

**2017**

# **Analysis of the Labour Economy**

**— Challenges for Promoting Innovations and  
Realizing Work-Life Balance —**

**[ Summary ]**

September 2017

**Ministry of Health, Labour and Welfare**



**2017**

# **Analysis of the Labour Economy**

**— Challenges for Promoting Innovations and  
Realizing Work-Life Balance —**

**[ Outline ]**

# Part I: Trends and Features of the Labour Economy

While the Japanese economy is gradually recovering, employment situation is steadily improving: the FY2016 average unemployment rate was 3.0%, the lowest rate in 22 years since FY1994, and the effective ratio of job offers to applicants was 1.39 times, the highest ratio in 26 years since FY1990 and so forth. [Fig. 1-1, Fig. 1-2]

[Trends of regions and regular/non-regular employment]

- ◆ By region, the effective ratio of job offers to applicants reached a level exceeding 1.0 times in all prefectures for the first time in history since the statistics have been collected. [Fig. 1-3]
- ◆ For people younger than 55, the number of regular employment workers has increased for two consecutive years, and in 2016 it increased to 28,050,000, exceeding the rate of increase of that of non-regular employment workers. [Fig. 1-4]
- ◆ The rate of involuntary non-regular employment workers has decreased from the same quarter of the previous year for 13 consecutive quarters since the quarter of January to March 2014. [Fig. 1-5]

[Trends of wages]

- ◆ The wages of full-time workers have increased for four consecutive years since 2013, and the hourly wage of part-time workers has been on an increasing trend for six consecutive years since 2011, an increase of 67 yen from 2010 to 1,084 yen in 2016. [Fig. 1-6]

Fig. 1-1 Japanese economy is gradually recovering

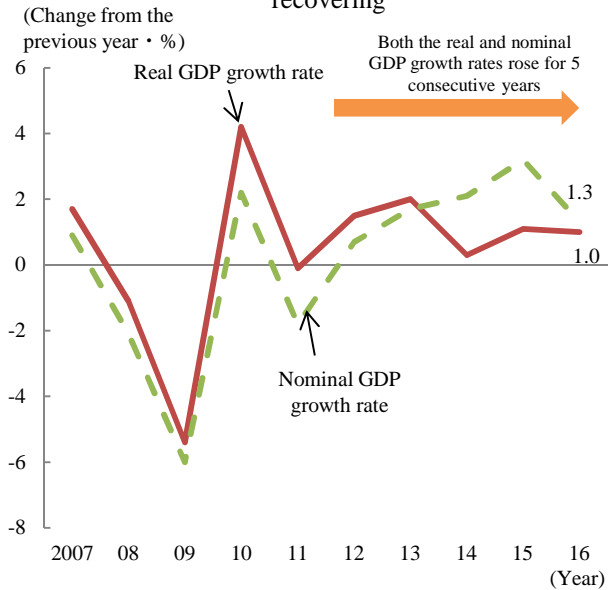
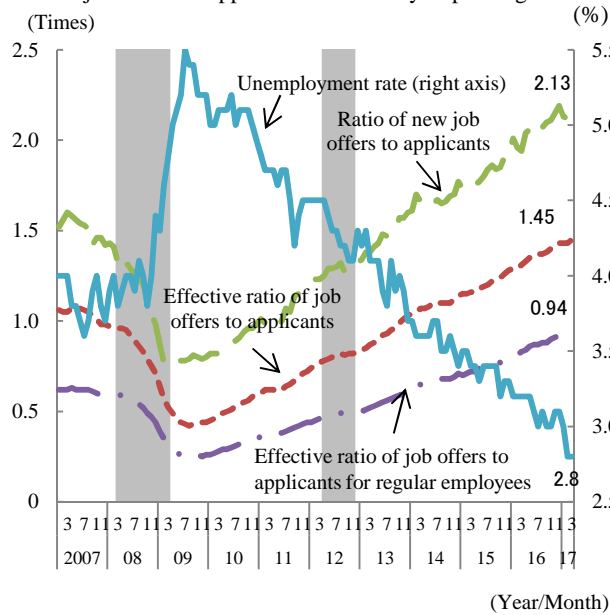


Fig. 1-2 Unemployment rate and effective ratio of job offers to applicants are steadily improving



(Note) The numerical values in Fig. 1-3 are based on the place of employment.

Fig. 1-3 Effective ratio of job offers to applicants exceeded 1.0 times nationwide (2016)

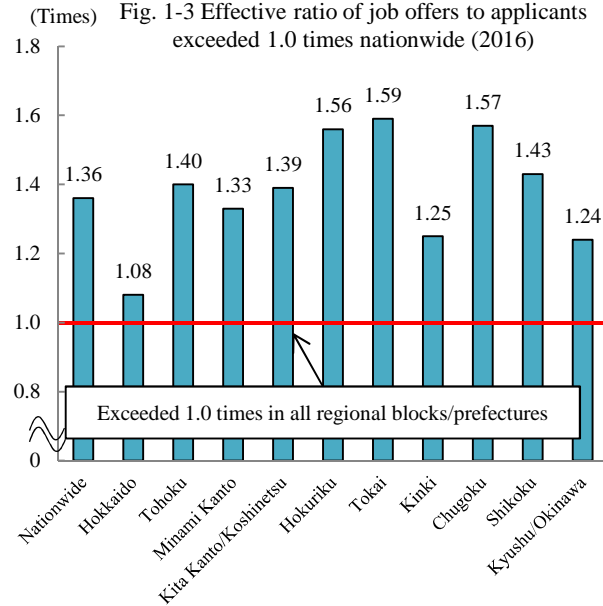


Fig. 1-4 Regular employment workers increased for 2 consecutive years (younger than 55)

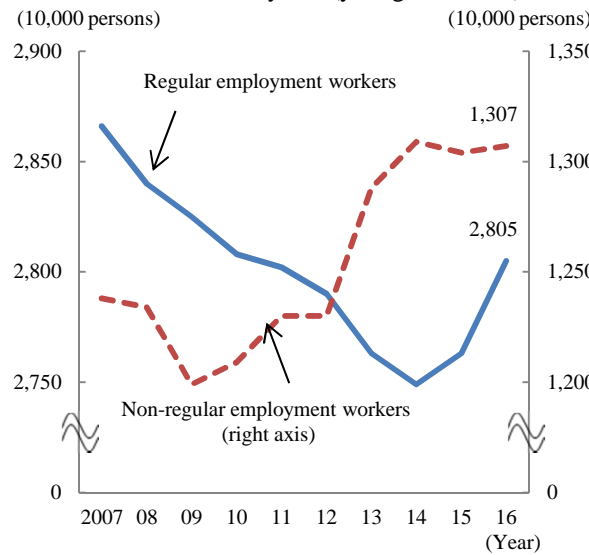


Fig. 1-5 Percentage of involuntary non-regular employment workers decreased

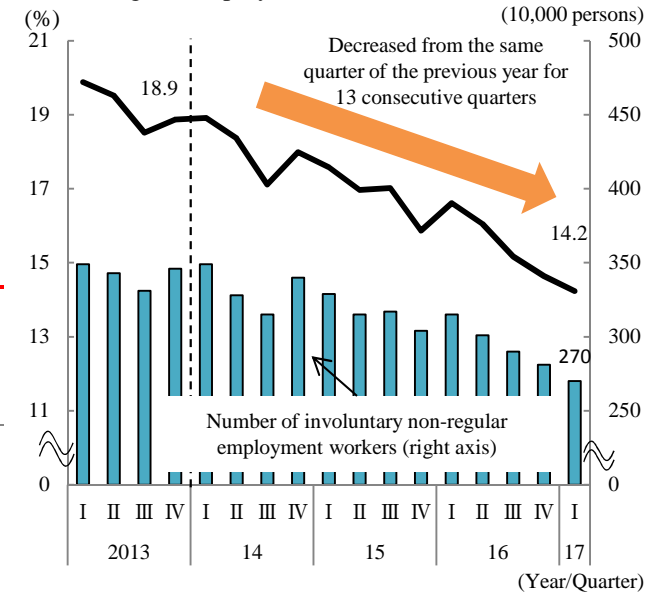
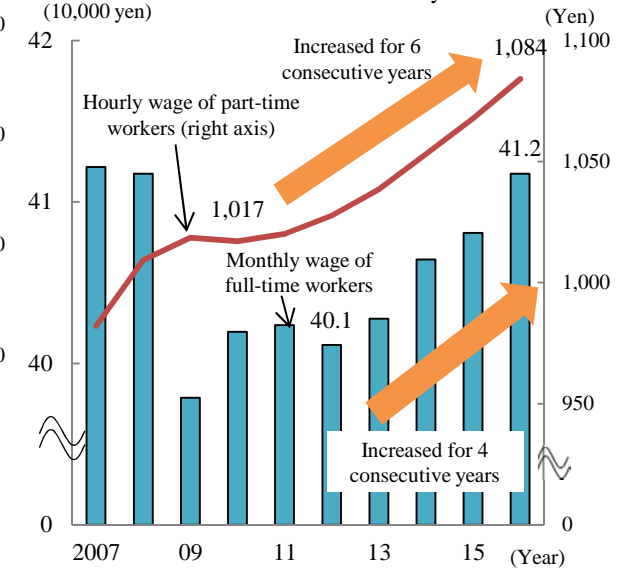


Fig. 1-6 Wages of full-time workers increased for 4 consecutive years and hourly wage of part-time workers increased for 6 consecutive years



## Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan

### [Current status of innovations in Japan]

- ◆ When compared internationally, the current status of innovations in Japan is at a low level for both manufacturing and service industries. [Fig. 2-1]
- ◆ In order to promote the realization of innovations, active capital investment in R&D and development of competent human resources (specialized human resources) are important. [Fig. 2-2]

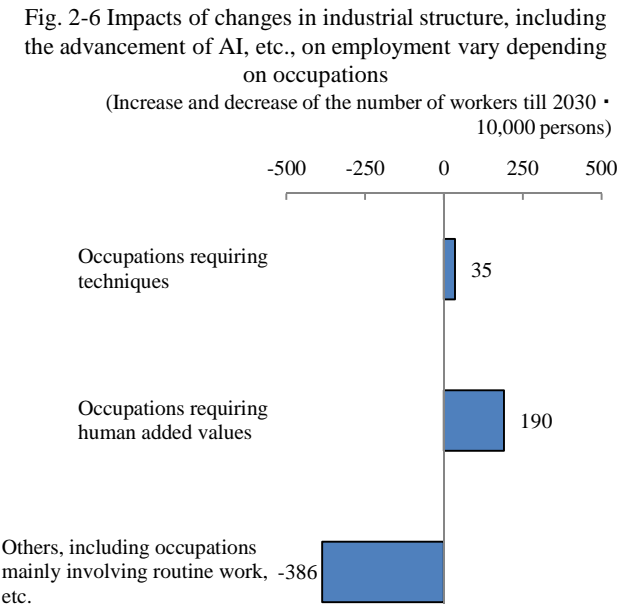
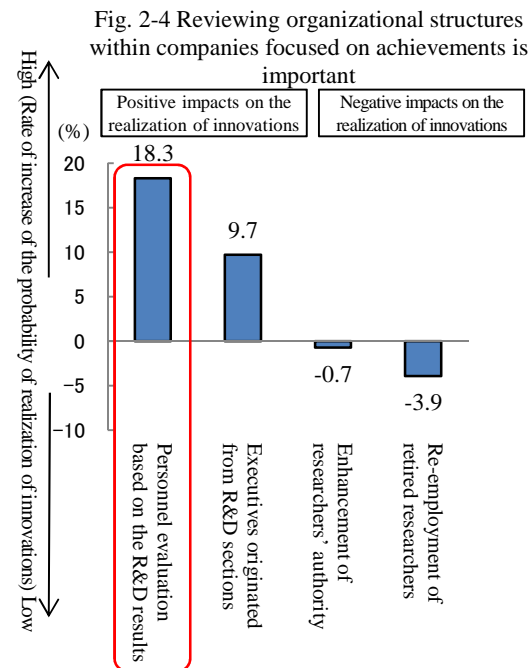
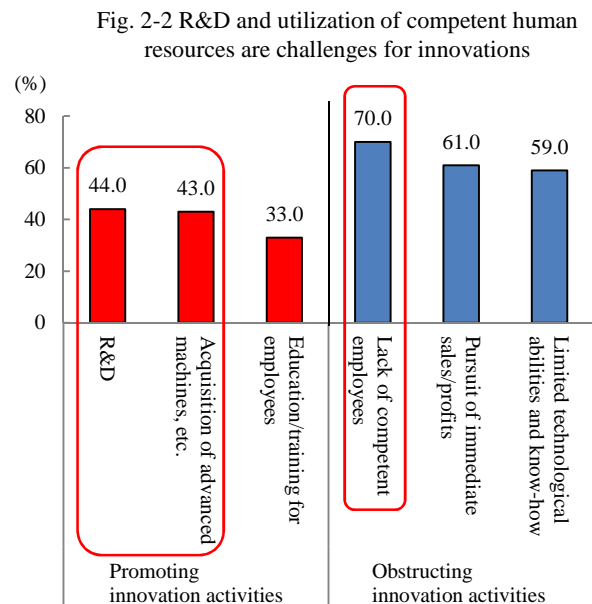
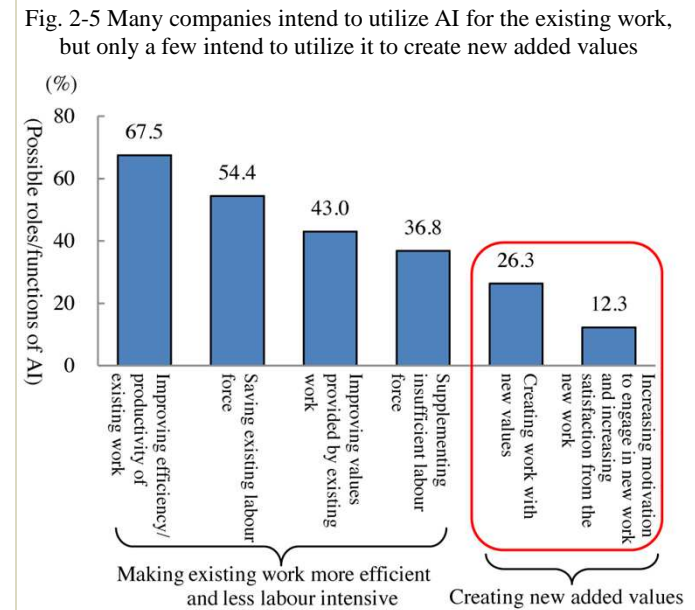
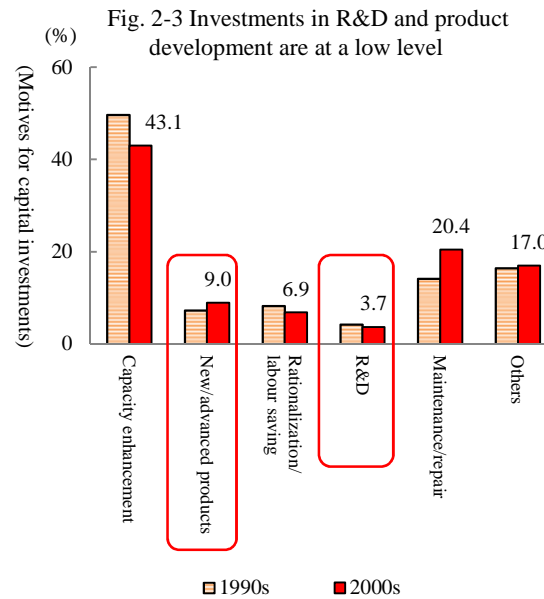
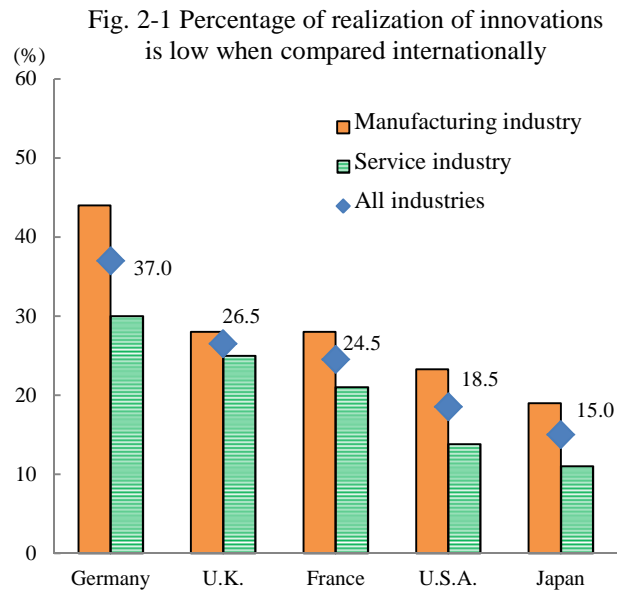
### [Challenges for promoting innovation activities]

- ◆ In Japan, investments in R&D and development of new products are at a low level, and active investments in these fields are important for realizing innovations. [Fig. 2-3]
- ◆ In order to realize innovations, effective utilization of specialized human resources by conducting personnel evaluation based on the R&D results, etc. is important. [Fig. 2-4]

### [Awareness of AI utilization and impacts of changes in industrial structure on employment]

- ◆ Many companies utilize AI to make the existing work more efficient and less labour intensive, but only a few utilize it to create new added values. [Fig. 2-5]
- ◆ While workers engaged in the occupations mainly involving routine work are decreasing due to changes in industrial structure, including the advancement of AI, etc., those engaged in technical work helping to create new added values are increasing. The impacts of AI on employment are therefore considered to vary depending on the occupations, and thus efforts need to be made in understanding actual situations in the future. [Fig. 2-6]

(\*) “AI” refers to “Artificial Intelligence”.



(Note 1) The realization of innovations is defined as the “development of new products/services, introduction of new production/sales methods, and creation of new added values through the introduction of new business management methods”.

(Note 2) The occupational categories in Fig 2-6 are provided by the MHLW, taking into consideration OECD (2016) “The Risk of Automation for Jobs in OECD Countries”, etc.

## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance

[General situation of a work-life balance in Japan]

- ◆ Although the percentage of workers working long hours of 60 or more per week is on a decreasing trend, it still remains at a level exceeding 10%. In addition, the percentage of workers working long hours in Japan is high when compared internationally. [Fig. 3-1]
- ◆ Large percentages of both males and females, mainly in double-income households, are stressed in their attempts at balancing work and family, and enhancement of efforts to realize a work-life balance is a challenge. [Fig. 3-2]

[Effects of promotion of a work-life balance and status of efforts of companies]

- ◆ Although many companies are working towards reducing overtime hours, those actually achieving positive results are limited, and thus exercising more ingenuity is needed. [Fig. 3-3]
- ◆ In order to make efforts more effective in achieving a work-life balance, placing a high value on performing work in shorter hours and reviewing organizational structures are important. [Fig. 3-4]

[Prevalence of working style without being employed]

- ◆ Working style without being employed are expected to prevail in the future. While such a way of working is considered effective in achieving a work-life balance, there are issues concerning income and skill development, etc. It is required to discuss how to respond to such working style in the future. [Fig. 3-5, Fig. 3-6]



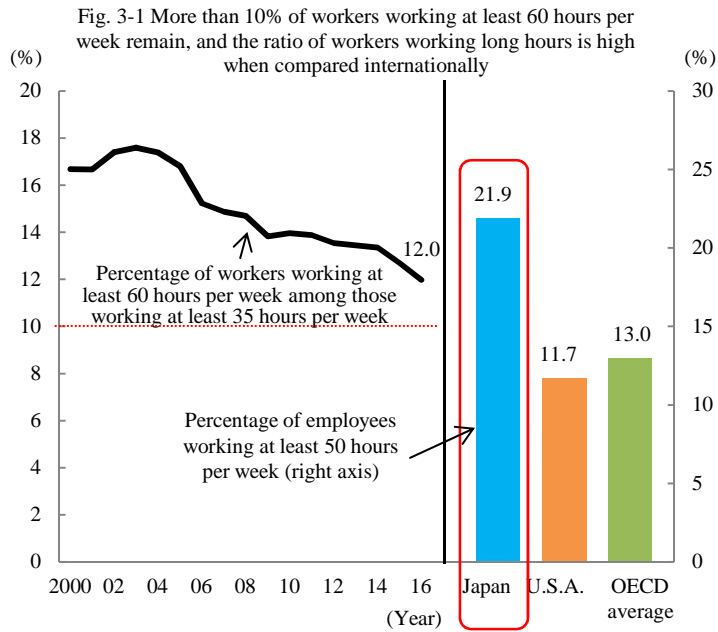


Fig. 3-3 Approx. half of companies reduced working hours by efforts to reduce overtime

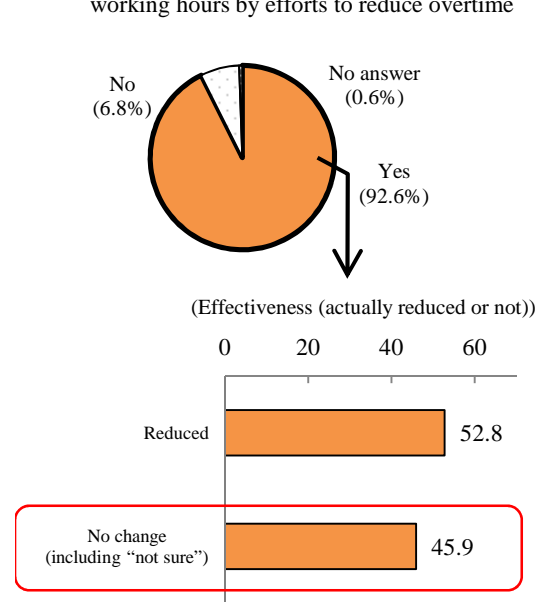


Fig. 3-5 Working style without being employed are effective for realizing a work-life balance

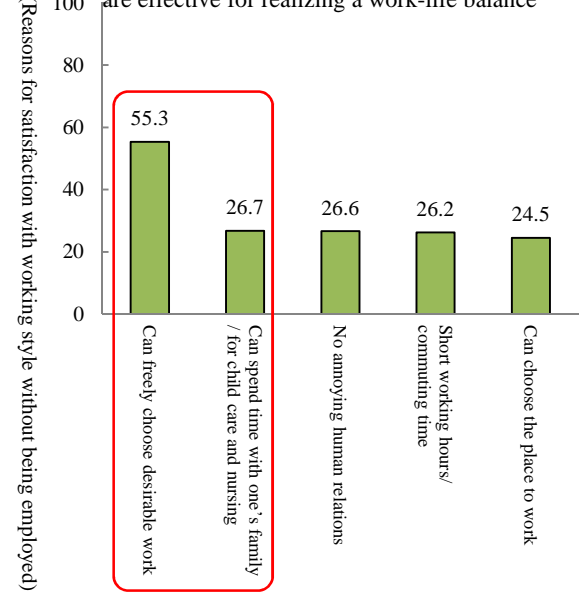


Fig. 3-2 Large percentages of both males and females, mainly in double-income households, are stressed from their attempts at balancing work and family

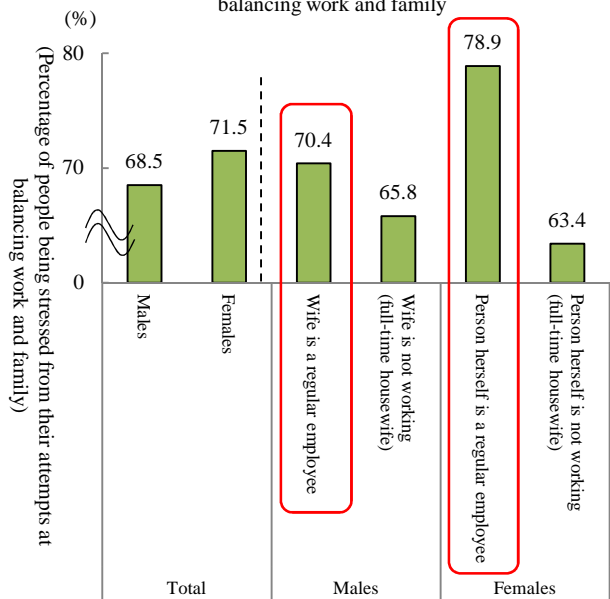


Fig. 3-4 Placing a high value on hours worked and reviewing work distribution are effective in reducing overtime

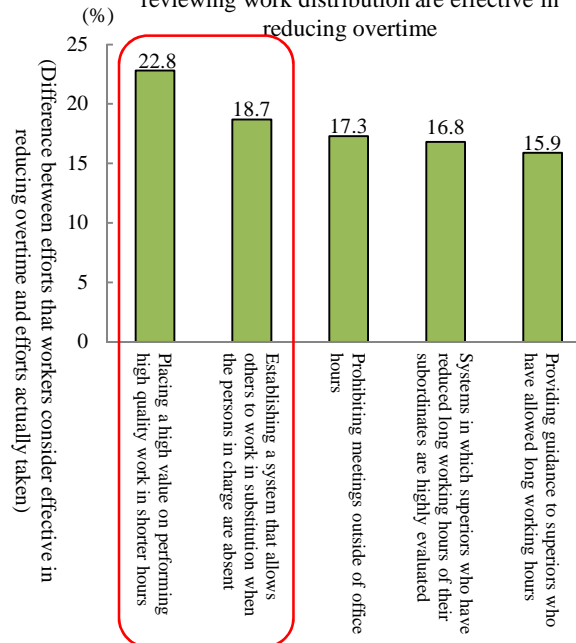
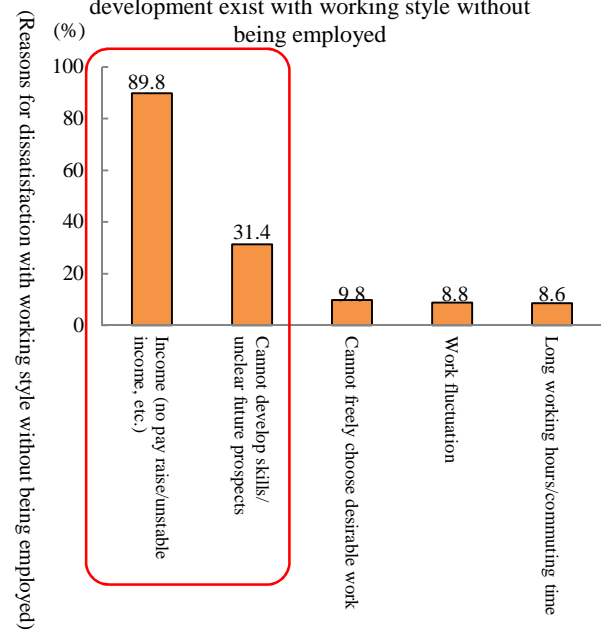


Fig. 3-6 Issues concerning income and skill development exist with working style without being employed





**2017**

# **Analysis of the Labour Economy**

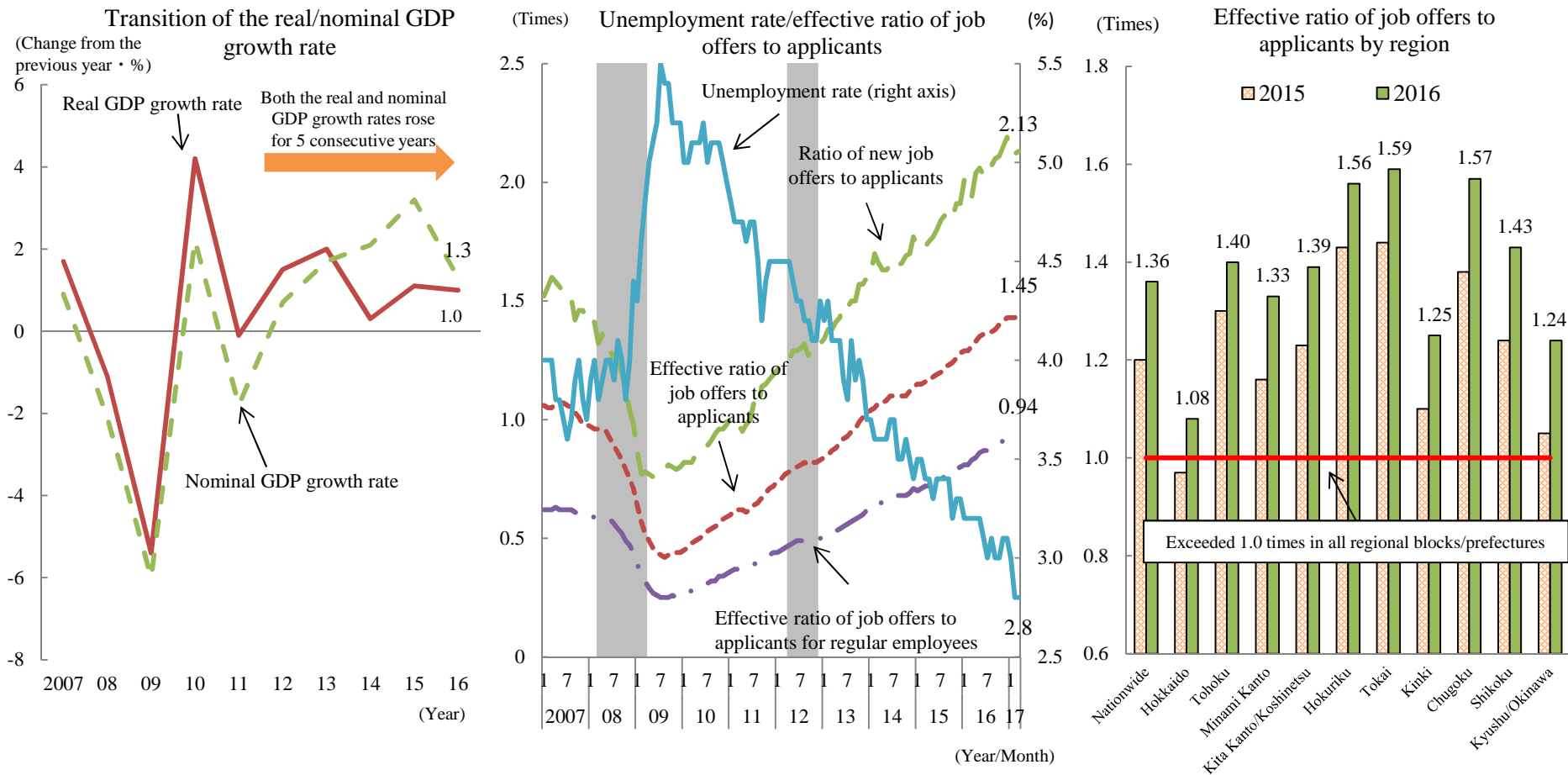
**— Challenges for Promoting Innovations and  
Realizing Work-Life Balance —**

**[ Overview ]**

# Part I: Trends and Features of the Labour Economy

## — Employment situation [1] —

- While the Japanese economy is gradually recovering, employment situation is steadily improving: the FY2016 average unemployment rate was 3.0%, the lowest rate in 22 years since FY1994, and the effective ratio of job offers to applicants was 1.39 times, the highest ratio in 26 years since FY1990 and so forth.
- By region, the effective ratio of job offers to applicants increased in all regional blocks and reached a level exceeding 1.0 times in all prefectures.

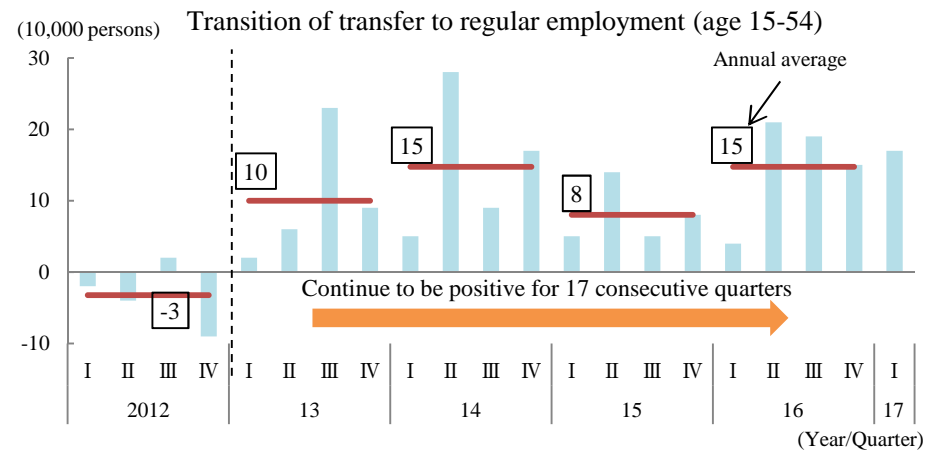
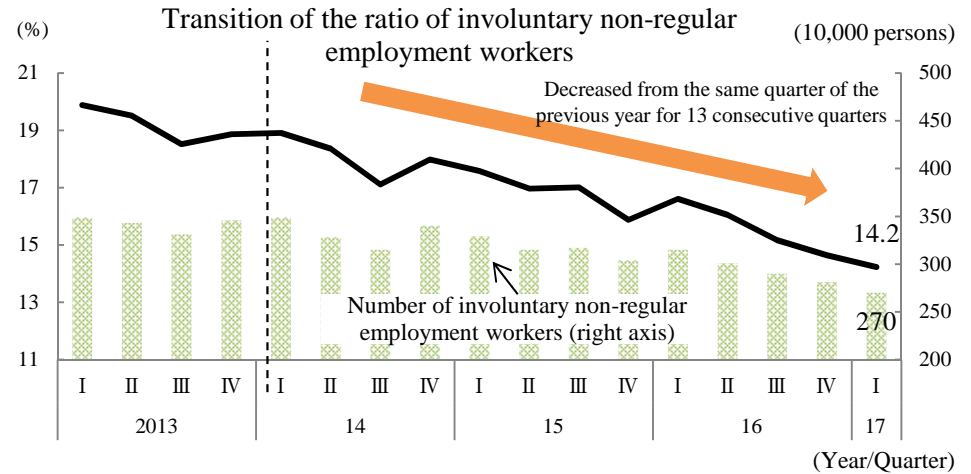
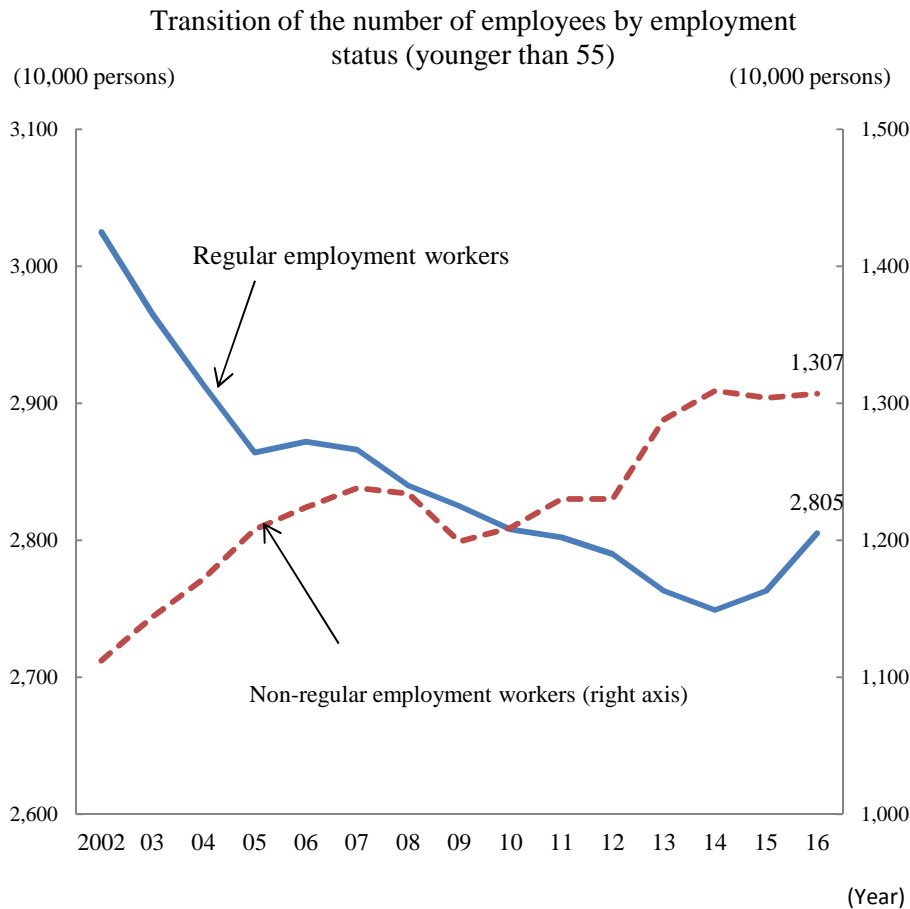


Source: Prepared based on “Report on Employment Service”, MHLW (middle figure and right figure); “System of National Accounts”, Cabinet Office (left figure); and “Labour Force Survey”, Statistics Bureau (MIC) (middle figure)

# Part I: Trends and Features of the Labour Economy

## — Employment situation [2] —

- For people younger than 55, the number of regular employment workers has increased for two consecutive years, and in 2016 it increased to 28,050,000, exceeding the rate of increase of that of non-regular employment workers.
- The rate of involuntary non-regular employment workers has decreased from the same quarter of the previous year for 17 consecutive quarters, and the rate of transfer from non-regular employment to regular employment has increased for 17 consecutive quarters since the quarter of January to March 2013.



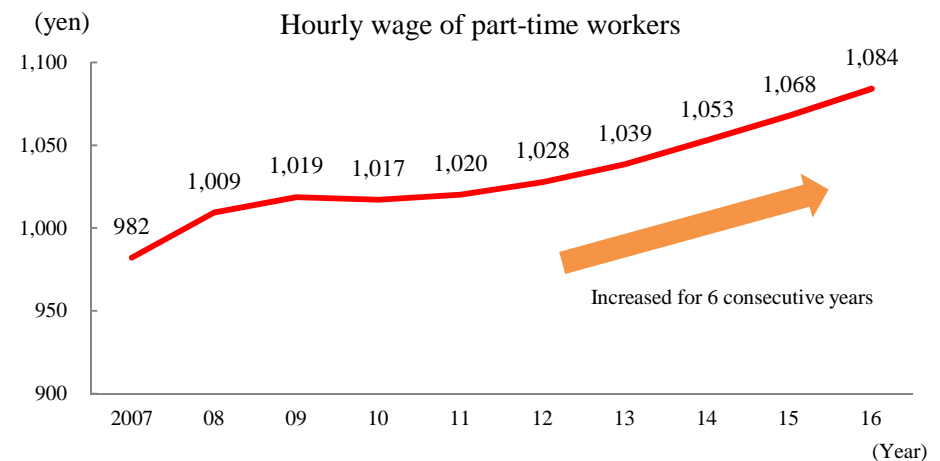
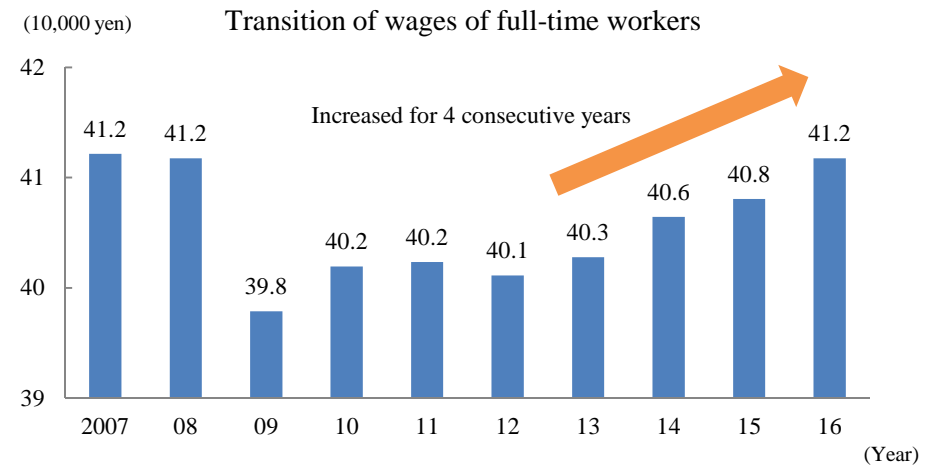
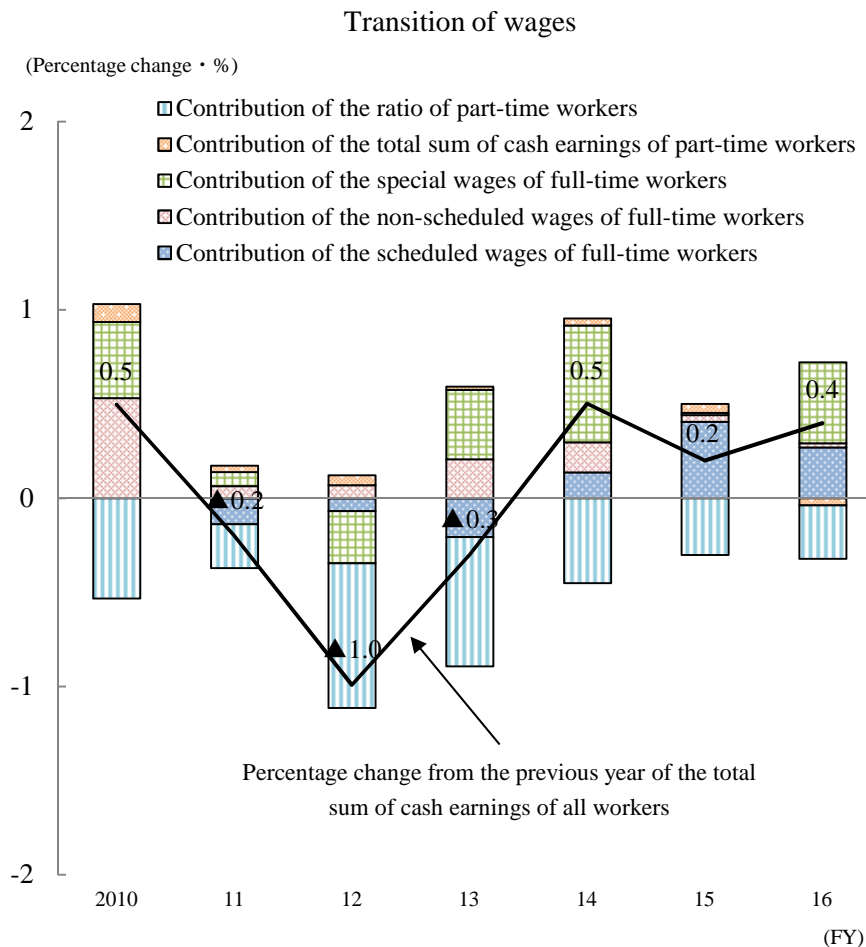
Source: Prepared based on “Labour Force Survey” (left figure); and “Labour Force Survey (Detailed Tabulation)” (upper right figure and lower right figure), Statistics Bureau (MIC)

(Note) “Transfer to regular employment” in the lower right figure indicates the number calculated by subtracting the “Number of persons transferred from regular to non-regular employment” from the “Number of persons transferred from non-regular to regular employment”.

# Part I: Trends and Features of the Labour Economy

## — Trends of wages —

- Nominal wages in FY2016 increased for three consecutive years mainly due to the increase in full-time workers' scheduled wages.
- Nominal wages of full-time workers have been increasing for four consecutive years since 2013.
- The hourly wage of part-time workers has also increased for six consecutive years since 2011, an increase of 67 yen from 2010 to 1,084 yen.



Source: Prepared based on "Monthly Labour Survey", MHLW

## Part II: Promotion of Innovations and Challenges for Realizing Work-Life Balance

[Current status in Japan]

- Declining economic growth rate
- Supply constraints due to the decline in birthrate and demographic aging

### [1] Improvement of added values

Increasing the added value of industries

Enhancement of skills development  
/  
Utilization of human resources

Improvement of labour productivity

### [2] Realization of work-life balance

Complementing labour force by AI, etc.  
(Improving work efficiencies)

Increasing options for working style  
(Realizing employment of those with constraints such as childcare and nursing, etc.)

Elimination of supply constraints

Advancement of innovations  
Responding to diversified work styles of females, etc.

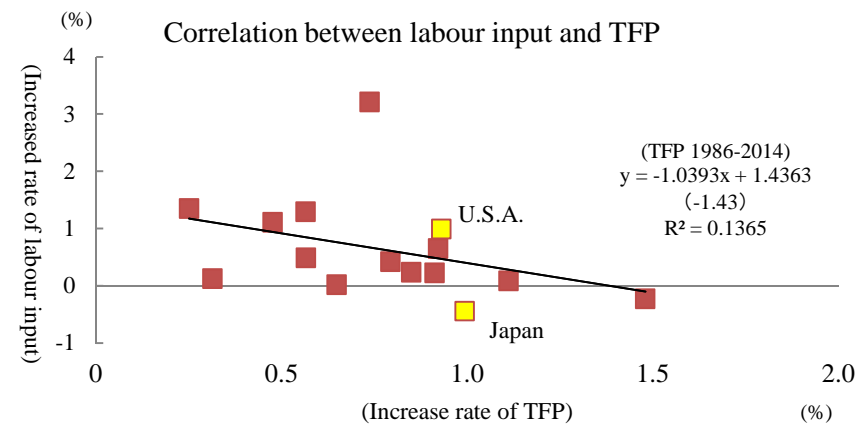
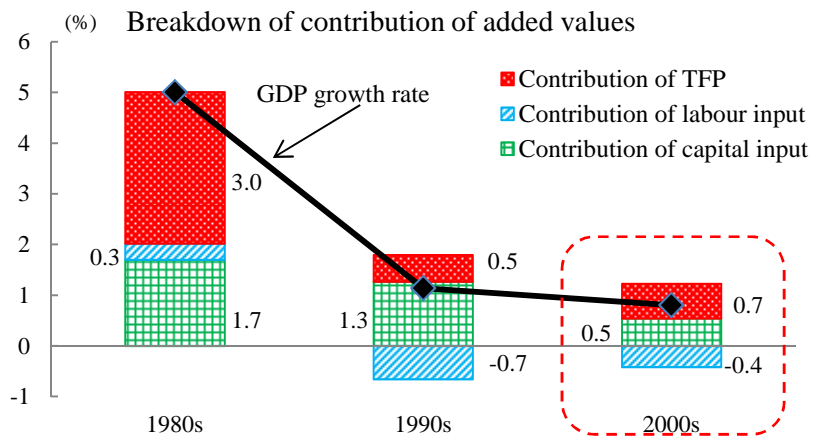
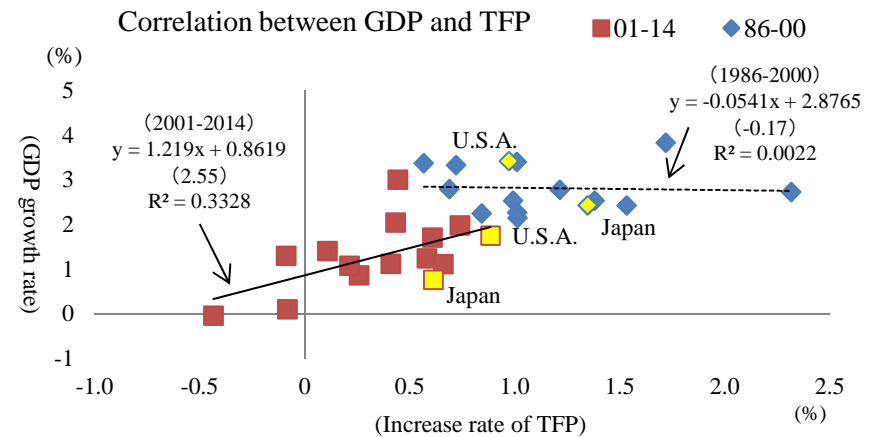
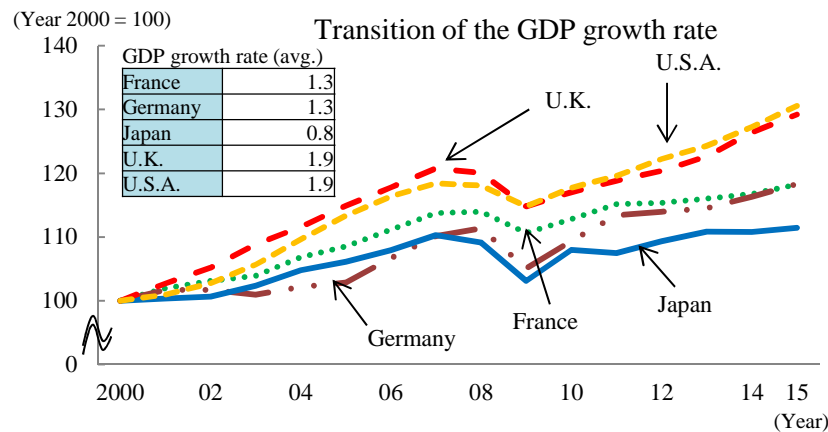
Dealing with both as “two halves of the whole”

Realization of economic growth under supply constraints

# Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan

## — Current status of economic growth in Japan —

- The GDP growth rate has remained at a low level of less than 1% when compared to other major countries since the 2000s.
- While the contributions of increase in labour and capital inputs are weakening, the TFP increase rate, for which the relationship with the GDP growth rate is becoming stronger, is slowing down. In addition, the TFP increase can be anticipated even where large increase in labour input cannot be expected.



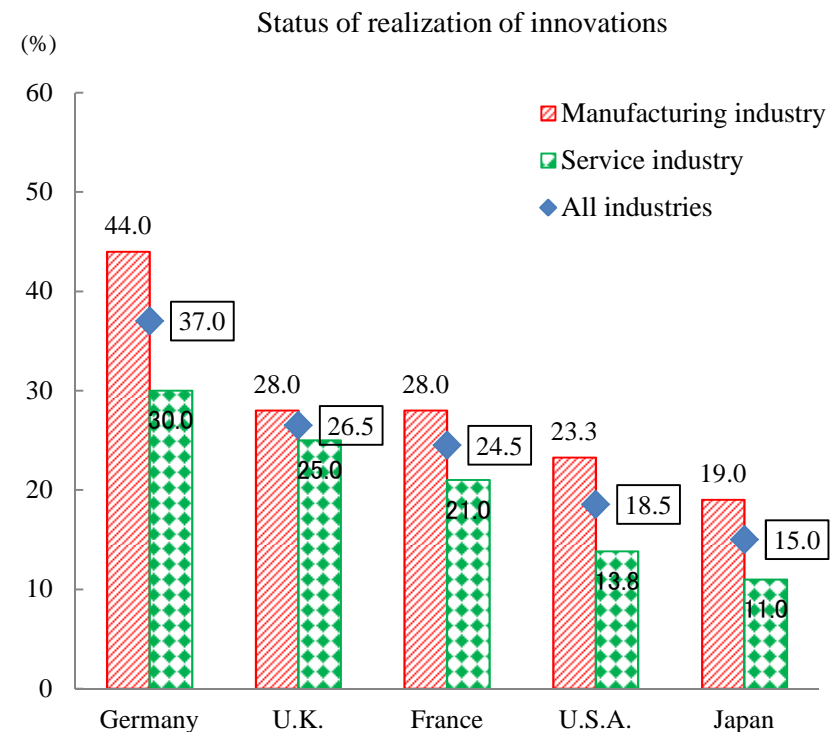
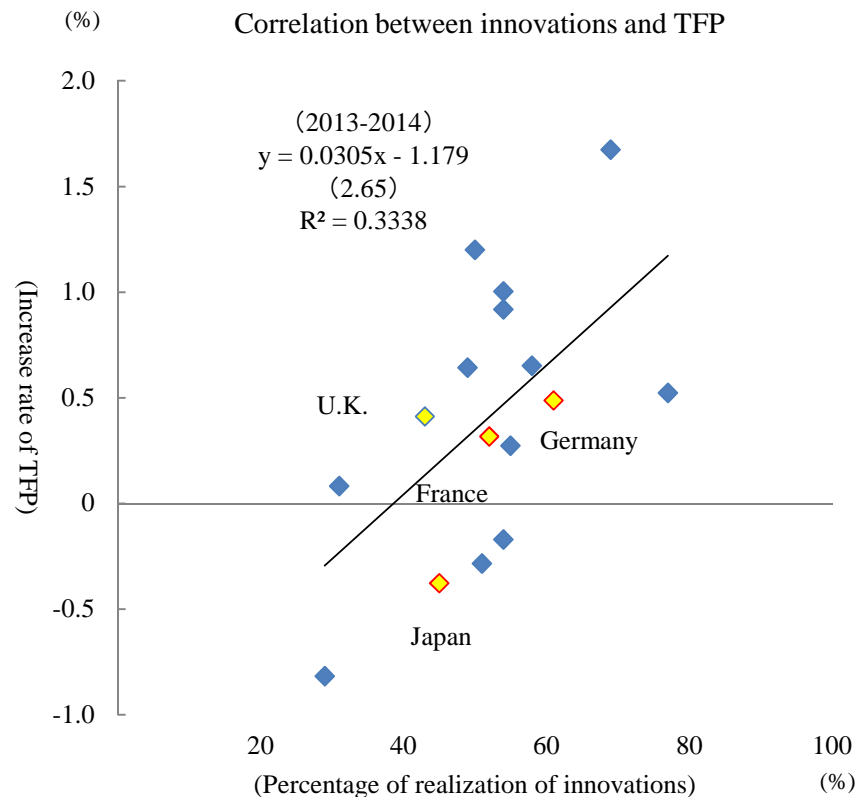
Source: Prepared based on OECD.Stat

(Note) TFP (Total Factor Productivity) refers to growth factors other than capital and labour inputs (e.g., innovations, etc.) when the economic growth is decomposed.



## Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Importance of innovations and status in Japan —

- Realizing innovations is important for improving TFP.
- When compared internationally, the current status of innovations in Japan is at a low level for both manufacturing and service industries.



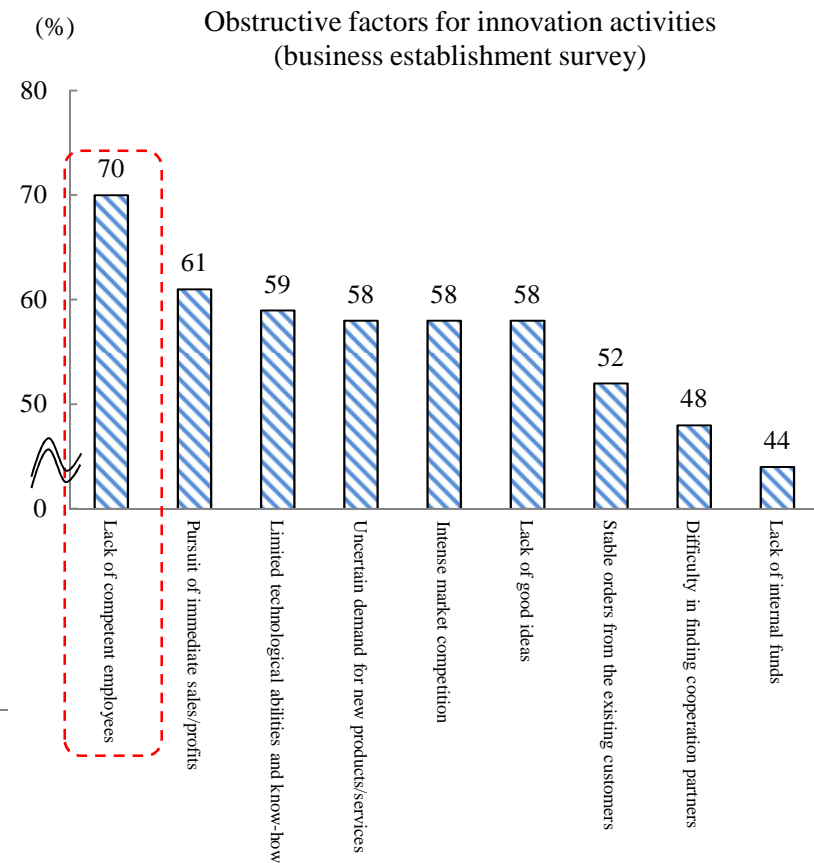
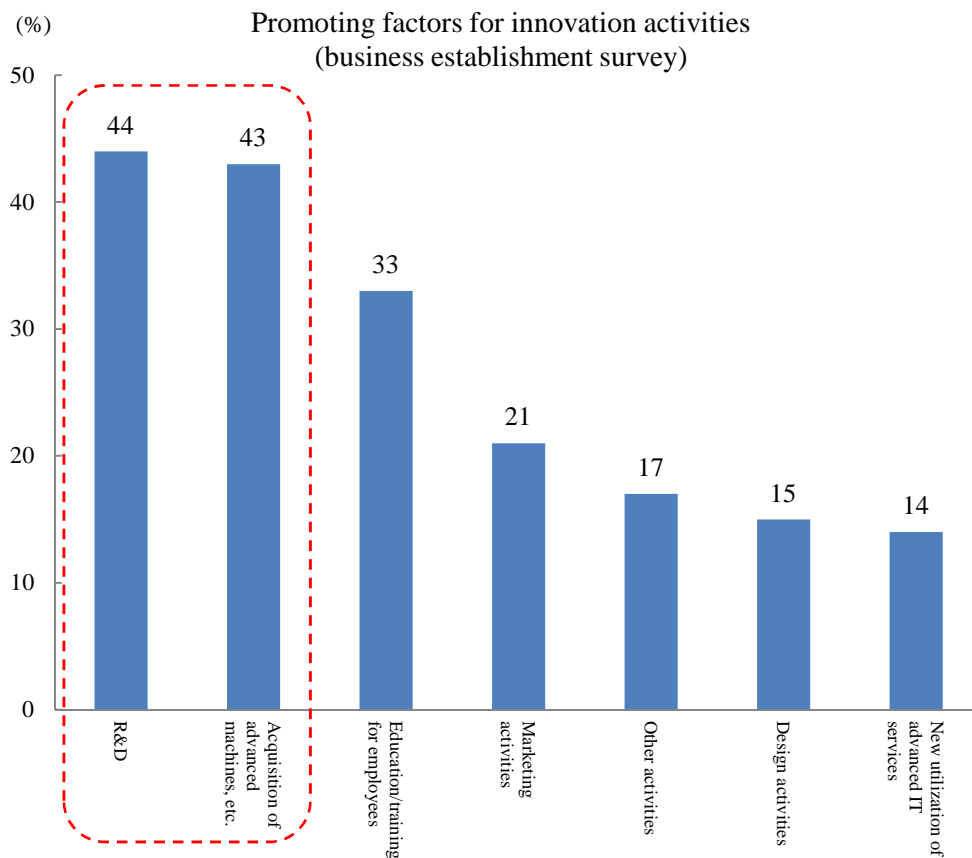
Source: Prepared based on “Report on the Fourth Round of the Japanese National Innovation Survey” (2016), National Institute of Science and Technology Policy (MEXT) (right figure); OECD.Stat (left figure); and “Innovation statistics and indicators”, OECD (right figure)

(Notes) 1) The percentage of realization of innovations refers to the percentage of companies that realized innovations during the reference period: 2012-2014 for Japan, 2008-2010 for U.S.A., and 2010-2012 for other countries.

2) The right figure shows the status of realization of product innovations.

## Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Challenges for realizing innovations —

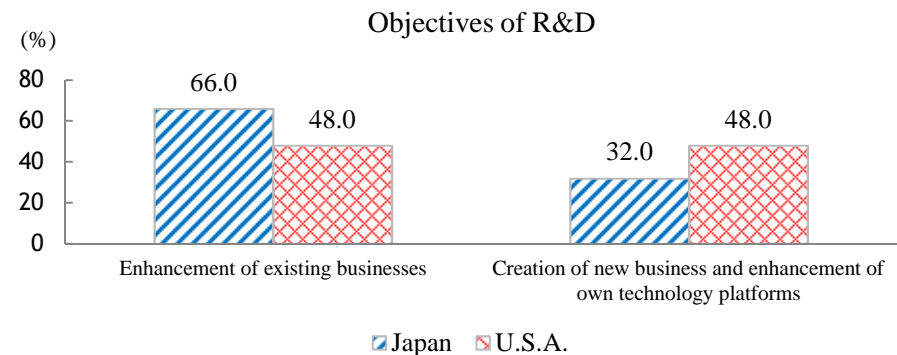
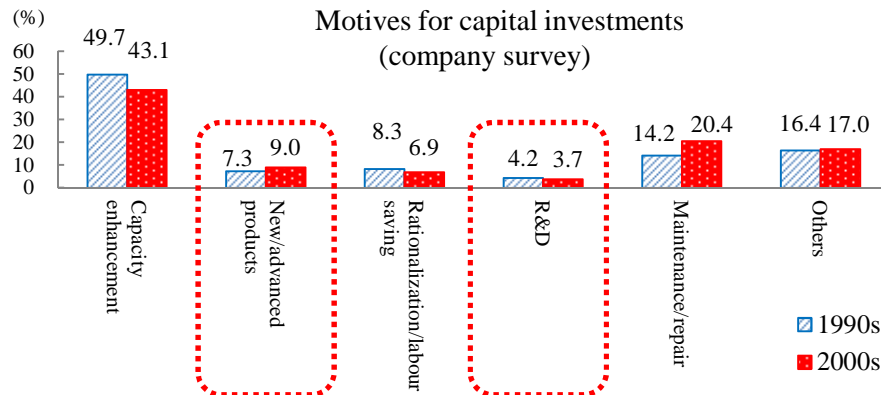
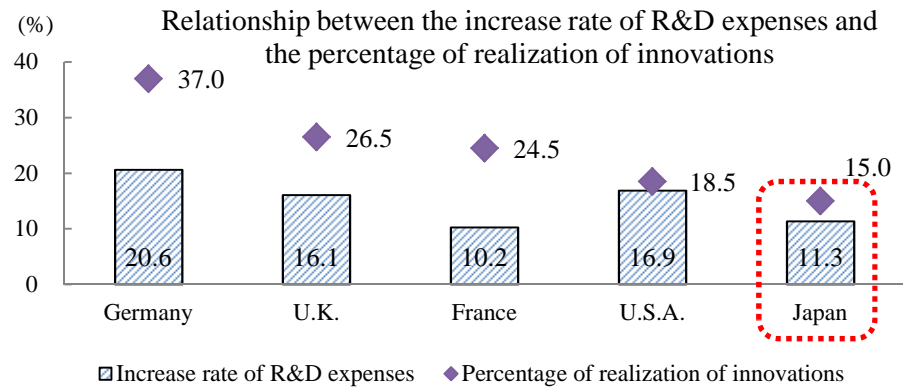
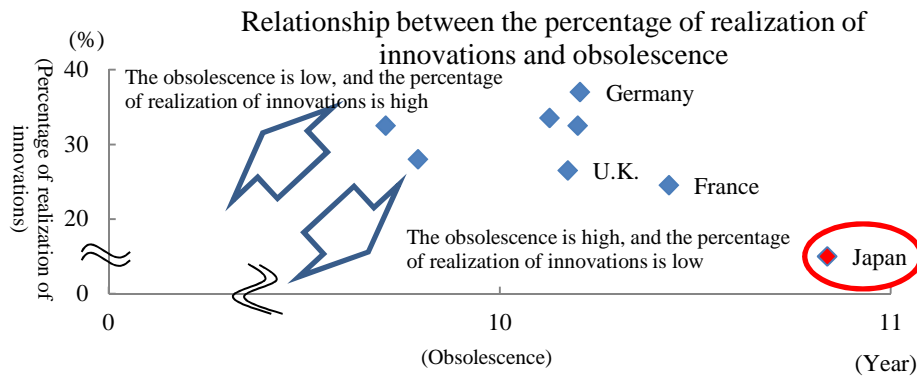
- The factors in promoting innovation activities include R&D and acquisition of advanced machines, etc.
- The lack of competent human resources has been an obstructive factor for innovation activities, and making efforts in securing human resources is important.



Source: Prepared based on “Report on the Fourth Round of the Japanese National Innovation Survey” (2016), National Institute of Science and Technology Policy (MEXT)

# Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Importance of capital investments for realizing innovations —

- The trend toward obsolescence is rising in Japan, and the fact that investments in product development and R&D are small has been a factor obstructing the advancement of innovations.
- It has been observed that the relationship is such that the more R&D advances, the easier it is to innovate, and advancing R&D aimed at creating new business and enhancing technology platforms is important.



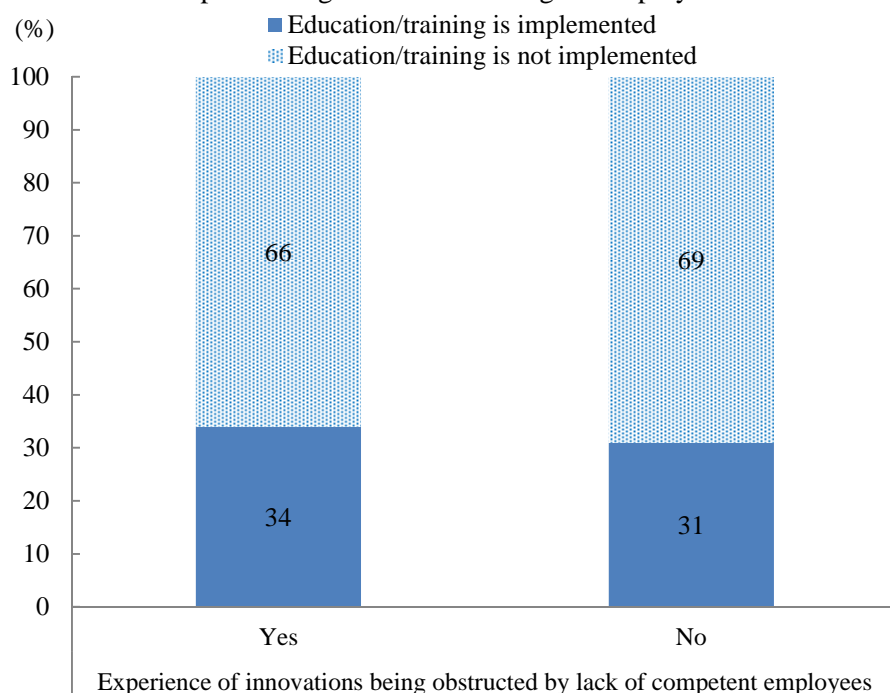
Source: Prepared based on “National Wealth Survey”, Cabinet Office (upper left figure); “Report on the Fourth Round of the Japanese National Innovation Survey” (2016), National Institute of Science and Technology Policy (MEXT) (upper left figure and upper right figure); “The R&D Process in the U.S. and Japan: Major findings from the RIETI-Georgia Tech inventor survey” (2009) (lower right figure) and “JIP Database 2015” (upper left figure), Research Institute of Economy, Trade and Industry; “Survey on Planned Capital Spending” Development Bank of Japan (lower left figure); EU KLEMS database (upper left figure); “Innovation statistics and indicators”, OECD (upper left figure); and OECD.Stat (upper right figure)

(Note) The reference period in the percentage of realization of innovations: FY2012-2014 for Japan, 2008-2010 for U.S.A., and 2010-2012 for other countries.

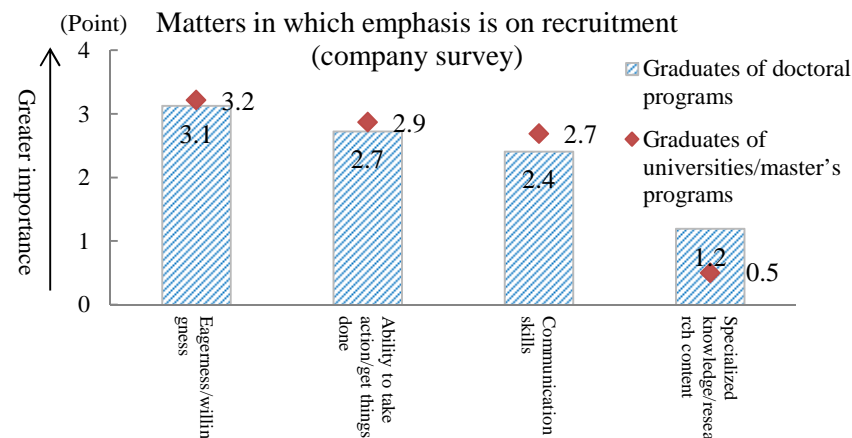
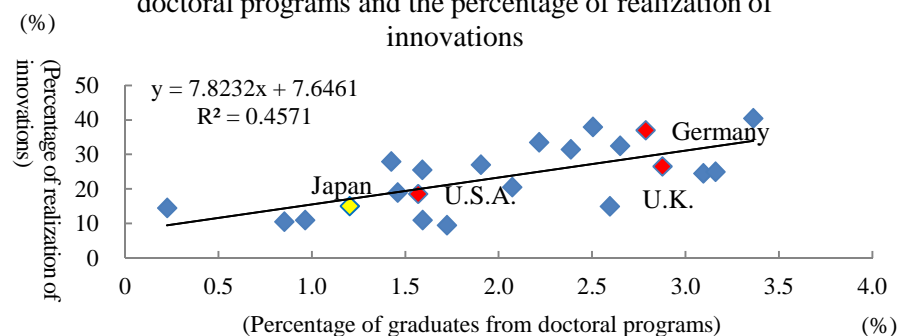
## Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Importance of utilizing advanced human resources for the realization of innovations —

- In Japan, education/training is not conducted in 60% or more of companies, and promotion of education/training is important for realizing innovations.
- Utilizing advanced human resources such as graduates from doctoral programs is effective for realizing innovations, but the percentage of these graduates is low in Japan, and recruitment that takes into consideration specialized knowledge and research content has not been accomplished.

Relationship between the experience of innovations being obstructed by lack of competent employees and the percentage of implementing education/training for employees



Relationship between the percentage of graduates from doctoral programs and the percentage of realization of innovations



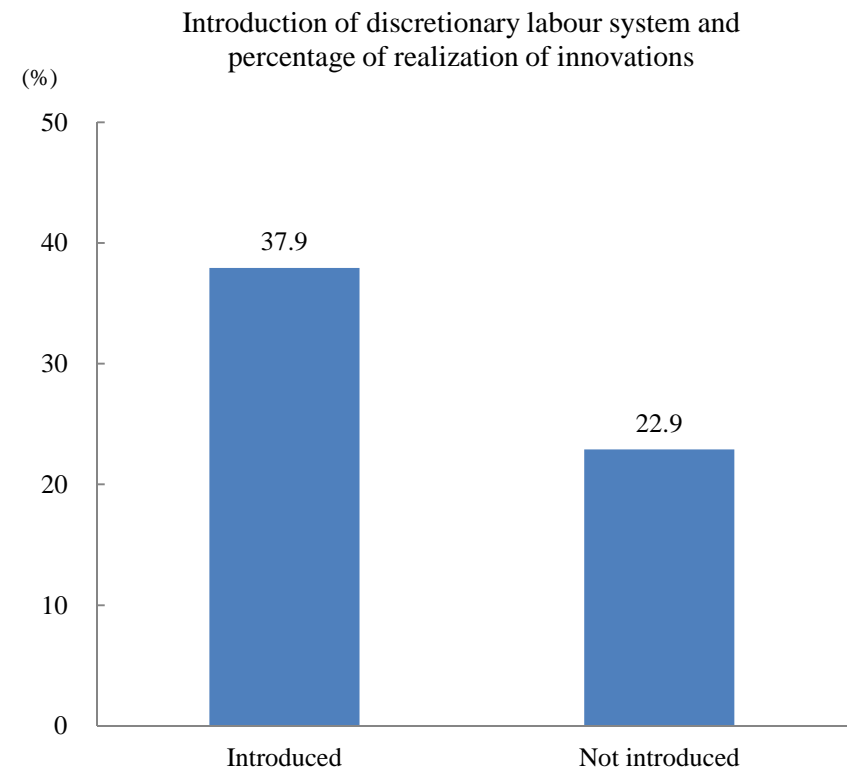
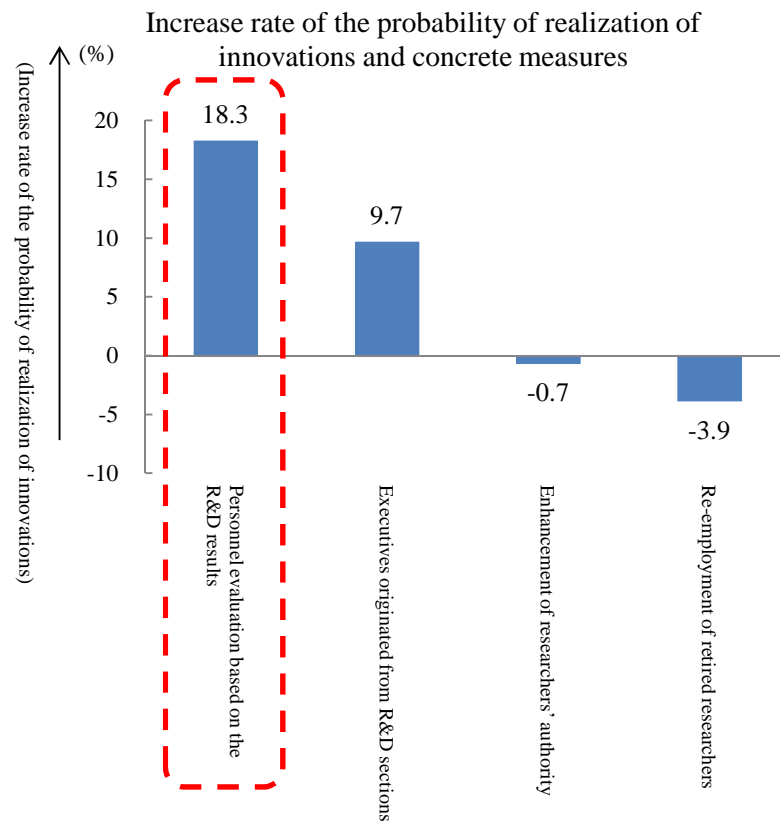
Source: Prepared based on “Report on the Fourth Round of the Japanese National Innovation Survey” (2016), National Institute of Science and Technology Policy (MEXT) (left and upper right figure); “Questionnaire Survey of Corporate Recruitment and Employee Education” (2012), Japan Association of Corporate Executives (lower right figure); and “Innovation statistics and indicators”, OECD (upper right figure)

(Notes) 1) The left figure shows the percentage of implementing education/training by counting companies that answered “High importance” or “Medium importance” to the question about the degree of importance of the obstructive factor of lack of competent employees for realizing innovations as “Yes” and those that answered “Low importance” or “No importance” as “No”.

2) The reference period in the percentage of realization of innovations in the upper right figure: FY2012-2014 for Japan, FY2012-2013 for Australia, 2009-2010 for Chile, 2008-2010 for U.S.A., and 2010-2012 for other countries.

## Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Efforts for effective utilization of human resources —

- Introduction of personnel evaluation based on the R&D results and discretionary labour system is important for the realization of innovations.
- In introducing such employment systems, efforts such as conducting appropriate personnel management to prevent long working hours are also important.

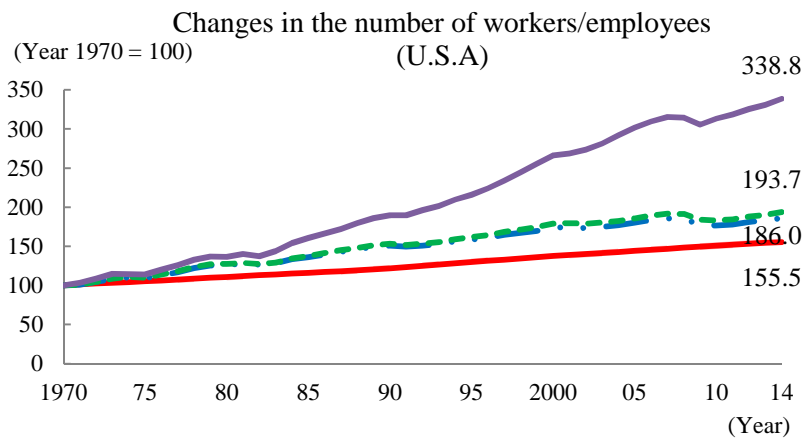
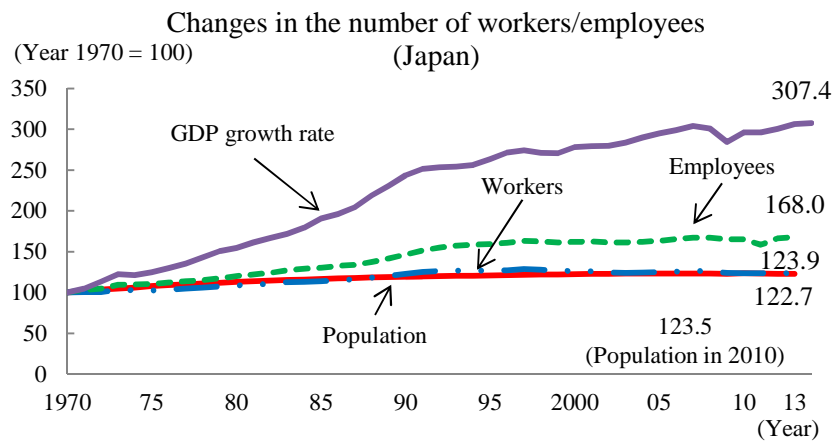


Source: Prepared based on “Effects of Organizational/Personnel Management in R&D Activities on Innovations” (2016), National Institute of Science and Technology Policy (MEXT) (left figure) and questionnaire information of “Survey on Status of Responding to Innovations” (2017), The Japan Institute for Labour Policy and Training (right figure)

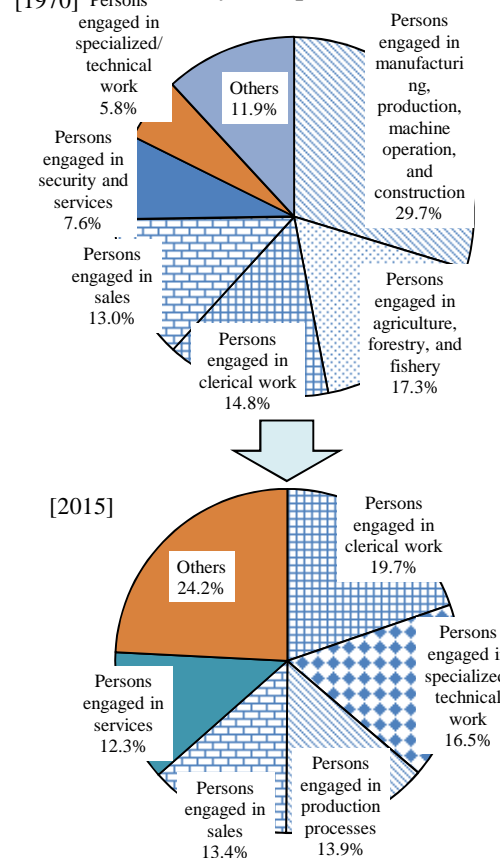
(Note) The numerical values in the left figure indicate the increase rate of the probability of realization of innovations when each measure is implemented.

## Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Changes in workers associated with innovations —

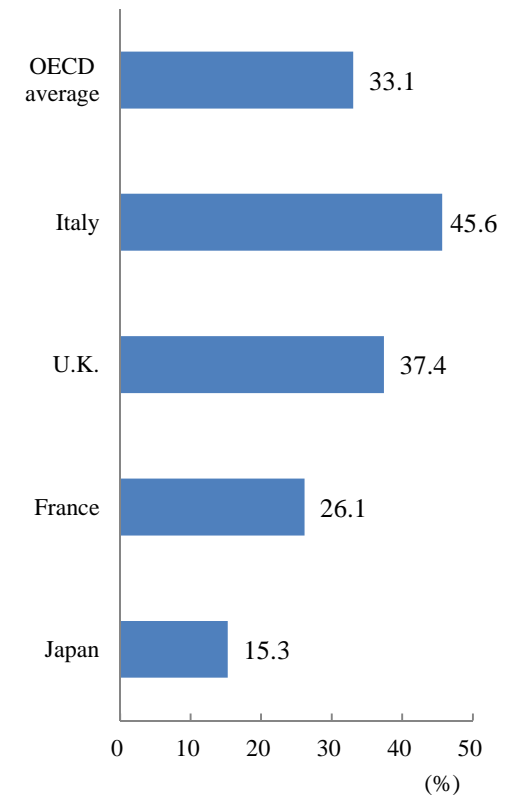
- Industries are becoming more service-oriented in Japan, and by occupation, the percentage of workers engaged in clerical work and specialized/technical work is increasing.
- The percentage of female researchers remains at a low level when compared to other countries.



**Transition of the number of workers by occupation**



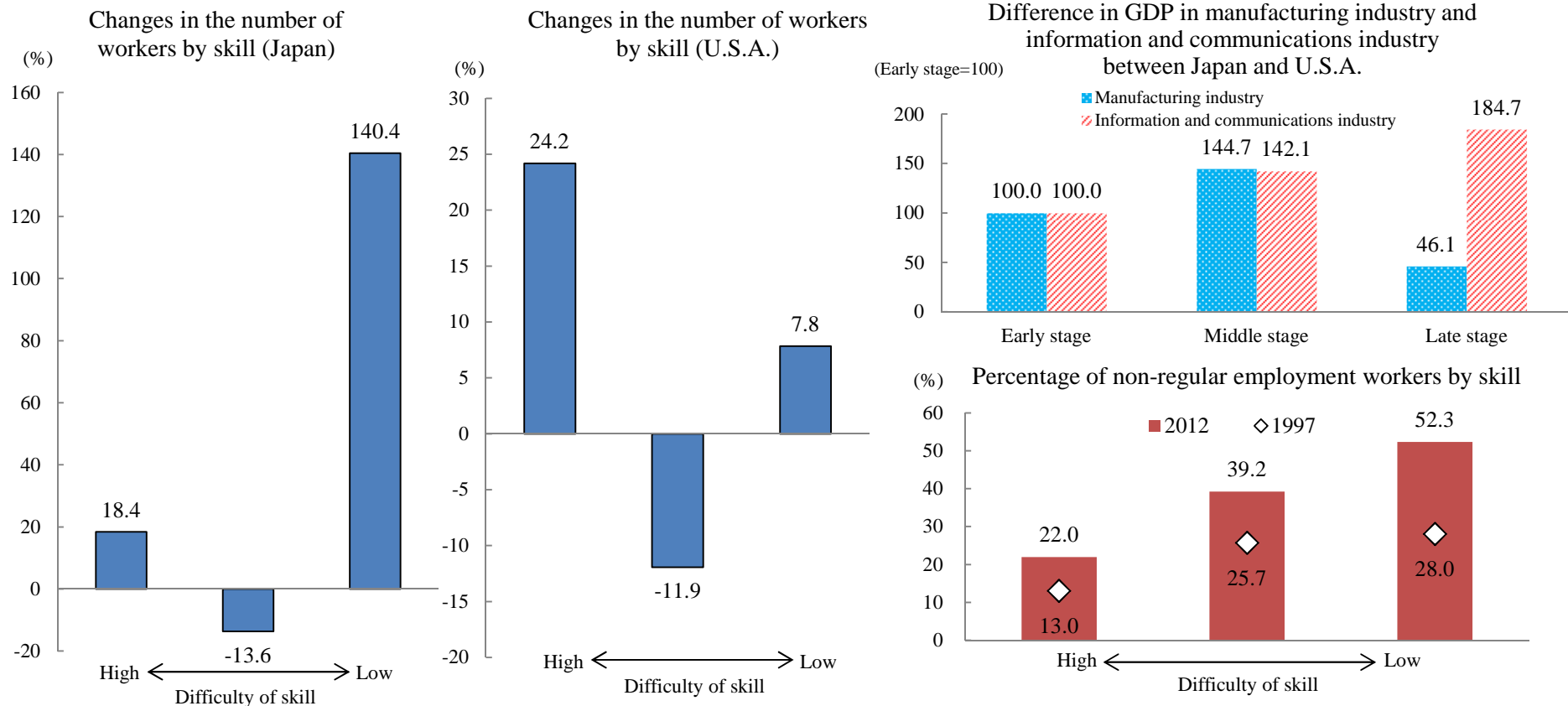
**Ratio of female researchers (international comparison)**



Source: Prepared based on “Labour Force Survey”, Statistics Bureau (MIC) (middle figure); “National Accounts Main Aggregates Database”, UN (left figure); and “Education at a glance 2016”, OECD (right figure)

# Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Changes in workers based on skills —

- By skill, polarization is advancing in Japan, and the number of workers in low-skilled occupations is increasing when compared to U.S.A.
- The reasons for the increase in the number of workers in low-skilled occupations are considered to be the failure to keep up with the IT revolution and the increase in non-regular employment workers due to diversified working styles.



Source: Prepared based on “Basic Survey on Employment Structure” (lower right figure) and “Labour Force Survey” (left figure), Statistics Bureau (MIC); OECD.Stat (upper right figure); EU KLEMS (upper right figure); IMF stat (upper right figure); and “Labor Force Statistics from the Current Population Survey”, Bureau of Labor Statistics, US Department of Labor (middle figure)

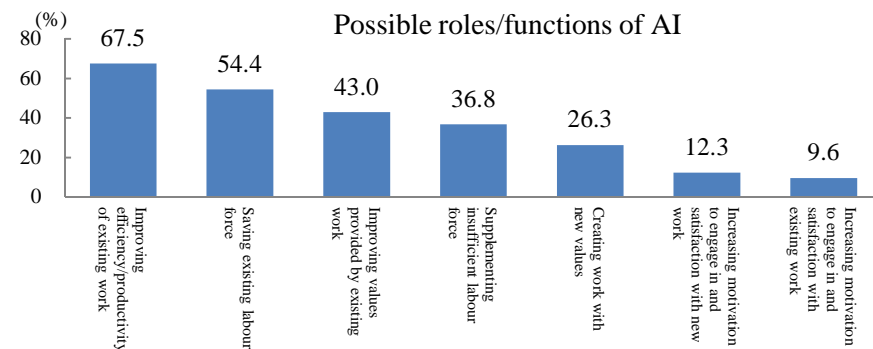
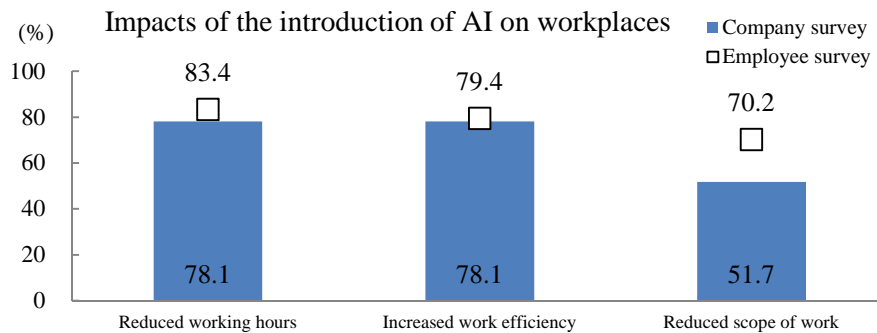
(Notes) 1) In the upper right figure, the early, middle, and late periods of the manufacturing industry refer to 1980, 1985, and 1990, and those of the Information and communications industry refer to 2000, 2005, and 2014, respectively.

2) Here the occupations requiring complex work are expressed as high skill and those requiring routine work as low skill.

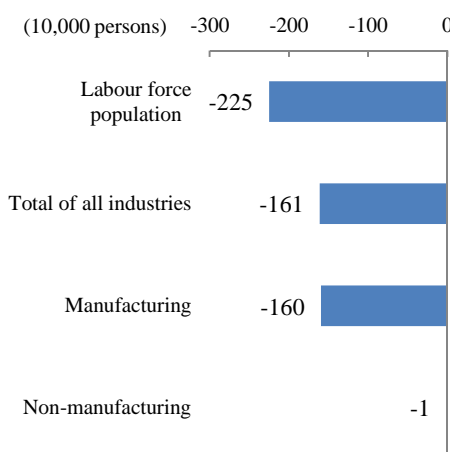
3) The left and middle figures show the increase rate from 1995 to 2015.

# Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Impacts of the advancement of AI, etc. on employment —

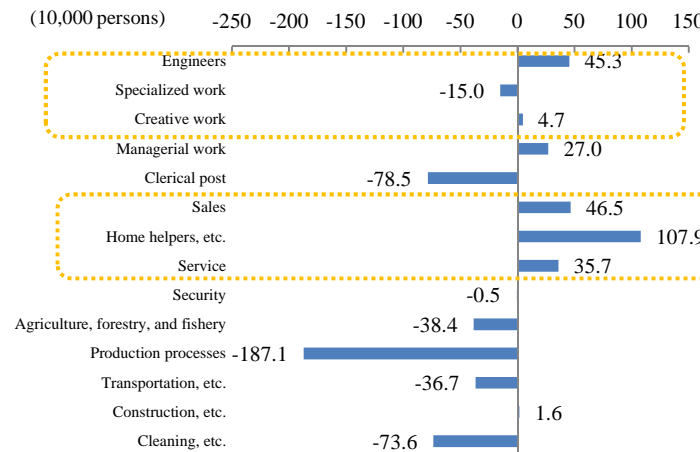
- As one impact that AI brings to workplaces, labour productivity is expected to improve through reduced working hours and improved work efficiencies, but only a few companies utilize AI to create new added values.
- The advancement of AI is expected to change the way of employment, but employees engaged in occupations requiring techniques and human added values, etc. will increase.



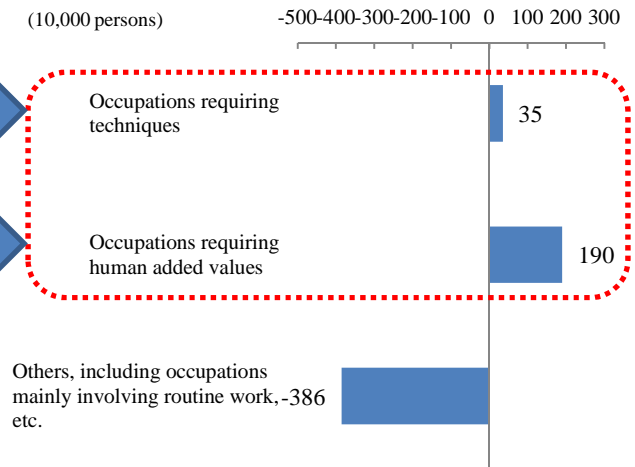
Changes in the labour force population and the number of workers



Changes in the number of workers by occupations



Changes in the number of workers by skill



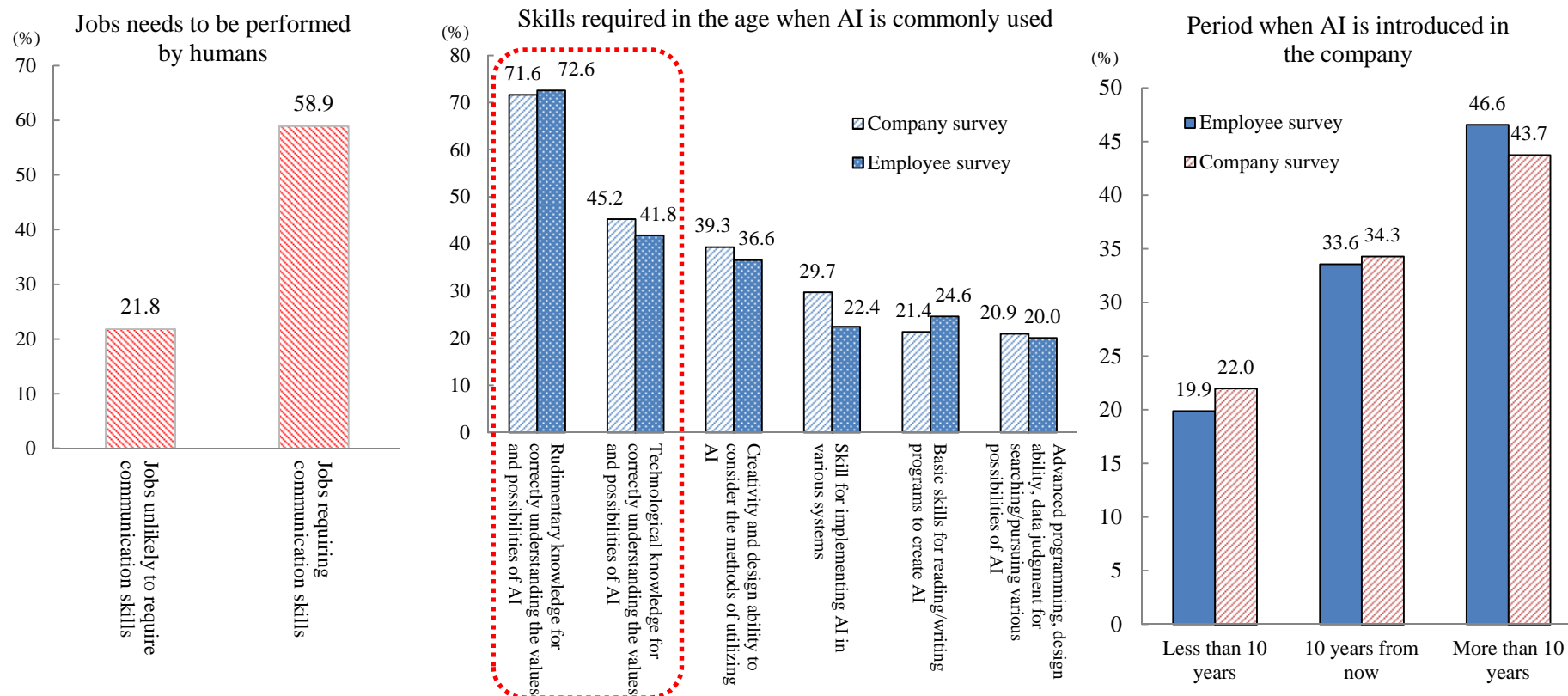
Source: Prepared based on “Interim Report on the New Industrial Structure Vision - Japan’s Strategy to lead the fourth industrial revolution” (2016), METI (lower figure); and “Estimate of labour force demand and supply - Preliminary Calculations by Prefecture Based on New National Estimate (2015 edition)” (lower figure), “Survey on Status of Responding to Innovations” (2017) (upper left and upper right figure), and “Survey on Working Style for Responding to Innovations” (2017) (upper left figure), The Japan Institute for Labour Policy and Training

(Note) “Employee survey” in the upper left figure refers to the survey on regular employees.



## Part II Chapter 1: Relationship between Economic Growth and Innovation/Employment in Japan — Abilities required for workers in the age of advanced AI —

- The skills required in the age when AI is commonly used include the ability to understand the possibility of AI and make full use of it and communication skills that cannot be replaced by AI, and improving these skills will be important in the future.
- While both companies and employees do not have much sense of danger about the prevalence of AI, raising their awareness is needed.



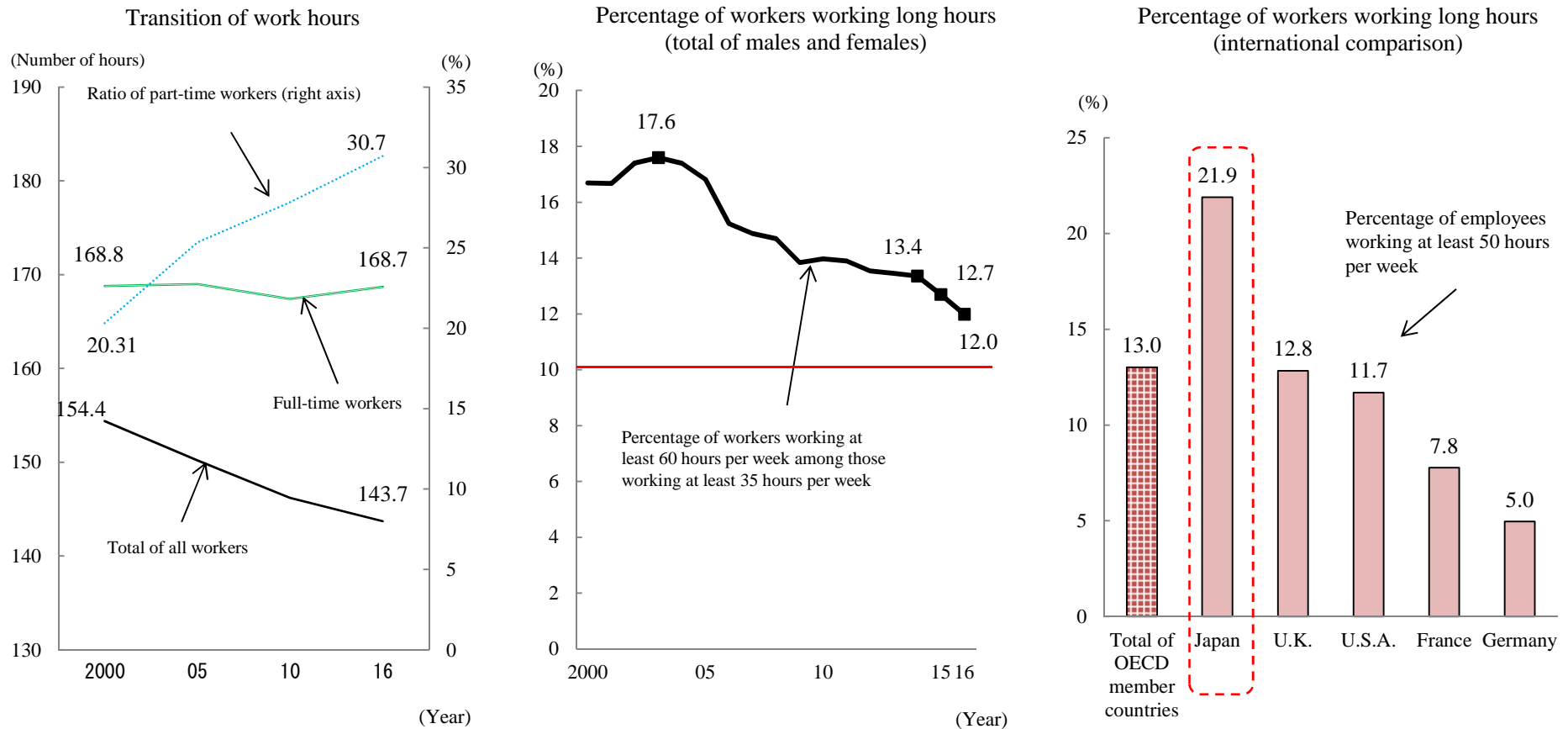
Source: Prepared based on “Survey on Status of Responding to Innovations” (2017) (middle figure and right figure), “Survey on Working Style for Responding to Innovations” (2017) (middle figure and right figure), The Japan Institute for Labour Policy and Training; and “The Effects of AI and Robotics on Business and Employment: Evidence from a Survey on Japanese Firms” (2016), Morikawa (left figure)

(Notes) 1) In the left figure, “Jobs unlikely to require communication skills” refers to driving vehicles, etc. and “Jobs requiring communication skills” refers to nursery services, medical services, and education, etc.

2) “Employee survey” in the middle and left figures refers to survey on regular employees.

## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Current status surrounding a work-life balance, including long working hours —

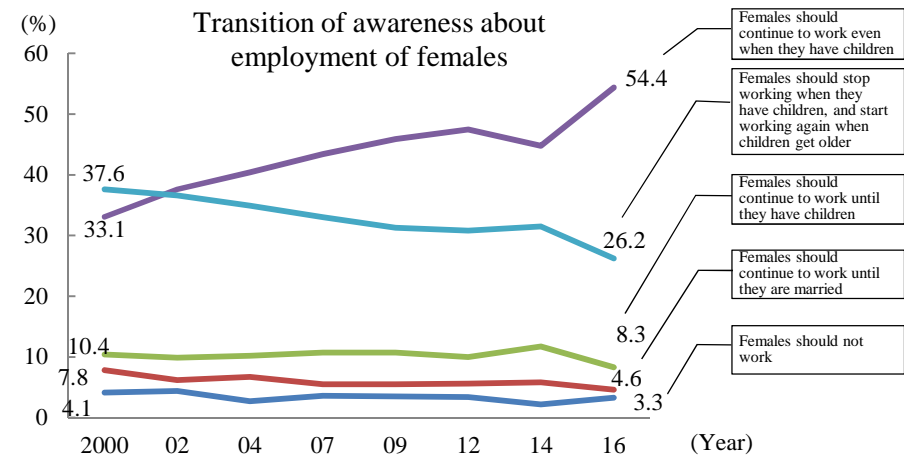
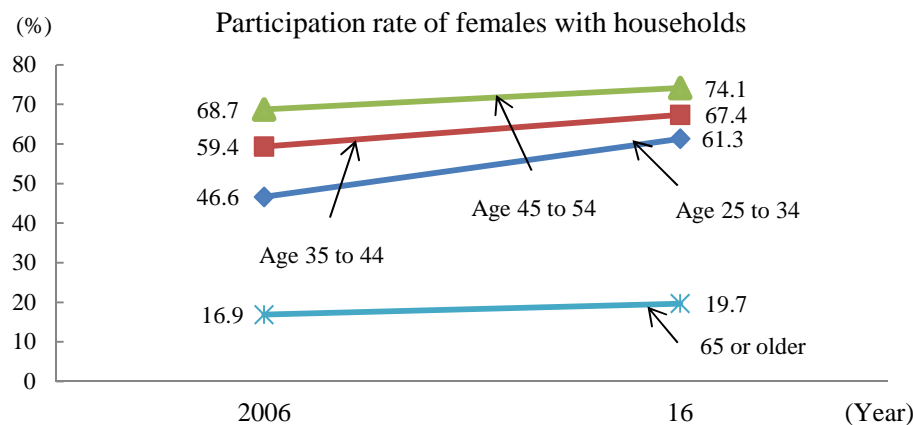
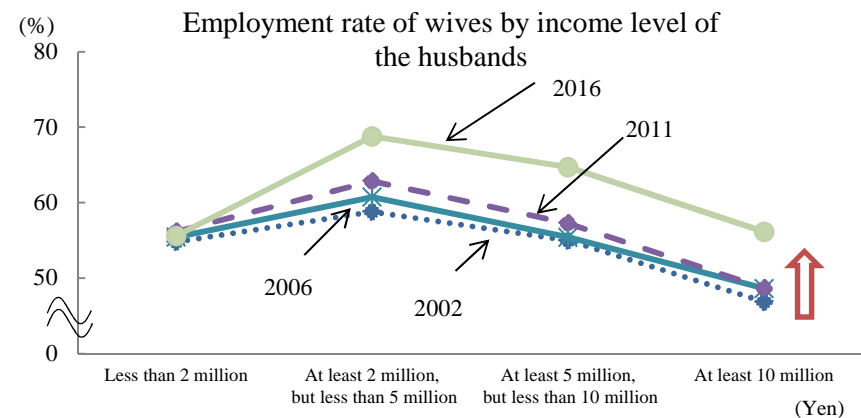
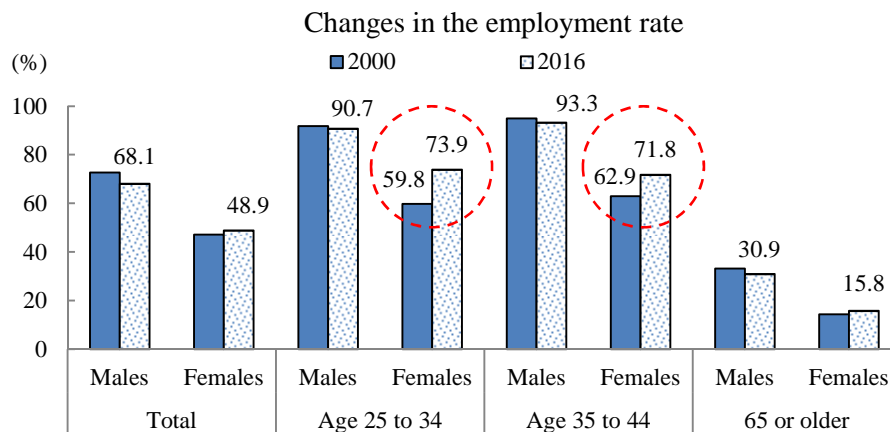
- While the number of working hours of full-time workers remains stable, the number of workers working long hours is decreasing, but still remains over 10%. In addition, the percentage of workers working long hours in Japan is high when compared internationally.



Source: Prepared based on “Monthly Labour Survey”, MHLW (left figure); “Labour Force Survey”, Statistics Bureau (MIC) (middle figure); and OECD.Stat (right figure)

## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Changes in environment surrounding working style and increase in number of double-income households —

- With the progress of labour participation of females in the child-rearing generation, the participation rate of females with households is rising, and double-income households are increasing.
- Female's awareness about employment has changed, and those hoping to work even if their husbands have high income and those willing to continue to work even when they have children are increasing.

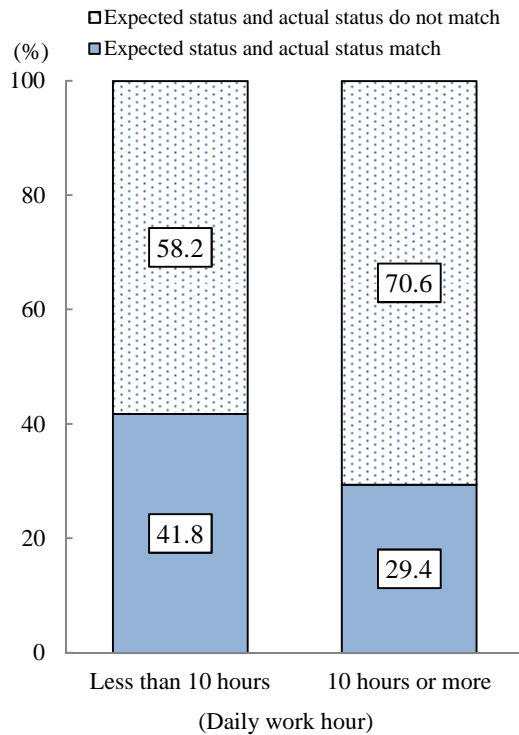


Source: Prepared based on “Public Opinion Survey on a Gender-Equal Society” (2016), Cabinet Office (lower right figure); and “Labour Force Survey” (upper left figure and lower left figure) and “Labour Force Survey (Detailed Tabulation)” (upper right figure), Statistics Bureau (MIC)

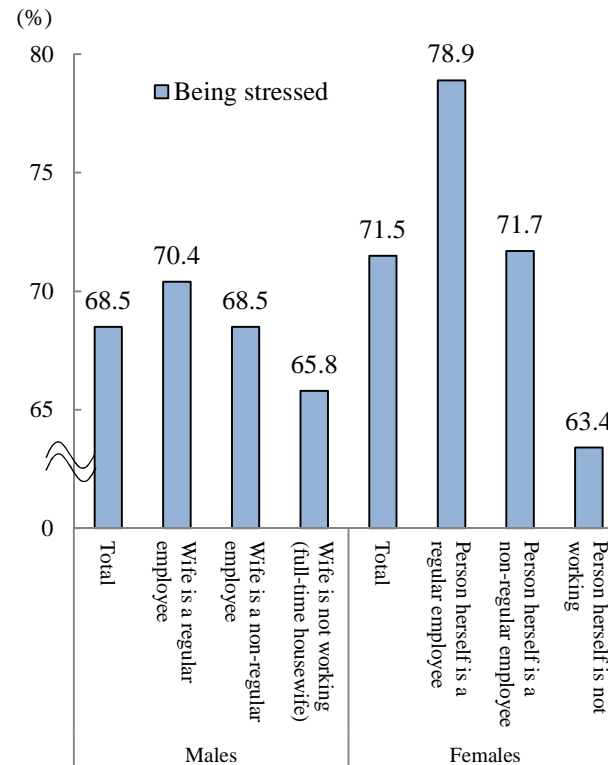
## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Challenges in balancing work and family —

- Those working longer hours tend not to realize a work-life balance, and husbands/wives in double-income households are more stressed than those in full-time housewife households, and therefore efforts for realizing a work-life balance are important.
- As the baby boomer generation (those born in 1947-1949) turns 75 years old in the years to come, the nursing care needs of the baby boomer junior generation (those born in 1971-1974) who are the bearers of employment will increase.

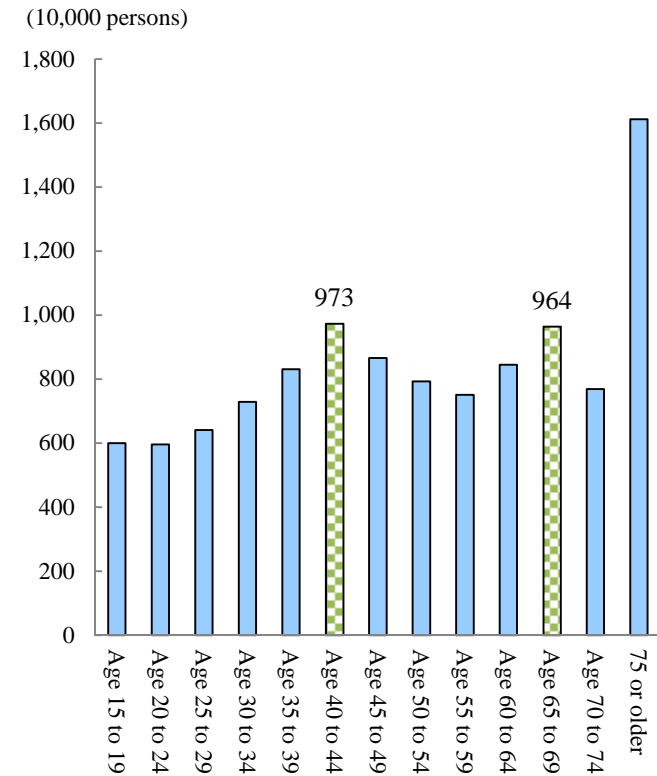
Matching status between expected and actual work-life balance (regular employees)



Stress conditions of a balance between work and family



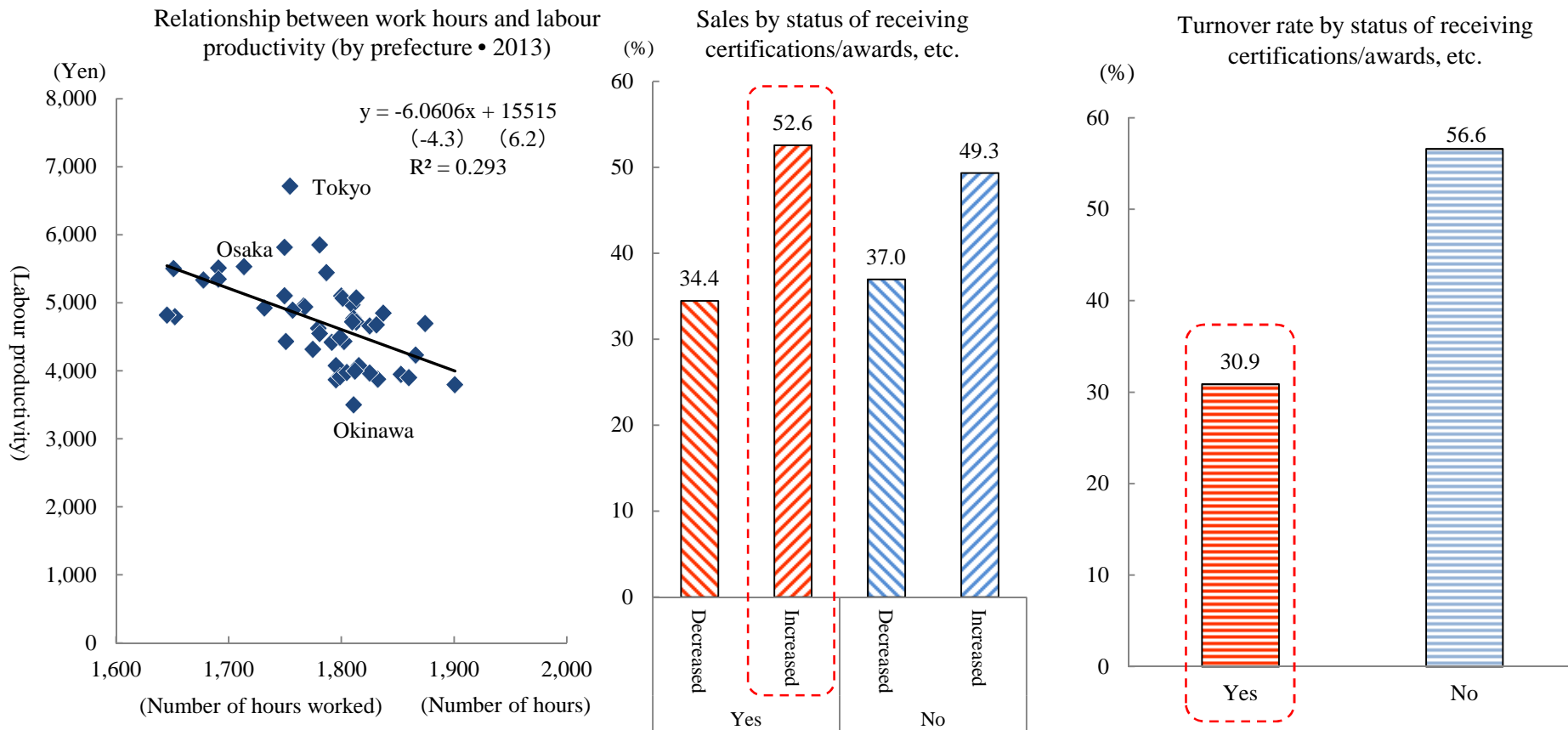
Population by age group



Source: Prepared based on “Individual/Company Survey on Work-Life Balance” (2014), Cabinet Office (left figure); “2015 Population Census”, Statistics Bureau (MIC) (right figure); and “National Employment Situation Panel Survey” (2016), Recruit Works Institute, Recruit Holdings (middle figure)

## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Effectiveness of efforts to realize a work-life balance —

- It has been observed that the relationship is such that the shorter the working hours, the higher the labor productivity, and therefore reducing working hours is important.
- By advancing efforts to realize a work-life balance, increased income and lower turnover rate can be expected.

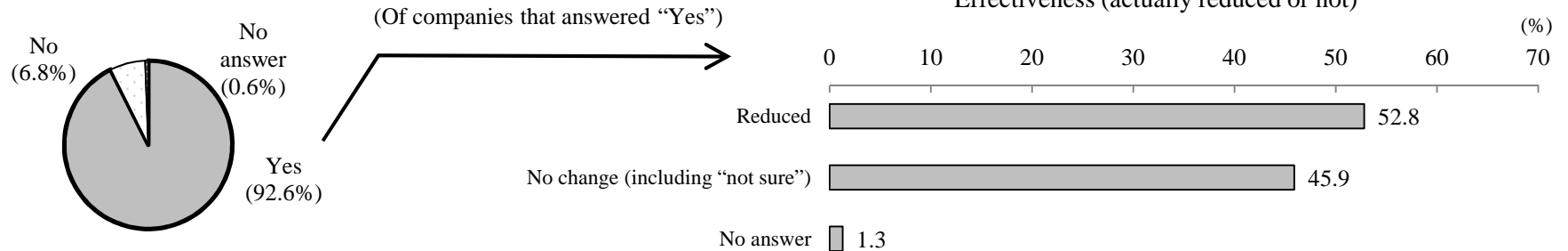


Source: Prepared based on “Monthly Labour Survey (Prefectural Survey)”, MHLW (left figure); “System of National Accounts”, Cabinet Office (left figure); and questionnaire information of “Survey on Effects of Companies’ Employment Management on Business Operations” (2015), Mitsubishi UFJ Research and Consulting (middle figure and right figure)

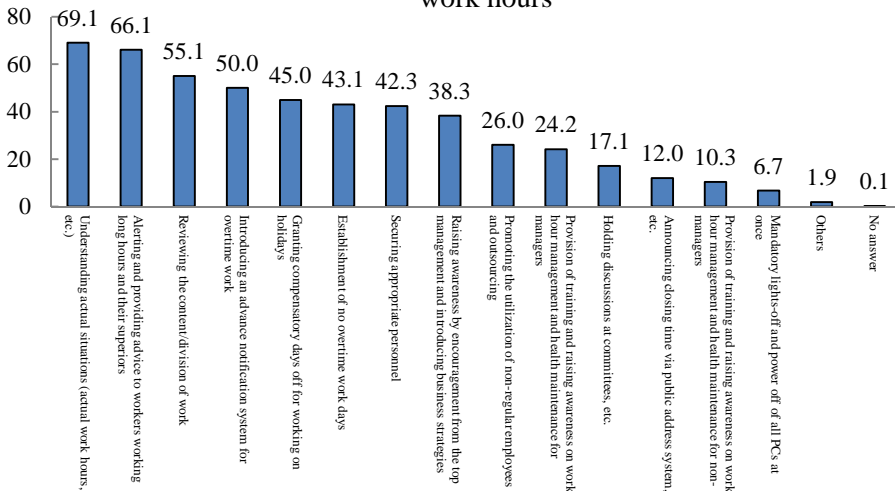
## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Effective efforts to reduce long working hours —

- Many efforts have been taken to reduce long working hours, but the actual effects are limited.
- Although companies that reduced long working hours have taken such efforts as understanding the actual conditions, efforts that are considered effective such as “placing a high value on performing high quality work in shorter hours” and “establishing a system that allows substituting work” have not been sufficiently implemented, and therefore implementing these efforts in addition would be more effective.

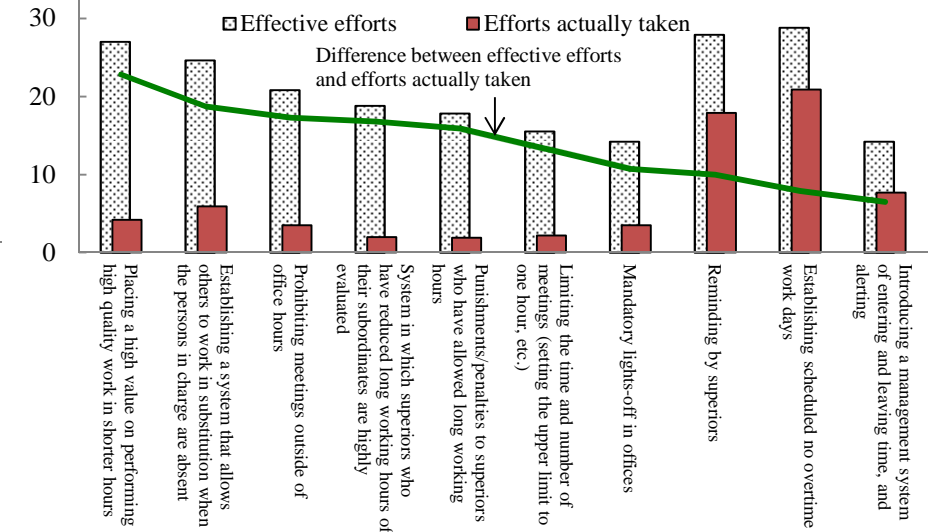
Efforts to reduce overtime work hours



Content of concrete efforts of companies that reduced overtime work hours



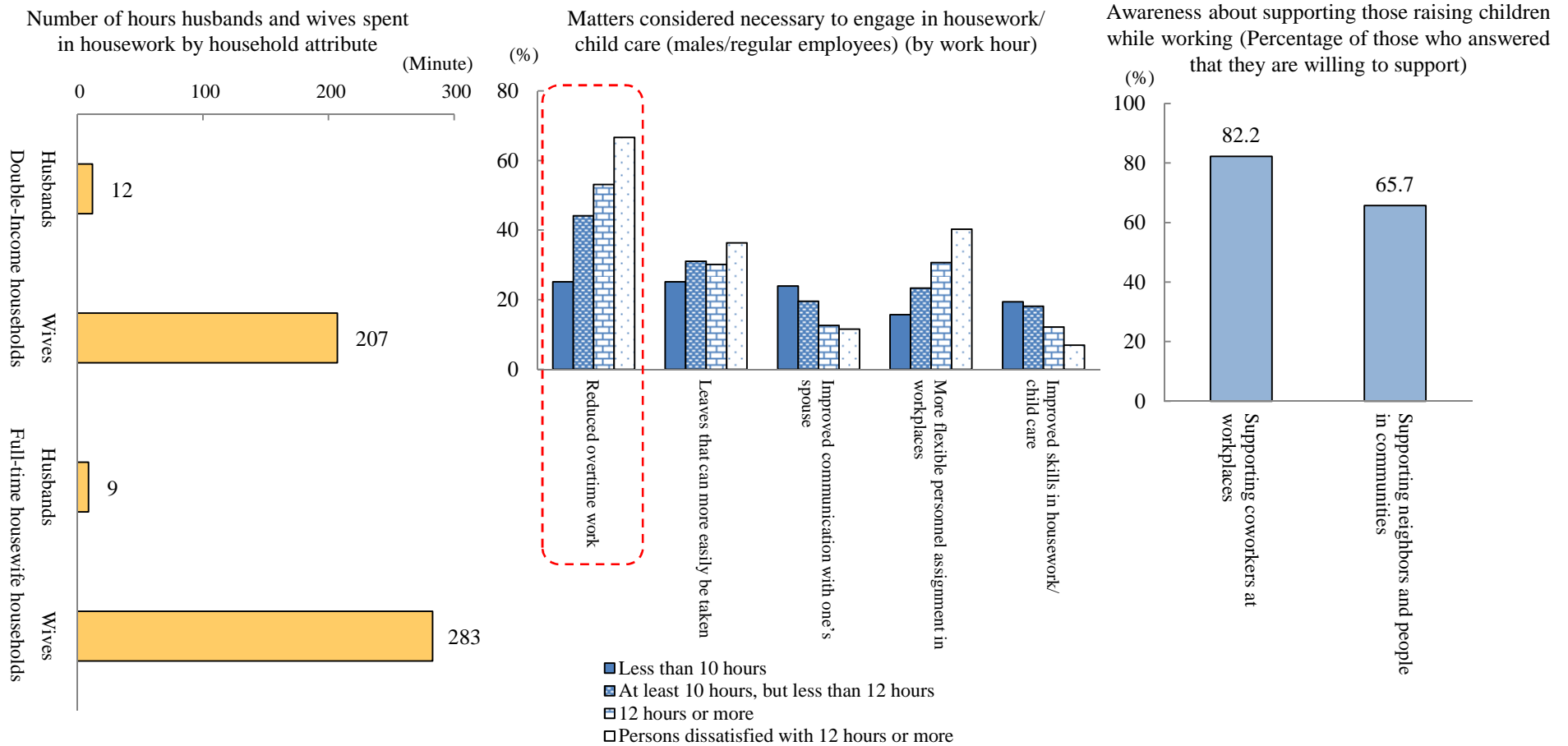
Efforts that workers consider effective in reducing overtime



Source: Prepared based on “Individual/Company Survey on Work-Life Balance” (2014), Cabinet Office (lower right figure); and “Survey on Working Hours Management and Efficient Work Styles” (2015), The Japan Institute for Labour Policy and Training (upper figure and lower left figure)

## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Status and Efforts of balancing housework/child care and work —

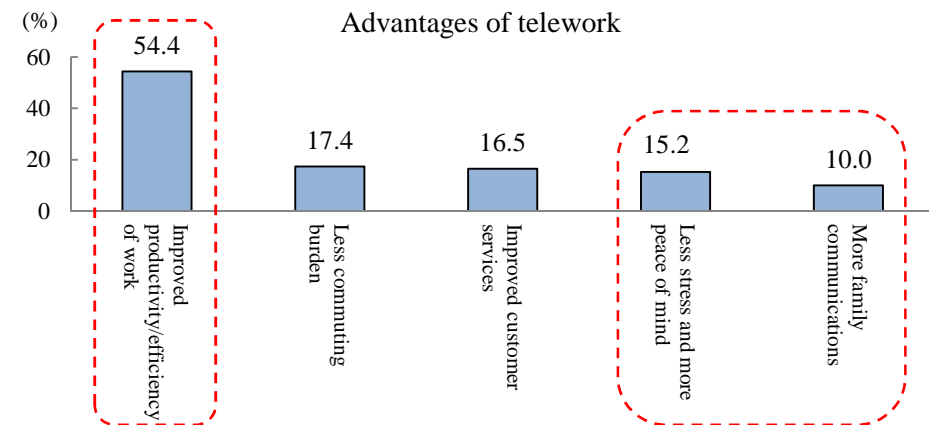
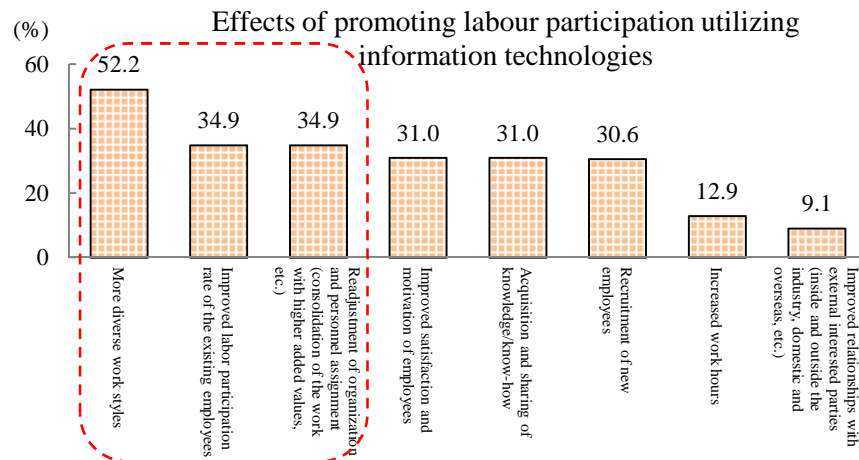
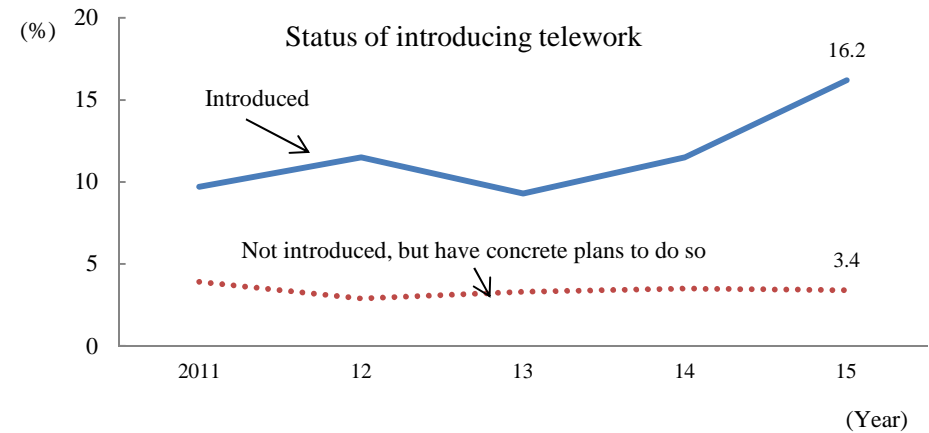
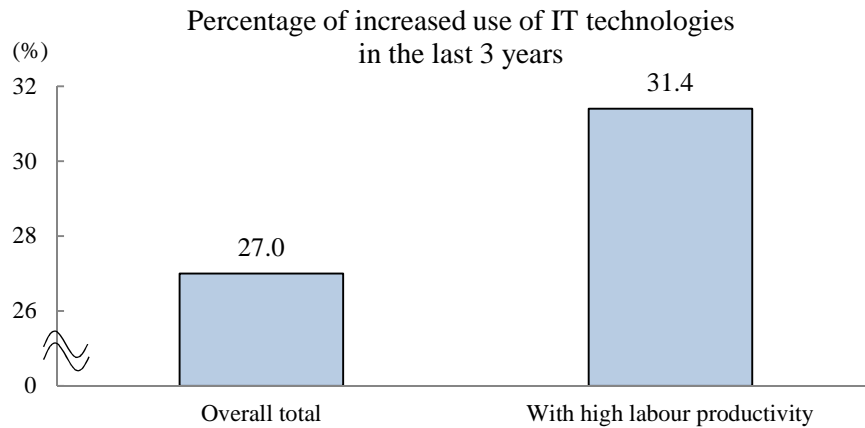
- There is almost no difference in the number of hours husbands spend in housework between double-income households and full-time housewife households.
- The percentage of males wishing overtime work hours to be reduced so that they can engage in housework/child care is high, mainly among workers working long hours.
- Many people are willing to cooperate with those raising children while working, and therefore asking people around in workplaces, etc. for support is effective.



Source: Prepared based on “Individual/Company Survey on Work-Life Balance” (2014), Cabinet Office (middle figure); “Survey on Time Use and Leisure Activities” (2011), Statistics Bureau (MIC) (left figure); and “7th Survey on Working Life” (2015), The Japan Institute for Labour Policy and Training (right figure)

## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Effects of new work styles utilizing information technologies —

- While new work styles associated with technological revolutions are drawing attention, promoting the introduction of new work styles utilizing information technologies such as telework is expected to contribute to the improvement of labour productivity and realization of a work-life balance.
- Telework, which has been broadly spreading, is advantageous for both companies and workers in improving work productivity, reducing stress, and securing family communications, etc.



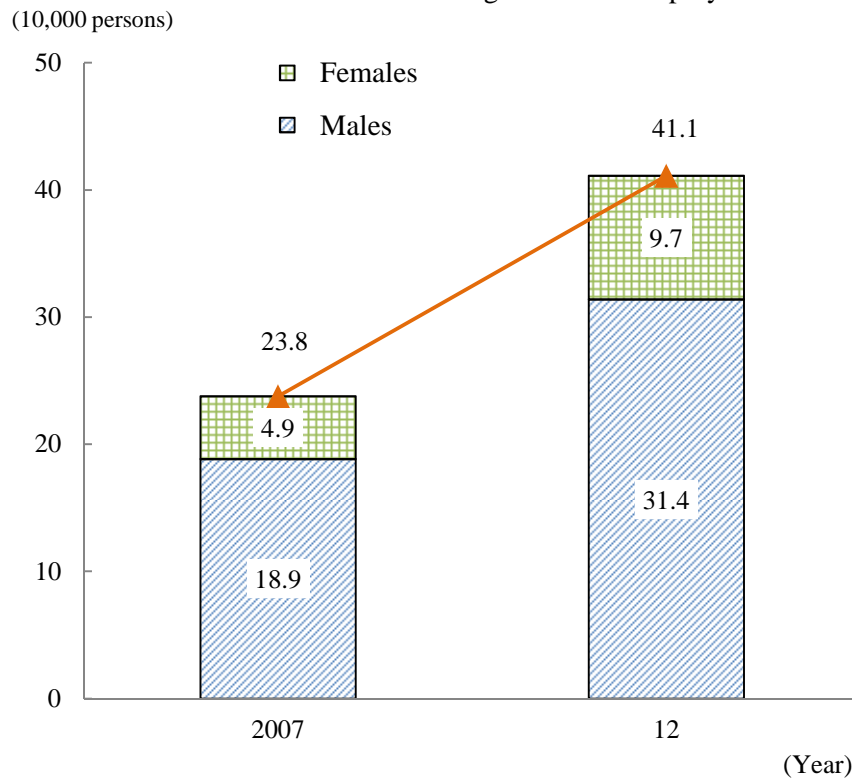
Source: Prepared based on “Study Report on a Structural Analysis of the ICT Industry in the IoT Era and Verification of ICT’s Multifaceted Contributions to Economic Growth” (2016) (lower left figure) and “FY2015 Communications Usage Trend Survey” (upper right figure), MIC; and Survey on Working Hours Management and Efficient Work Styles” (2015) (upper left figure) and “Results of Study on the Actual Situation of Diverse Work Styles Using Information and Communication Devices” (2014) (lower right figure), The Japan Institute for Labour Policy and Training



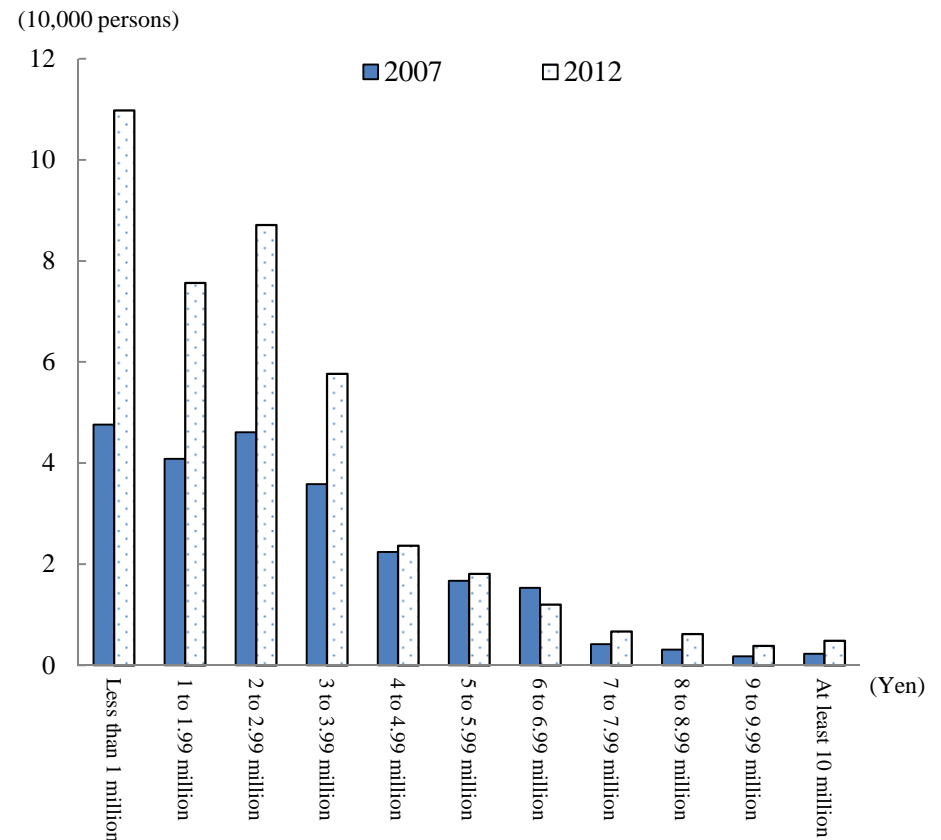
## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Interest in flexible work styles utilizing technological innovations and their effects [1] —

- There is a high interest in working styles enabling people to work whenever and wherever they choose, and the number of people choosing working styles without being employed utilizing information technologies is increasing.
- By income level, those with low income are relatively large in number, but there are a certain number of those with high income.

Number of business operators utilizing information communications technologies with no employees



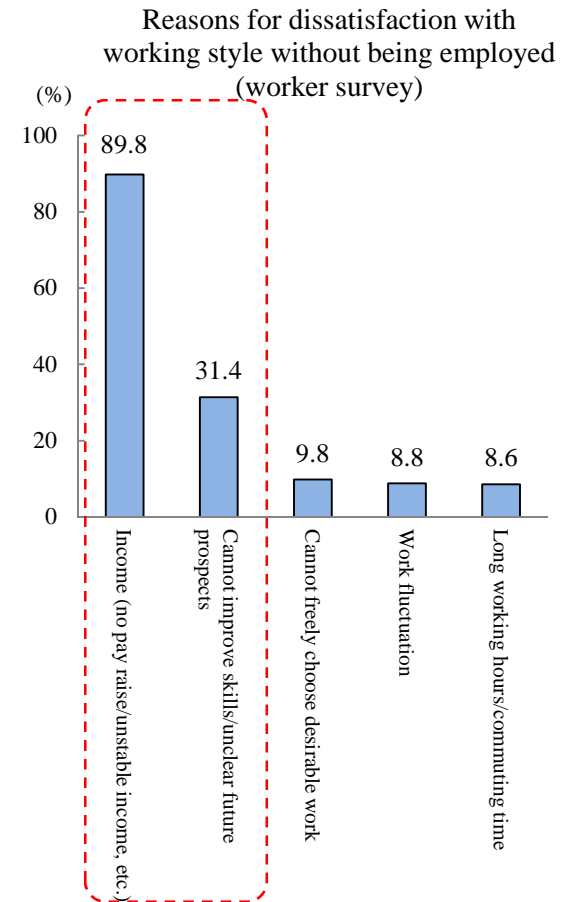
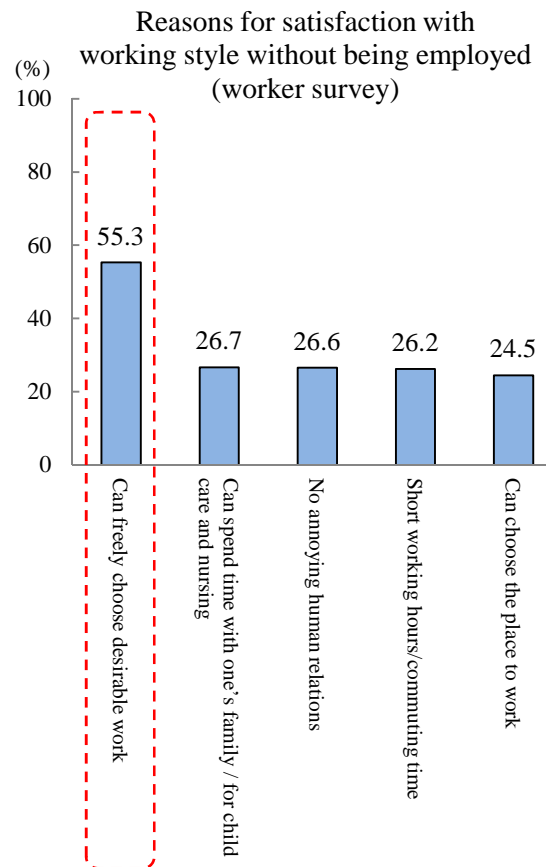
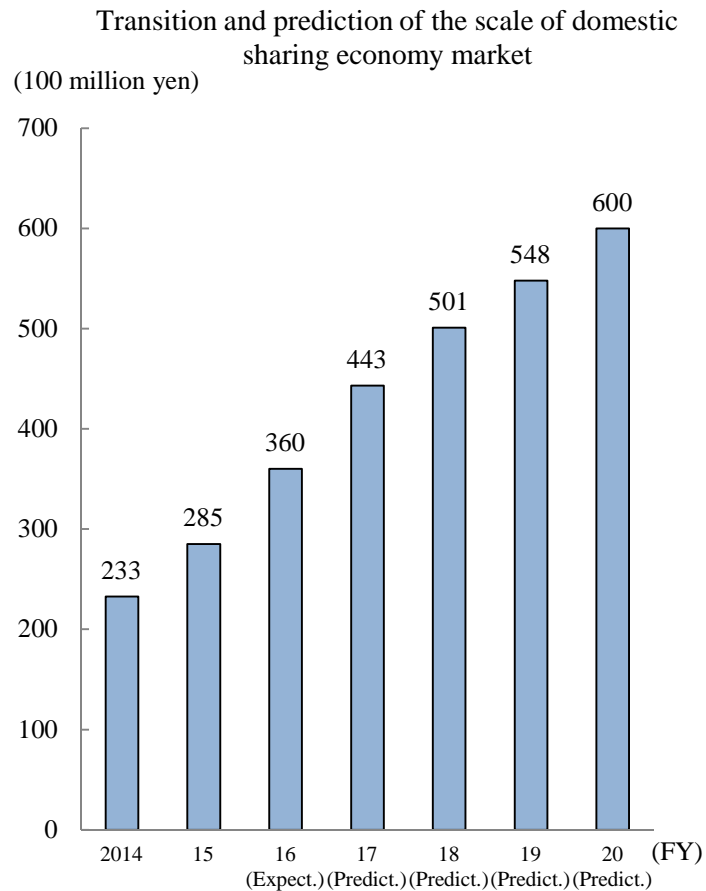
Income distribution of business operators utilizing information communications technologies with no employees



Source: Prepared based on “FY2007 Basic Survey on Employment Structure” and “FY2012 Basic Survey on Employment Structure”, Statistics Bureau (MIC)

## Part II Chapter 2: Changes in Environment Surrounding Working Style and Realization of Work-Life Balance — Interest in flexible work styles utilizing technological innovations and their effects [2] —

- The domestic market for sharing economy is expected to expand.
- With regard to the degree of satisfaction in working style without being employed, while many answered that they can freely choose desirable work, many listed income issues and unclear future prospects as the reasons for dissatisfaction. Therefore, it is required to understand the actual situation and discuss how to respond to it for the future.



Source: Prepared based on “Sharing Economy” (2016), Yano Research Institute (left figure); and “Survey of Actual Conditions for Work Style Reform to Respond to New Industrial Structure” (FY2016 Industrial Economic Research Commissioned Project of METI), Mizuho Information & Research Institute (middle figure and right figure)