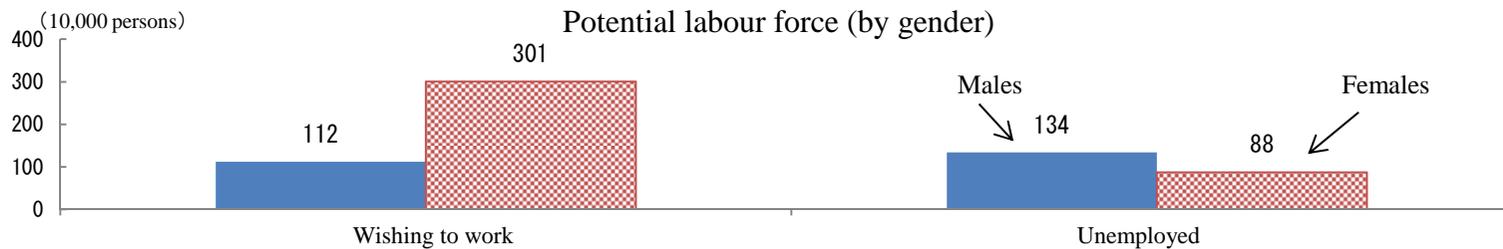


Source : Prepared based on OECD. Stat, (Ind.)The Research Institute of Economy, Trade and Industry, "JIP Database 2015" (Left fig. and center fig.), EU KLEMS Database (Center fig.), EURO Stat(Right fig.).

Note: (1)Lilien measure aggregates isolations between employment fluctuation of each industry and employment fluctuation of whole industry and it means that the bigger its value, inter-industrial labour transfer is more active.  
(2)Baumol's effect means an effect by a change according to industrial structure; Denison effect means an effect according to labour transfer.

## Chapter 3: Toward a Society Where Everyone can Play an Active Role in the face of Population decline —Japan’s Situation Where Active Roles of Workers are sought—

- Although a decrease in the labour force population is expected, when looking into potential labour force\*, there are 4.13 million population who wish to work and 2.22 million unemployed.
- In terms of a certain number of existence of those who have not yet been employed due to incongruous content of work, duty hours, wage, etc., from their requests, provision of working alternatives by configuration of a variety of working hours, and attempting the enhancement of matching functions by transparency of jobsite information, are essential.

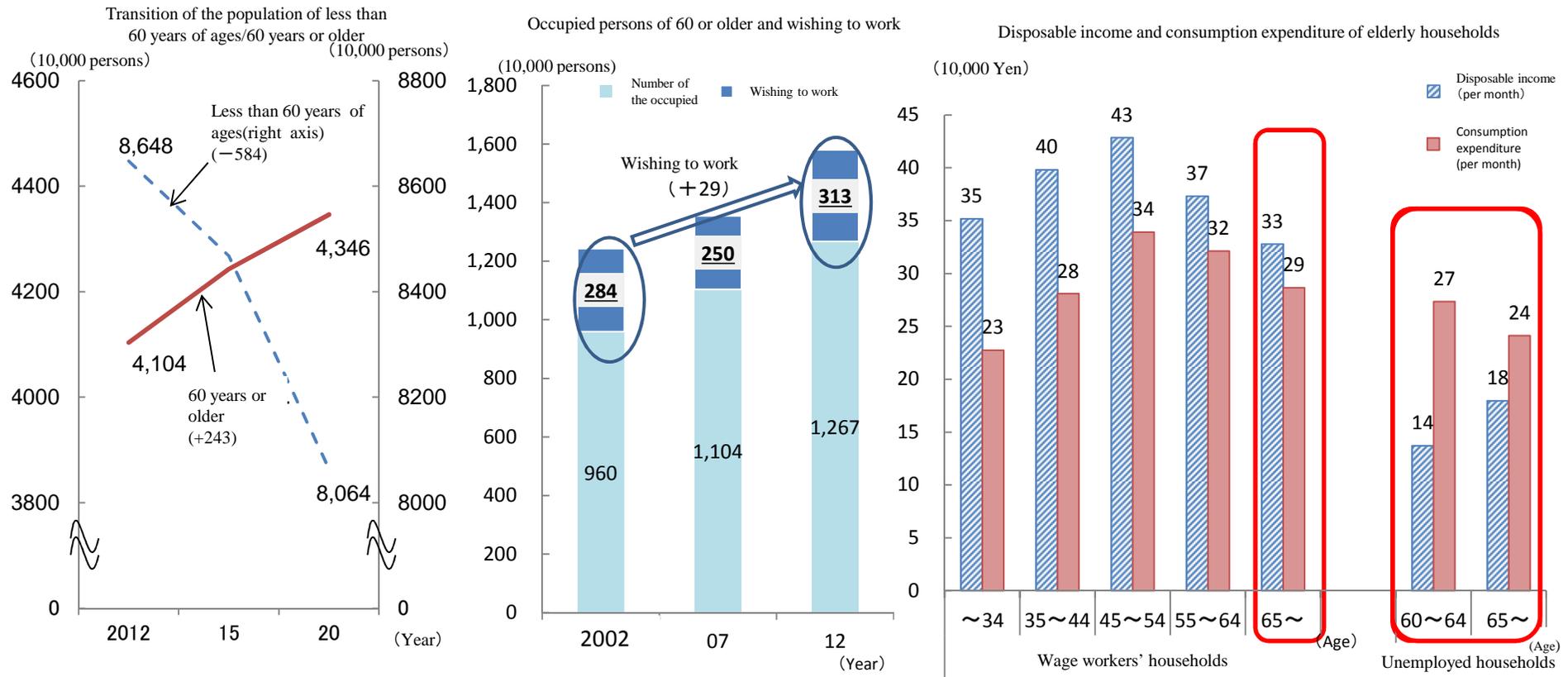


Source : Prepared based on “Labour force survey (detailed tabulation)(2015)”, Statistic Bureau (MIC)

\* Those who are considered as wage-earners regardless of not reaching to be employed. Within non-labour force population, “Wishing to work” and the “Unemployed” are considered.

## Chapter 3: Toward a Society Where Everyone can Play an Active Role in the face of Population decline — Environmental Improvement for the Elderly on How to Work and Play Active Roles (1) —

- Although a decrease in the labour force population is expected in the future, as far as the elderly are concerned, the population is expected to increase. The number of working elderly is increasing, and there are still 3.13 million elderly people who have yet to start to work but want to work.
- Further, the stratum of unemployed households of 60 – 64 age and 65 or older age ranges have the same level of consumption expenditure as the stratum of working households of 35 – 44 age and 34 or younger, and working households of 65 or older stratum have consumption expenditure over that of the aged 60 or older stratum of unemployed households. The participation of the elderly in employment not only leads to alleviation of labour force supply limitations, but also contributes to creating the virtues of economic circulation through income acquisition.

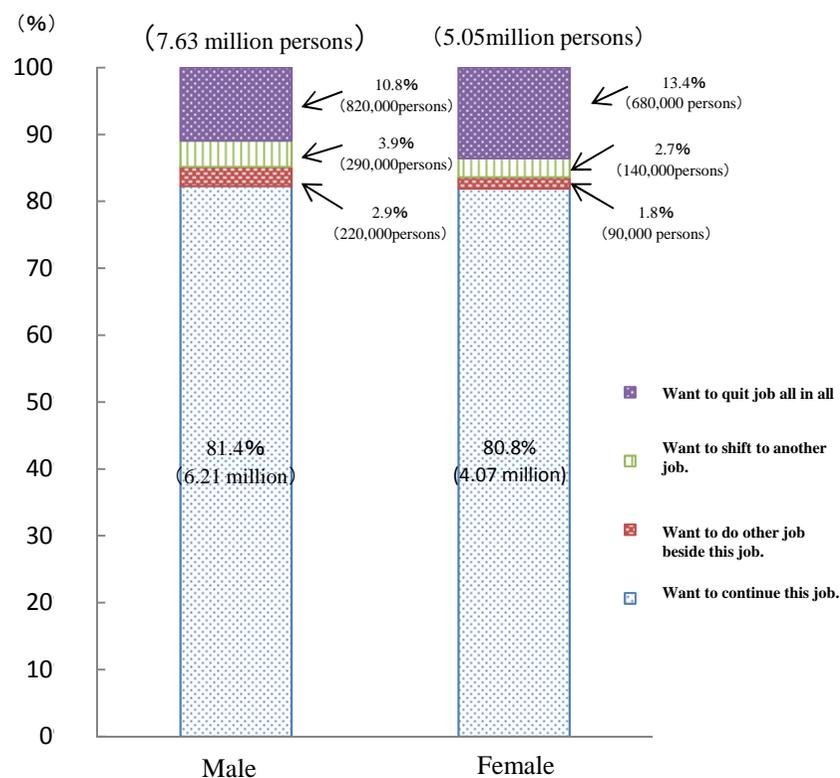


Source : Prepared based on "Population Estimates" (Left fig.), "Basic Statistical Survey on Employment Structure(2012)" (Left fig/Center fig.), "Family Income and Expenditure Survey (2015)"(right fig.), Statistic Bureau,(MIC), "Population Projections for Japan", (Ind.) National Institute of Population and Social Security Research.

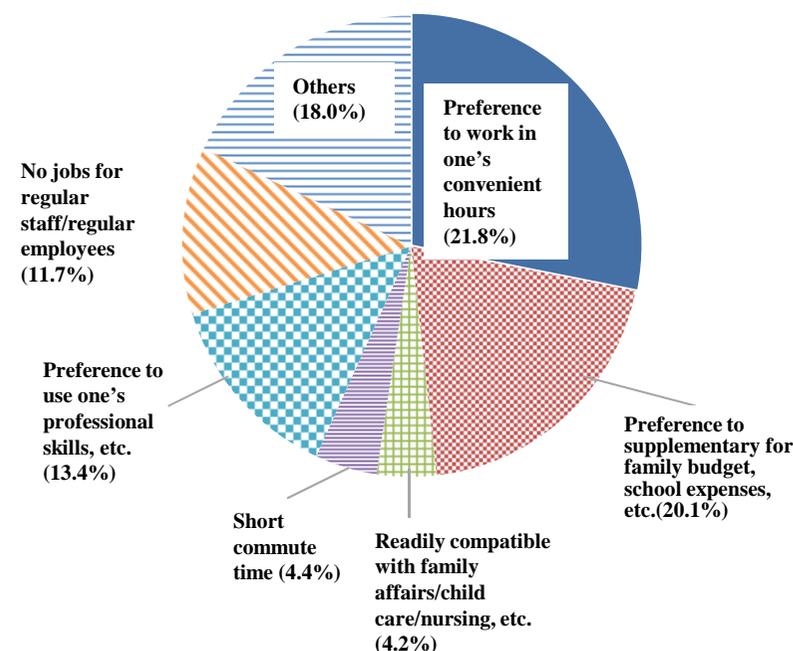
## Chapter 3: Toward a Society Where Everyone can Play an Active Role in the face of Population decline Environmental Improvement for the Elderly on How to Work and Play an Active Role (2) –

- With respect to the elderly, because that both males and females wishing to continue their present work exceed 80%, the implementation of policies for continued employment has become significant.
- Meanwhile, there are plenty of elderly employed in irregular employment on the grounds of their preference to work at times convenient to them, or because of their wish to gain supplementary revenues for their family budgets (e.g. school expenses, etc). Hence the configuration of flexible labour hours is necessary from the standpoint of being employed with a rewarding and challenging mood.

**Conscious mind of working for employed person over 60 years or older (by gender)**

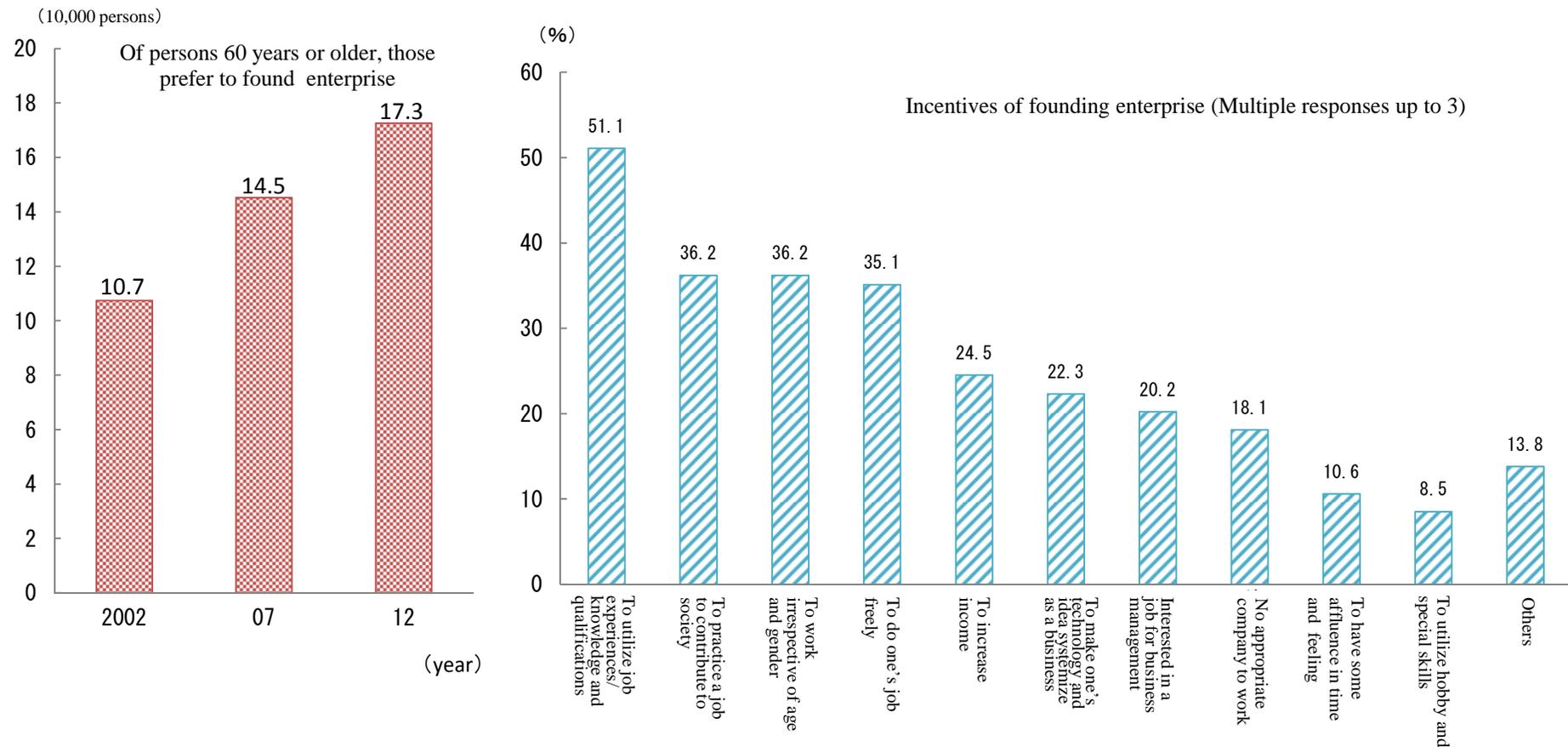


**Main reasons for non-regular employment labourers 60 years or older get present employment status**



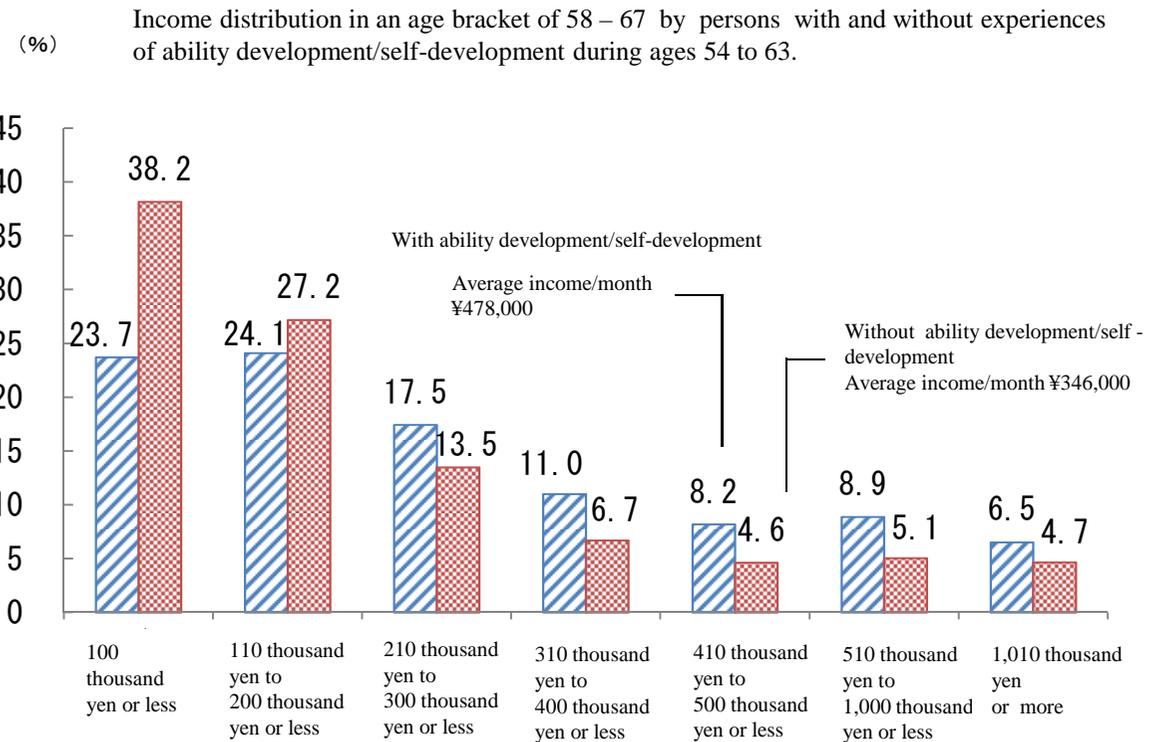
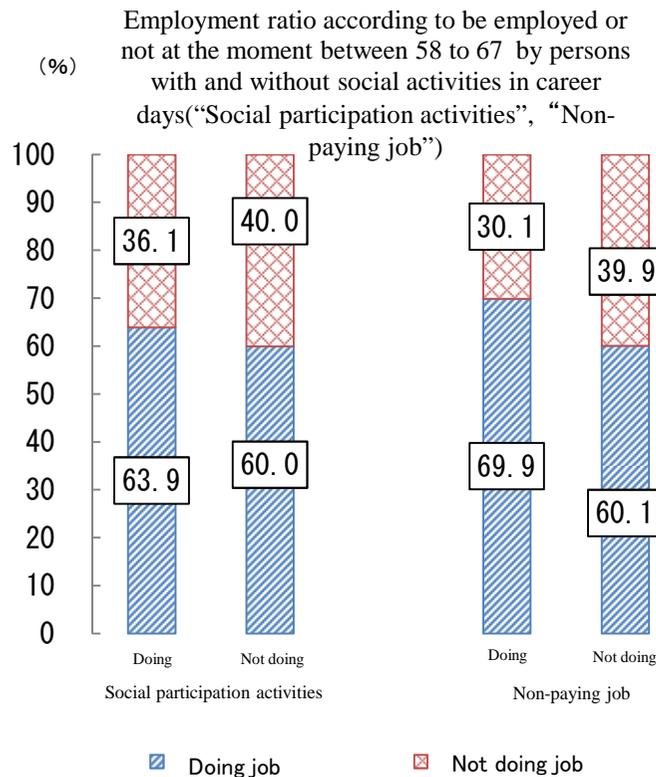
## Chapter 3: Toward a Society Where Everyone can Play an Active Role in the face of Population decline — Environmental Improvement for the Elderly on How to Work and Play an Active Role (3)—

- The elderly who want to found an enterprise have been increasing.
- When taking a look at incentives for starting a business, responses obtained are “Want to utilize one’s experiences, knowledge and qualifications,” “Want to practice a job to contribute to society,” “Want to work irrespective of age and gender” and suchlike. The founding of businesses by the elderly also is based on elderly needs to take advantage of their experiences and knowledge obtained through their occupational experiences and therefore the implementation of a business foundation assistance policy is considered necessary.



## Chapter 3 Toward a Society Where Everyone can Play an Active Role in the face of Population decline — Environmental Improvement for the Elderly on How to Work and Play an Active Role (4) —

- When looking into relations between social activities and employment from the standpoint of what sort of things are necessary in order to play an active role even when one becomes elderly, those who replied that they carry out social activities during their career (50 – 59 years old) have a higher ratio of employment experience in their age bracket between 58 and 67.
- Moreover, looking into relations between ability development/self-development and incomes, those who have experienced ability development/self-development during the age bracket between 54 and 63 have high their monthly incomes on average.
- It is significant to carry out social participation actively and execute ability development/self-development by securing time through a reduction in long working hours, from career ages.

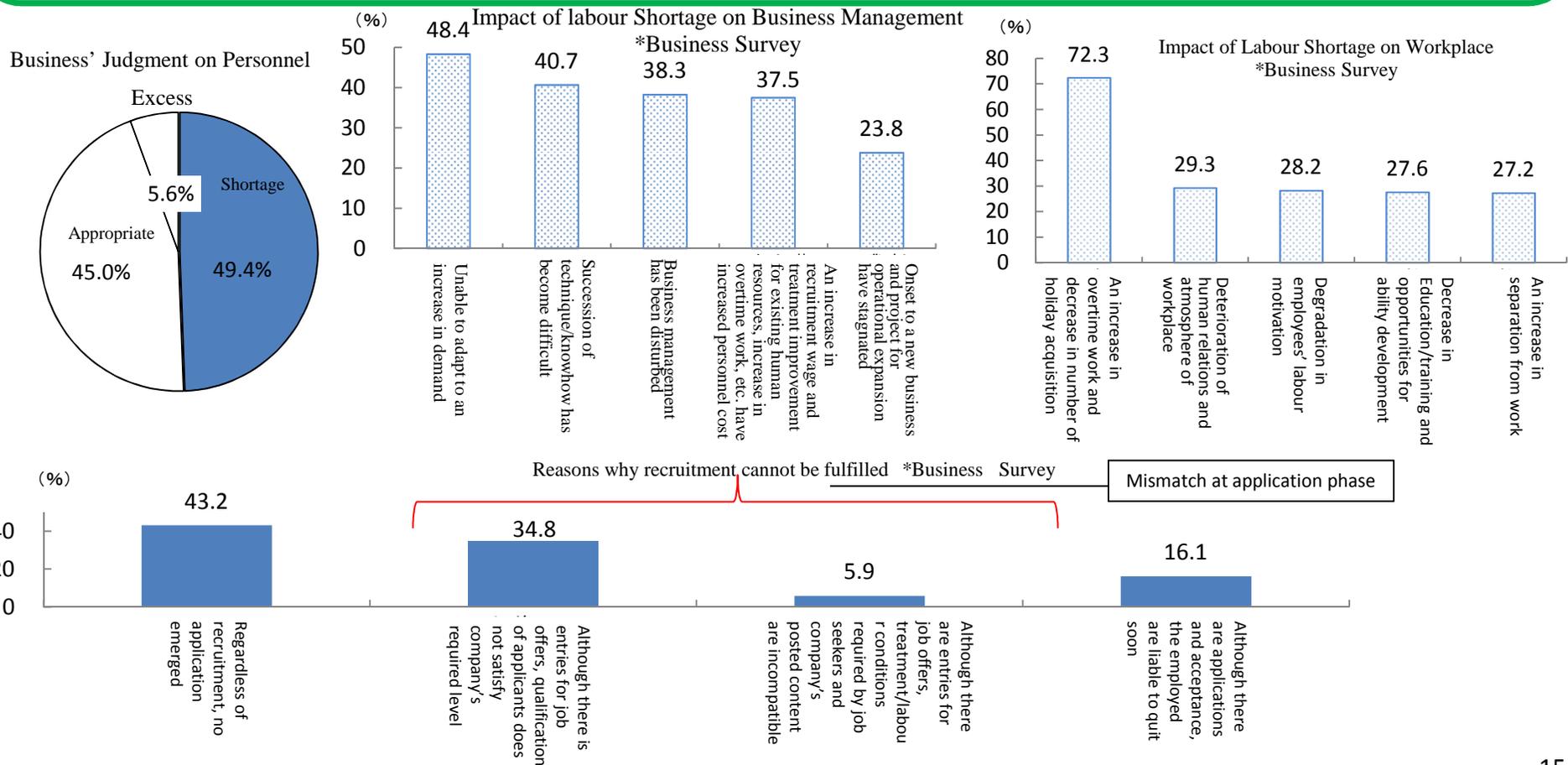


Source: Prepared based on “Longitudinal Survey of Middle-aged and Elderly Persons (9<sup>th</sup> research, 2013)”, MHLW.

Note: Doing or not doing social activities is age bracket 50 – 59 (1<sup>st</sup> research) is point in time, working on or not working on of ability development/self-development is age 54-63 (5<sup>th</sup> research) at this point in time, doing or not doing job, income per month is at this point in time of age 58-67 (9<sup>th</sup> research).

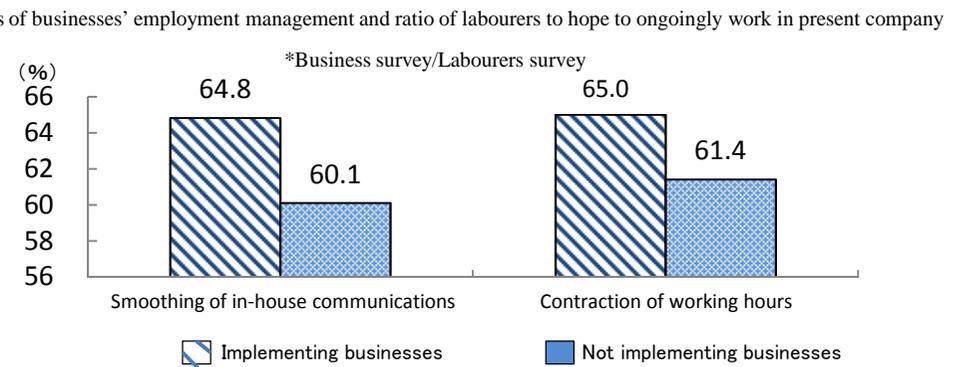
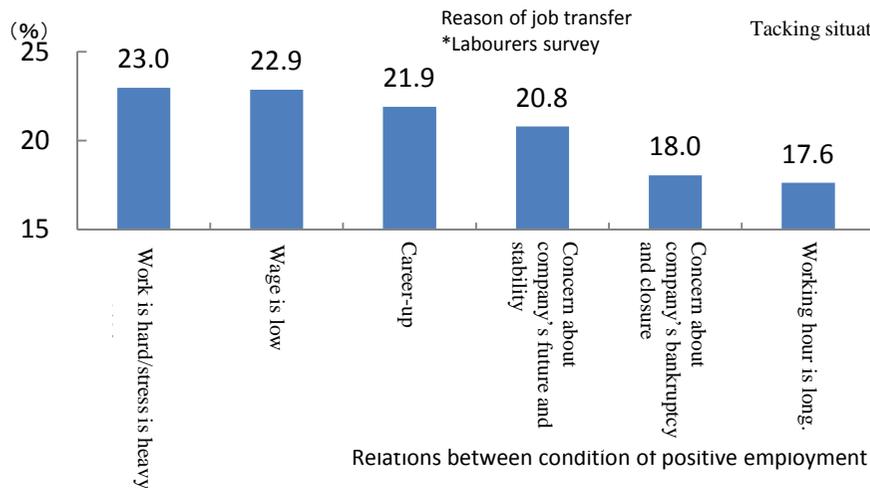
## Chapter 3 Toward a Society Where Everyone can Play an Active Role in the face of Population decline — Challenges of Companies/Labourers aiming to Play an Active Role for Limited Human Resources(1)—

- In Japan, the labour shortage has emerged in addition to the decline birthrate and demographic aging. Taking account businesses' judgements on personnel, about half of them replied that they have a shortage of labour. Labour shortages have an effect on business management as an inability to correspond to increases in demand, and workplace impacts of an increase in overtime working hours and in a decrease in acquisition of holidays. Furthermore, an impact in terms of an increase in employee resignations can be seen.
- Even as businesses issue employment offers in order to secure human resources, as many as 40% of businesses have received no applicants despite offering employment, and 40 percent face mismatches in terms of the applicants. As the lack of applicants and the mismatches were caused by mismatches in the wage level and treatment/working conditions, businesses must carry out positive employment management and try to secure human resources.



## Chapter 3 Toward a Society Where Everyone can Play an Active Role in the face of Population decline –Challenges of Companies/Labourers aiming to Play an Active Role for Limited Human Resources (2) –

- Under the labour shortage, human resources must be prevented separation from service and human resource abilities identified.
- As job transfer's reasons, "Work is hard and the stress is enormous" occupies a high rate. On the other hand, several businesses that engaged with the "Smoothing of in-house communications" and "Contraction of working hours," have high labour retention rates. It is necessary to implement such employment management to lead to continued employment.
- In addition, it is important that labourers exert their abilities. In the businesses that engage in lifting employee motivation, human resources development, or supporting a work-life balance have a high ratio of labourers able to use their skills, indicating the need for businesses to actively pursue employment management.



Relations between condition of positive employment management in business and employees' ability exertion \*Labourers survey

