

## The Present Situation and Problems of Employment of the Elderly Concerning Continued Employment

### Summary

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## 1. Study Period

Between fiscal 2007 and fiscal 2009

## 2. Objectives of Study

The population in Japan has been falling since 2005, and due to the further progress of the declining birthrate and aging population, it is expected that Japan will become a real depopulating society. A significant decrease in the labor force caused by the shrinking population could constrain and negatively affect the economic growth.

Against this background, the Minister of Health, Labour and Welfare has instructed the Japan Institute for Labour Policy and Training (JILPT), an incorporated administrative agency, to conduct the “Research and Study of a Society in which All Demographics Could Participate in a Time of Population Decline” as one of research and study themes (project research) of JILPT’s second medium-term targeted period (between fiscal 2007 and fiscal 2011) concerning labor policy issues. JILPT has launched the project research and is conducting a study on the development of an environment in which the elderly, women and youth and all other people can give full play to their eagerness and skills in order to curb the decline in the labor force and to maintain and enhance the dynamism of the Japanese economic society.

In particular, a significant number of baby boomers started reaching their retirement age of 60 in 2007 and the first group of them will be 65 years old in 2012. Also, the starting age for pension benefits of the earnings-related component will also be raised beginning in fiscal 2013 and people in the first half of their 60s start becoming ineligible to receive any pension benefits in phases, making it necessary to take immediate action to utilize the skills of the elderly.

In the project research, therefore, we have front-loaded “Research on Employment Promotion of the Elderly” in fiscal 2007 as one of the subprojects, and have initiated a study on the development of an environment in which the elderly can keep their motivation and exert their abilities and can continue to work regardless of their age. In

fiscal 2007, we examined factors that determine the employment of the elderly through a reanalysis of existing research results. In fiscal 2008, based on the results of analysis in fiscal 2007, we conducted a survey on companies, “Research on Employment and Hiring of the Elderly,” on the employment situation of people in the first half of their 60s and the securing of employment of people older than 65 in order to identify challenges in promoting employment of the elderly. We also conducted a reanalysis of existing research studies on the choice of employment forms of the elderly and the relationship between health and employment decisions, obtained an overview of the current situation of employment of the elderly and policies in European countries in recent years, and examined the development of an environment in which the elderly can continue to work regardless of their age if they are willing and have the skills to do so.

### **3. Outline of the Results of Analysis**

The report consists broadly of three parts: an analysis of the survey on companies (personnel and employment management at companies) (Chapter 1 to Chapter 6), an analysis of the employment situation of the elderly (a reanalysis of existing research studies) (Chapter 7 to Chapter 9), and an overview of the current situation of and measures for employment of the elderly in European countries (Chapter 10). We outline each chapter below:

#### **1) An Analysis of the Survey on Companies**

##### **(1) “Chapter 1 Determining Factor for the Age Limit on Employment of the Elderly at Companies – Empirical Analysis, including the Impact of Seniority-Based Pay”**

Using “Research on Employment and Hiring of the Elderly” conducted by JILPT in 2008, we made a quantitative analysis of the impact of seniority-based wages at companies on the age limit on employment of the elderly by focusing on (1) the impact of the wage curve on companies’ establishment of the retirement age, and (2) the impact of the wage curve on companies’ establishment of the upper-limit age on continued employment of the elderly and taking into account the problems of selection bias and endogeneity. Findings of the analysis and their policy implications can be summarized as follows:

Firstly, it was revealed that the wage curve has an impact on employment of the elderly. Assuming that other conditions stay constant, when monthly wages go up ¥10,000 each year, the retirement age is established about four years lower and the upper limit of age for continued employment is set about two years lower. It has been demonstrated that the steeper the wage curve, the lower the retirement age and the

upper-limit age on continued employment, thus verifying the Lazear model. Its policy implication calls for efforts toward a shift from the wage/personnel treatment system focusing on age factors to one that gives priority to such factors as abilities and job responsibilities in order to remove the age limit on employment of the elderly and build a society of “age-free” employment. However, since the establishment of a moderate wage curve may dampen the motivation of employees in long-term employment, it is desirable to exert efforts to establish and enforce a planned and graduated wage curve system that gives consideration to employment and livelihood stability of the elderly employed by companies. It is also necessary to introduce ingenious personnel management systems other than the wage system, including human resources management mechanisms such as competence development throughout the working life of employees, job enrichment and fringe benefits.

Secondly, the impact of the wage curve on the establishment of the upper-limit age on elderly employment differs by size of company. While the wage curve has a significant impact on (1) the retirement age at companies of any size, the extent of the impact differs by company size, with an increase of ¥10,000 in monthly wages each year lowering the retirement age by about five years at companies with a workforce of one to 99, by about five years at companies with a workforce of 100 to 299, and by about three years at companies with a workforce of 300 or more. Regarding the impact on (2) the upper-limit age on continued employment, the wage curve does not have any significant impact at companies with a workforce of one to 199 and 100 to 299, but has a significant impact on the upper-limit age on continued employment at companies with a workforce of 300 or more, lowering it by about five years with an increase of ¥10,000 in monthly wages each year. Policy implications are that the impact of the wage curve on the establishment of the upper-limit age on employment of the elderly differs by company size, and the wage curve has a negative impact on both the retirement age and the upper-limit age on continued employment at companies with a workforce of 300 or more. While the seniority-based wage system that takes into account not only labor productivity of employees but also their life security expenses has the incentive effect for employees until they reach their retirement age, it has a negative effect on continued employment of the elderly aged 60 or over. In order to encourage continued employment of the elderly at companies with a workforce of 300 or more, it would be necessary to consider reforming the wage/personnel treatment system by balancing the incentive and negative effects of the seniority-based wage system.

Thirdly, other factors also impact the retirement age and the upper-limit age on continued employment. As for the impact on the retirement age, the higher retirement

age tends to be set at companies with the high starting salary, the high ratio of employees who have graduated from universities and a workforce of 300 or more, and companies in the construction and services industries rather than the manufacturing industry. As for the impact on the upper-limit age on continued employment, the higher upper-limit age on continued employment tends to be established at companies where “wage levels = productivity” (at the age of 55) instead of “wage levels > productivity” and in the wholesale/retail and services industries rather than the manufacturing industry, and companies with large size, the high ratio of regular employees and the high ratio of employees who have graduated from universities.

Finally, the major remaining problem is the data constraint in an analysis based on a survey on companies that only the averages of the retirement age and the upper-limit age on continued employment are available. Issues that should be addressed in the future include an empirical analysis of problems related to wage system operations and an empirical analysis that takes account of the survival rate of employees who reach the age of 60 and the endogeneity in the establishment of the upper-limit age on employment of the elderly.

## **(2) “Chapter 2 Impact of Pre-60 Employment Management on Post-60 Continued Employment – Shape of the Wage Profile and Existence of Labor Unions”**

In this chapter, following the research framework of Yamada (2007) and using “Research on Employment and Hiring of the Elderly” conducted by JILPT in 2008, we made an analysis of continued employment of the elderly by focusing on the following five relationships: relationship of continued employment of the elderly with (i) the seniority of wages (wage profile); (ii) range of reduction of wage levels and utilization of public benefits; (iii) demand for labor of regular employees; (iv) employment management up to the age of 60; and (v) labor unions.

The cross tabulation shows that 90% of companies set the retirement age at 60, and 90% of companies with the post-retirement continued employment system set the upper-limit age at 65. Some companies make a short list of candidate employees for continued employment while employees are in their 50s. The ratio of 60-year-old regular employees going into continued employment shows a polarization tendency. Nearly half of companies surveyed cut wages by 40% or more from their highest levels for employees in continued employment. One-fourth of companies determine wage levels for those in continued employment in consideration of wage levels in the external labor market. Over 50% of companies do not change wages when public benefits are changed. Based on hypothetical questions, the possibility of public benefits coming back

to companies is low.

In an analysis of the establishment of the retirement age (the probit analysis of whether the retirement age is set at 61 or older), the “wage increase magnification ratio” lowers the probability of the retirement age of 61 or older and the steepness of the wage profile is a negative factor for the extension of the retirement age, while the “increase rate of regular employees” raises the probability of the retirement age of 61 or older and companies’ higher demand for labor of regular employees is a promotional factor for the extension of the retirement age. The “10-year survival rate of 50-year-old regular employees” and the “wage decrease prior to the age of 55,” adopted as variables for employment management of employees in their 50s, do not have a significant impact on the probability of the retirement age of 61 or older. As for the “ratio of employees between the ages of 55 and 59 to total regular employees” and the “existence of labor unions,” adopted as proxy variables for the bargaining power of workers, the former has a significant impact in promoting the extension of the retirement age and the latter a significant negative impact.

The results of an empirical analysis (OLS estimation) of the ratio of 60-year-old regular employees going into continued employment shows that the “wage increase magnification ratio” raises the continued employment ratio. But the “decrease rate of estimated wages around the age of 60” lowers the continued employment ratio more substantially. This reaffirms the results of Yamada (2007) that substantial cuts of wages at the start of continued employment prompt workers not to want continued employment and the inhibitory effect becomes larger than the promotional effect due to reduced payroll costs. In connection with this, the “in-house wage differentials around the age of 60” lower the continued employment ratio, showing that too big a gap in wages after continued employment would prove an inhibitory factor for continued employment. In contrast, the “increase rate of regular employees” pushes up the continued employment ratio. The “10-year survival rate of 50-year-old regular employees” and the “wage decrease prior to the age of 55” also raise the continued employment ratio. The “ratio of employees between the ages of 55 and 59 to total regular employees” is not statistically significant, while the “existence of labor unions” is a statistically significant negative factor. Looking at the impact of the use of public benefits for maintaining annual income (adding an explanatory variable of public benefits to the estimation formula), just as a reference value due to a lot of missing value, while “old-age pensions for active employees” and “employment continuation benefits for the aged” do not have any significant impact, the use of “corporate pensions” for maintaining annual income lowers the continued employment ratio.

Summarizing the above discussions, companies with the more moderate wage profile tend to show the higher probability of the extension of the retirement age and companies that modify the wage profile before employees reach the retirement age tend to have the higher continued employment ratio. When margins of wage cuts at the time when employees go into continued employment are large, the continued employment ratio declines. Based on hypothetical questions, the possibility of public benefits coming back to companies is low, though this result has to be considered with some reservations due to a lot of missing value, while the incorporation of corporate pensions in annual income guarantees at the time of continued employment tends to lower the continued employment ratio. In addition, at companies with labor unions, both the probability of the extension of the retirement age and the continued employment rate tend to decline. Companies with labor unions tend to have a set of criteria for the selection of employees for continued employment, and many of those criteria are objective, such as the evaluation of job performance. This is an issue that requires a further careful examination, including whether the existence or nonexistence of “labor unions” is an appropriate proxy variable for the negotiating power of workers and whether it is serving as a proxy variable for something else.

### **(3) “Chapter 3 Barriers between Wishes for Continued Employment beyond the Retirement Age of 60 and Realization of Continued Employment – An Analysis of Problems Facing Companies”**

In this chapter, by focusing on the existence of “barriers between wishes for continued employment and satisfaction of such wishes (the diverging point of employment or non-employment)” discussed in an analysis (analysis of the consciousness of workers themselves) in an interim report of the Study Group and using data from “Research on Employment and Hiring of the Elderly” conducted by JILPT in 2008, we attempted to identify barriers that sever the path to the realization of continued employment from the viewpoint of “corporate management” by a survey on companies with the retirement age of 60, the current norm in Japan, as well as the continued employment system. More specifically, we clarified the characteristics of (i) companies with strong employment security (the ratio of 50-year-old regular employees reaching the age of 60 is 100%), (ii) companies with many employees wishing to work beyond the retirement age of 60 (wishes for continued employment, (iii) companies with the high ratio of employees aged 60 or older, and (iv) companies with strong employment security, many employees wishing for continued employment and the high ratio of employees aged 60 or older.

The analysis results show that companies with stronger employment security have many employees wishing to work beyond the retirement age of 60 and the realization of continued employment after the retirement age also depends on the “intensity of employment security” before the retirement age, a new finding. The above result appears to reflect the mentality of workers similar to the result of analysis in the interim report that when workplace restructuring is carried out before the retirement age of 60, the number of employees wishing to work beyond the age of 60 decreases and employees tend to think the possibility of continued employment is low.

Further, the analysis shows that companies adopting wage systems that reflect seniority factors tend to have strong employment security until the retirement age of 60 and at many of such companies, many employees wish to work there beyond the retirement age of 60. Employees at many Japanese companies forecast their future wages under the notion that wages continue to rise to a certain extent in tandem with longer years of service, and perhaps, steady and stable payments of wages encourage employees to be willing to continue to work beyond the retirement age and tend to strengthen their confidence in the realization of continued employment.

Given the results of the analysis, modifications of wage systems require careful discussions. Going forward, when companies find it necessary to revise the wage curve downward in order to promote employment of the elderly, it is basically desirable for them to extend the employment of all employees through the uniform raising of the retirement age so that the ultimate total receipts of wages of employees falling short of expectations would not trigger opportunistic behaviors. In addition, measures to curb the increased rates of wages should not lead to wage system changes that would dampen employees’ willingness to work or threaten the economic life of all employees, including the elderly. Employment beyond the age of 60 is an extension of employment until the age of 60, and companies are being called upon to strive to preserve jobs for employees and exert efforts to guarantee wages by paying heed to the stability of their livelihood.

One of challenges companies face in employment of the elderly is whether it is feasible to maintain employment until employees reach the age of 60 and whether personnel management is in place to support that.

In other areas, as factors pushing up the continued employment ratio beyond the age of 60, the “mid-career recruiting of the elderly aged 55 or older” and the measures to secure employment for the elderly in the second half of their 60s” newly came to the fore. It is also noteworthy that at companies employing or considering employment of those in the latter half of their 60s, employees who have reached the age of 60 are becoming

more willing to continue working there.

Furthermore, at companies with many employees wishing to work after the retirement age, the existence of labor unions or labor-management consultation mechanisms is a negative factor of statistical significance. This requires further research going forward, including the possibility of them serving as a proxy indicator of something else and what causal process exists between them and employment of the elderly.

Among important analysis results other than those mentioned above, we discovered that of companies with strong employment security until the age of 60 and many employees wishing for continued employment beyond the age of 60, companies particularly promoting employment of the elderly (with the high ratio of employees aged 60 or older) are holding seminars for employees before they reach the retirement age of 60 to explain about ways of work and life after the retirement age of 60. The interim report earlier found that employees who are good at planning ahead and have steady-going lifestyles are highly likely to find continued employment. The analysis in this chapter also shows employment of the elderly is moving ahead at companies that are providing employees with opportunities to think about the planned and steady design of their life.

Summarizing the above discussions, the key conclusion of this chapter is that at companies offering stable employment, employees tend to find a high value in staying with those companies. This is probably because for these employees, work means more than just offering labor in exchange for monetary compensation and forms the positive perception of the role deeply rooted in their respective life. Behind the positive image of work lies their deep confidence in their companies. That should help encourage willingness to work beyond the age of 60 and promote employment of the elderly going forward.

Therefore, what sort of personnel management has been provided to employees before they reach the retirement age of 60 becomes an important factor in deciding employment or non-employment beyond the age of 60. For the promotion of employment of the elderly, companies are required to engage in human resources development from the long-term perspective and provide employees with opportunities to encourage them to design the future of their life. Thus, the analysis in this chapter shows the implication again similar to that of the interim report that companies are being called upon not only to create institutional mechanisms for continued employment of the elderly but also conduct human resources management by looking out for the mentality and career as a whole of each of their employees.

#### **(4) “Chapter 4 Impact of Old-Age Pensions for Active Employees and Employment Continuation Benefits for the Aged on Companies’ Decisions on Wage Levels of Employees in Continued Employment”**

It has been argued that old-age pensions for active employees and employment continuation benefits for the aged influence not only the elderly but also employer companies, causing reactions such as wage cuts by companies. However, as the elderly are perceived to be willing to work even at lower wage levels on the back of their receipts of old-age pensions for active employees and employment continuation benefits for the aged, it is likely that wage cuts by companies simply reflect such reactions of the elderly.

Therefore, we made an analysis of whether companies are cutting wages beyond the extent referred to above and whether the labor demand curve for companies is shifting downside (to the left) in addition to the downside shift (to the right) of the labor supply curve for the elderly. Using data from “Research on Employment and Hiring of the Elderly” conducted by JILPT in 2008, we looked at continued employment of the elderly in the first half of their 60s. Our analysis of the labor supply side is based on the results of analysis by Hamada (2008) in the interim report.

The analysis results show that the coefficients of old-age pensions for active employees and employment continuation benefits for the aged are statistically significant negative, as suggested by theoretical assumptions, but are both less than half, with statistical significance, of their coefficients and absolute values against reservation wages in the supply of labor estimated by Hamada (2008). The decline in wages due to old-age pensions for active employees and employment continuation benefits for the aged is less than half of the decline in reservation wages due to old-age pensions for active employees and employment continuation benefits for the aged.

When the employment function is estimated, the coefficient of wages vis-à-vis the continued employment ratio is negative, as theory suggests, but is small. The wage elasticity of labor demand is also small, and is not larger than that of labor demand based on the employment function estimated in Hamada (2008) (This may reflect the impact of companies having to take measures to secure employment until the age of 65 under the revision to the Act on Stabilization of Employment of Elderly Persons). Thus, the decline in wages due to the downside (to the right) shift of the labor supply curve due to old-age pensions for active employees and employment continuation benefits for the aged is not smaller than half of the decline in reservation wages due to such pensions and benefits.

Thus, since the decline in wages due to old-age pensions for active employees and employment continuation benefits for the aged does not exceed the impact of the downside (to the right) shift of the labor supply curve for the elderly, the downside (to the left) shift of the labor demand curve for companies is not occurring. In other words, companies are not cutting wages beyond the extent of the reaction of the elderly becoming more willing to work with lower wages due to these two plans. Thus, old-age pensions for active employees and employment continuation benefits for the aged are not offset by wage cuts by companies, and as such these benefits are perceived to have the effect of employment subsidies.

#### **(5) “Chapter 5 Companies’ Efforts toward Continued Employment Beyond the Age of 65”**

In this chapter, based on the results of “Research on Employment and Hiring of the Elderly” conducted by JILPT in 2008, we shed light on companies’ moves toward securing employment beyond the age of 65, intentions of companies committed or reluctant to secure employment, and contents and actual results of measures to secure employment.

Some one-fourth (23.1%) of companies responding to our survey have already implemented measures to secure employment for employees beyond the age of 65, but the extent of implementation varies greatly by industry in particular (the ratio of implementation is high for the transport, education/learning support, and manufacture of general machinery sectors).

As reasons for measures to secure employment beyond the age of 65, many companies say that the elderly are fully capable of working or that it is necessary to actively utilize the elderly who have workforce potential. For reasons not implementing or considering such measures, many companies say that employment of people beyond the age of 65 is not a pressing issue, that blanket employment and treatment is difficult in view of differences in the physical strength and abilities of individual employees, and that there are concerns about the health and physical strength of the elderly beyond the age of 65. Considering these responses, continued employment of the elderly beyond the age of 65 is mainly driven by motivations on the part of companies and these motivations are presumed to be backed up by the actual existence of the elderly with workforce potential in the companies.

Regarding personnel management initiatives that become necessary in association with measures to secure employment for the elderly, many companies said “there are no necessary initiatives” or gave “no replies” (= “Don’t know”), indicating that there are no

strong linkages between particular personnel management mechanisms or initiatives and the implementation of such measures.

As for specific details of measures to secure employment beyond the age of 65, the pattern most frequently seen at companies is measures without resorting to the retirement age system or the continued employment system (companies with the retirement age of 65 or under and the upper-limit age of 65 or under on continued employment). It is assumed that many companies secure employment as extraordinary measures in accordance with circumstances of individual employees beyond the age of 65. As for measures under consideration by companies to secure employment for employees beyond the age of 65 going forward, the largest group of companies, or nearly half, is considering “some mechanisms under which the elderly can work in conformity with actual conditions of companies other than mechanisms related to the retirement age system or the continued employment system.” Thus, the pattern of securing employment for the elderly apart from the retirement age system and the continued employment system is expected to remain as the most prevalent pattern going forward. The continued employment system for securing employment beyond the age of 65 is characterized by the high degree of utilization of the employment extension system with the strong tendency to cover all employees who wish to extend employment. Criteria for the coverage give greater importance to the continuation of present jobs, with somewhat less importance given to job performance, and patterns of employment and work beyond the age of 65 are more varied compared with continued employment up to the age of 65.

The payroll of employees aged 65 or older can change significantly depending on employer companies' measures (the payroll of employees aged 65 or older is larger at companies taking these employment security measures). Among companies already having such measures, there are few noticeable differences in their mechanisms to realize job security.

In considering ways to promote the expansion of job opportunities for people aged 65 or older on the basis of the above results of analysis, the first thing to be noted is that in many cases, measures for continued employment beyond the age of 65 appear to be taken on an ad hoc basis without regard to any fixed systems in order to secure elderly individuals with workforce potential. If that is the case, it would be necessary to increase opportunities for employer companies to find the elderly perceived to have workforce potential even after they reach the age of 65 in order to expand job opportunities. Employees, before they reach the age of 65, need to further enhance their vocational capabilities on the strength of their own characteristic features and working experiences, and it is also required of society as a whole to develop and improve an

environment with accessible opportunities to enhance vocational capabilities. It should also be advisable to consider the matching in job offers and job-hunting activities in a fashion that would underscore vocational capabilities of the elderly more prominently.

Another noteworthy point is that compared with continued employment up to the age of 65, companies are making use of more varied forms of employment and work. This is quite appropriate in view of physical and mental conditions of elderly employees that could change in tandem with increasing age, and this kind of effort is necessary to secure employment and work opportunities for even older people. What is important in expanding employment opportunities for people beyond the age of 65 would be the simultaneous pursuit of the utilization of forms of employment other than full-time and the utilization of workforce potential of the elderly. In this respect, it seems necessary to collect detailed empirical data on such matters as the job assignment and treatment of the elderly and progress management from concrete examples of utilization of employees aged 65 or older and conduct deeper examinations.

#### **(6) “Chapter 6 Does the Introduction of the Continued Employment System Lead to Higher Evaluation of Companies?”**

In this chapter, using “Research on Employment and Hiring of the Elderly” conducted by JILPT in 2008, we examined the objectives of employer companies concerning employment of the elderly, took an overview of market developments related to employment of the elderly, and offered some of our observations at the end of the chapter.

Many companies are responding to mandatory measures to secure employment under the revised Act on Stabilization of Employment of Elderly Persons with the continued employment system. There should be some positive factors in favor of the introduction of the continued employment system on the part of companies as well. Treatment of full-time employees in the first half of their 60s in continued employment and the ratio of employees continuously employed after reaching the age of 60 are unrelated with business performance (sales compared with the level five years ago). However, many companies with deteriorating business performance say they continue to employ regular employees reaching the age of 60 “because it has become difficult to newly hire regular employees (hiring of new graduates/mid-career recruiting), as they try to save on training expenses by refraining from fresh hiring while addressing the shortage of manpower by continuing to employ skilled employees in the first half of their 60s through reemployment and other forms. At the same time, it is possible for employer companies to curb wages for reemployed employees below certain levels. This

approach is a doubled-edged sword, and potential problems involved include a loss of an opportunity to alter corporate culture and depriving young people of job opportunities. Also, annual wage levels of those in continued employment change in accordance with sales of employer companies.

Ways of working and employment of people aged older than 65 are perhaps more directly linked to the pension system. The starting age for pension benefits is 65 or higher in many countries in the world (including Britain, the United States and Germany).

Regarding measures to secure employment for employees beyond the age of 65, 63.5% of the surveyed companies replied that they are “not implementing or considering” such measures. The reason given by the largest proportion of such companies is that “because they can only manage to make efforts to secure jobs for employees aged up to 65 and they do not consider employment of people beyond the age of 65 as a pressing issue,” followed by “because blanket employment and treatment is difficult in view of differences in the physical strength and abilities of individual employees” and “because there are increasing concerns about the health and physical strength of the elderly beyond the age of 65.” Considering these reasons given by reluctant companies, under current circumstances it seems that a lot of difficulties lie ahead before continued employment beyond the age of 65 can be made mandatory.

In the markets, shareholders are perhaps most sensitive to projected benefit obligations (PBO) to elderly employees. The PBO issue cannot be neglected particularly with respect to employees’ pension funds and defined contribution corporate pensions. Employment of the elderly affects benefits and payment periods of these pension plans, giving a significant impact on the PBO computed by discounting future payments to the present value. When the mandatory retirement age is raised to 65, the PBO, under a set of certain assumptions, declines on an individual basis. But the raising of the retirement age is highly likely to result in the aging of the workforce into the future, and if that happens, the PBO by employing companies should increase. Given these prospects, the extension of the retirement age or the abolition of the retirement age system altogether would require an overhaul of the entire personnel and remuneration structure, conceivably bringing extremely harsh changes for employees.

Of measures to secure employment under the revised Act on Stabilization of Employment of Elderly Persons companies are supposed to apply the continued employment system to all employees that wish to remain on the payrolls, in principle. In practice, however, companies are allowed to take flexible responses, making the system the most favored choice as a measure to secure employment. Conceivable

reasons for the choice are (i) “risk of labor productivity decline” is small (it is possible to set objective criteria for eligible employees and companies are allowed to employ only those meeting certain levels of competence), (ii) “risk of personnel expense increase” is small (it is possible to narrow down the number of elderly employees and it is also easier to change terms of employment for employees aged 60 or older), and (iii) “risk of change in the personnel system” is small (it is considered possible to inherit, to a certain extent, the framework and idea of the personnel system for employees younger than 60). We believe we could all but confirm the above in our research.

Meanwhile, when the PBO is taken into account, the problem remains that it is difficult to determine obligations due to employment of the elderly. That probability increases particularly in cases of employees’ pension funds and defined benefit corporate pensions. In that sense, in efforts to secure employment for the elderly, companies are expected to opt for “continued employment” and refrain from establishing corporate pension funds (our research found the ratio of such companies at 40.4%). This is not a desirable situation for employees who are pressed to make the choice between employment and pensions. Going forward, it is desirable to consider a mechanism that takes further heed of both employment and pensions while carefully monitoring developments concerning corporate pension funds.

## **2) Analysis of the Employment Situation of the Elderly (Reanalysis of the Survey on Individuals)**

### **(1) “Chapter 7 Determining Factors for the Choice of Employment Forms by Elderly People in their 60s – An Empirical Analysis of Occupational Career and Other Factors”**

In this chapter, we conducted an empirical analysis of the influence of an occupational career and other factors on forms of employment of elderly people in their 60s using “Survey on Employment Conditions of Elderly Persons (Individual Data)” (2000 and 2004) by the Ministry of Health, Labour and Welfare. More specifically, we made a multinomial logit analysis of four categories of employment forms (employed workers, self-employed workers, other workers and retirees (not working)) (with retirees as the denominator) of people (with trackable career history) aged between 60 and 69 who were employed workers at the age of 55. The main results of analysis and their policy implications are described below:

First, as for the influence of job types at the age of 55 (with the low-skill, non-physical job as the denominator), in the 2004 survey, high-skill, non-physical workers had a statistically significant positive influence on the probability of becoming

self-employed workers. Compared with people in the second half of their 60s, the influence of job types is larger on people in the first half of their 60s. In the 2004 survey, the influence of job types is large on both males and females, but the impact differs by sex. The results of analysis suggest that in the case of high-skill, non-physical workers, support measures are effective for self-employed elderly workers. So, support measures should be maintained, while measures to promote employment should also be considered for low-skill workers.

Second, as for the influence of experiences of job type changes immediately before and after reaching the retirement age (or early retirement), when elderly workers experienced job type changes, the likelihood of these people becoming employed workers, self-employed workers (in the 2000 survey only) and other workers increased, raising the probability of being workers for the elderly as a whole. There was no significant difference between those in the first half of their 60s and those in the second half of their 60s. In the 2000 survey, for both males and females, elderly workers who experienced job type changes had the higher probability of becoming employed workers, self-employed workers and other workers. In terms of policy implications, job type changes may reduce labor productivity of elderly workers due to the loss of company-specific human capital, resulting in lower wages. In order to solve these problems, enhanced vocational education and training programs tailored to elderly workers and measures to support their self-development would be required.

Third, the effect of the market wage rate differs by form of employment. The higher the wage rate, the higher the probability of elderly workers becoming employed workers and the lower the probability of elderly workers becoming self-employed. For both those in the first and second half of their 60s, as the wage rate increases, the probability of becoming employed workers increases and the probability of becoming self-employed workers declines generally. The higher the wage rate, the lower the probability of becoming self-employed workers for both males and females and the higher the probability of becoming employed workers for males. It should be noted that the effect of policy measures for raising the wage rate is different by form of employment.

Fourth, concerning the influence of the health factor, when elderly workers are healthy, the probability is equally high of them becoming employed workers, self-employed workers and other workers. In the 2004 survey, the influence of the state of health on the probability of elderly workers becoming employed workers diminished, while its influence grew stronger on self-employed workers and other workers. For both those in the first and the second half of their 60s and for both males and females, being healthy has a statistically significant positive influence on the probability of them

becoming employed.

Fifth, as for the influence of the size of company at the age of 55, in the 2004 survey, the size of company had a statistically significant influence on forms of employment, with differences in the size of company reflected in different forms of employment. Compared with employees working at medium-sized companies (with the workforce of between 100 and 999) at the age of 55, employees working at large companies (with the workforce of 1,000 or more, or government offices) are more likely to become employed workers, and employees working at small companies (with the workforce of between 1 and 99) have the higher probability of becoming self-employed workers. The influence of the size of company is different between males and females.

Sixth, as for the influence of the experience of reaching the mandatory retirement age, elderly workers who had the experience of reaching the age limit are highly likely to become employed workers, while the 2004 survey shows they are also highly likely to become self-employed. The experience of reaching the retirement age had a larger positive influence on the probability of becoming employed workers for those in the second half of their 60s than for those in the first half of their 60s. For both males and females, the 2004 survey shows that they had the high probability of becoming self-employed workers after reaching the retirement age, while the 2000 survey indicates that their experiences of reaching the retirement age had a positive influence on the probability of becoming employed workers. In the 2004 survey, the experience of reaching the retirement age had a statistically significant influence on males becoming employed workers, but its influence on females becoming employed workers was not statistically significant, showing a clear difference between males and females.

Seventh, as for the influence of the experience of employment extension after reaching the retirement age, elderly people who experienced employment extension are highly likely to become employed workers. For both those in the first half and the second of their 60s (except in the 2004 survey) and for both males and females, the experience of employment extension has a significant positive influence on the probability of becoming employed workers, with the influence bigger for females than for males.

Based on the analysis of the experiences of reaching the retirement age and employment extension, it can be pointed out that the high likelihood of people who reached the retirement age becoming employed workers stems partly from an increase in those who remain as employed workers after reaching the retirement age under the continued employment system. In order to promote employment of the elderly as employed workers, it is necessary to further spread the continued employment system

covering all those who want continuous employment. A more detailed analysis of the situation regarding the introduction and implementation of the continued employment system remains a future challenge.

Eighth, concerning the influence of public pensions, the 2004 survey shows public pensions had a statistically significant negative influence on elderly people becoming employed workers, with the negative influence becoming larger than in the 2000 survey. For both those in the first and the second half of their 60s, the larger the public pensions, the smaller the probability of elderly people becoming employed workers in the 2004 survey than in the 2000 survey. The influence of public pensions is larger for males than for females. The results of analysis indicate that while public pensions have the life security function for the elderly, increases in public pension benefits are likely to reduce the probability of elderly people becoming employed workers. Therefore, it is important that in any reform of the public pension system, its influence on employment and work of the elderly should also be considered.

Ninth, concerning the influence of macroeconomic factors, the lower the unemployment rate, the more elderly people are likely to become self-employed workers and other workers (the 2004 survey). The higher the active job opening ratio, the higher the probability of elderly people becoming employed workers. For both those in the first and the second half of their 60s, as the unemployment rate rises, elderly people are less likely to become self-employed workers in the 2004 survey, while in the 2000 survey, the higher the active job opening ratio, the higher the probability of elderly people becoming employed workers. The results of analysis suggest that macroeconomic policy to push up overall demand for labor is needed as a measure to promote employment of the elderly. Going forward, we need to make a more detailed analysis of the influence of macroeconomic policy on employment of the elderly.

## **(2) “Chapter 8 The Employment Situation of the Elderly from the Health Perspective – Survey on Employment Conditions of Elderly Persons in 1980-2004”**

This chapter is intended to examine the influence of public pensions and other policy variables in consideration of the simultaneous decision relationship between health and employment conditions, using individual data from “Survey on Employment Conditions of Elderly Persons” of the Ministry of Health, Labour and Welfare. We assume the concurrent estimation model that takes into account the sample selection bias of employment decisions as well as the mutual endogeneity between ill health,  $\ln$  (the wage rate) and employment. In this chapter, we make an analysis in line with Oishi (2000), as we use the same type of data as that study and the objectives of the analysis

are similar. In the interpretation of the analysis, we compared the results with Seike and Ma(2008). The analysis covers males aged between 60 and 69 who were employed workers at the age of 55. In consideration of the retirement age, we set age brackets subject to the analysis at 60-64 and 65-69 from 1996 onward, when the retirement age of 60 has become the common practice, and at 55-59 and 60-64 in 1992 and before.

An exogeneity test of Hausman (1978) on the endogeneity of health supports a hypothesis that the health variable is the endogenous variable on employment decisions under “usual health conditions” (the whole period) for the age brackets of 55-59 and 60-64 in 1983-1992 and for the age brackets of 60-64 and 65-69 in 1996-2000, but under “physical employment possibility” (1996-2004), the hypothesis is supported only in 2000. These unstable results of analysis are in parallel with the argument of Oishi (2000) that “this paper’s attempt at testing the endogeneity of health has left several important issues unresolved. (snip) The clarification of the labor supply structure for the elderly with the use of a variety of health information being undertaken in the United States will become an important theme in Japan as well in the future.”

On public pension benefits, Seike and Ma (2009) conclude that “for each age bracket, higher public pension benefits reduce the probability of employment of elderly people. However, the influence of public pensions has been becoming smaller in recent years.” In this chapter, we take no notice of time-oriented changes of estimates. Under “usual health conditions,” the influence of public pensions was statistically significant in 1983-1992 when health is taken into account, with the observable likelihood that public pensions influenced employment decisions. In 1996 and 2000, when health is taken into account, the influence of public pensions is hardly statistically significant (in the estimation with a simple formula that does not take health into account, some statistical significance is observed). In 2004, the hypothesis that the health variable is the endogenous variable was not supported, and in the estimation with a simple formula that does not take health into account, the amount of public pension benefits were statistically significant. Though somewhat different from Seike and Ma (2008) due in part to differences in analytical methods, it seems likely that public pension benefits are generally influencing employment decisions.

Concerning the wage rate, Seike and Ma (2008) conclude that “for each age bracket, the higher market wage rate increases the probability of employment of elderly people. This influence of the market wage rate is larger on those in the second half of their 60s than on those in the first half of their 60s.” As for the relationship between wages and employment decisions, when the market wage rate rises, the supply of labor increases (substitution effect). On the other hand, there is also the possibility of the supply of

labor decreasing due to the income effect. Therefore, in employment decisions, it is possible that wages have a negative influence (decisions to take jobs even when wages decline), but the conventional employment decision model seems to point to a positive influence. We do not draw a clear conclusion from the results of analysis in this chapter. Statistically significant results are fewer than in an analysis of public pensions. The analysis results are unstable, and we have a lot of negatives for the sign condition. While the difference in analytical approaches does not warrant a precise comparison, there are evident differences from the results of Seike and Ma (2008).

While the precise comparison is difficult as analytical approaches, such as the estimation method and the use of explanatory variables, are different (while in this chapter, we consider the endogeneity of health, Seike and Ma (2008) considers the endogeneity of public pension benefits and employment decisions and some explanatory variables are different between them), the results of analysis of public pensions and the market wage rate are different, as seen above, between this chapter and Seike and Ma (2008). But the estimation by Seike and Ma (2008) is excellent and also consistent with instincts. It seems that based on “Survey on Employment Conditions of Elderly Persons,” a more constructive analysis is possible by taking into account the endogeneity of public pension benefits and employment decisions, rather than health.

The main conclusions of this chapter include that an analysis that takes into account the endogeneity of health amid the scarcity of health information suggests the likelihood that elderly people in the age bracket of 60-64 are generally concerned about the level of health in making employment decisions. In addition, on average, they seem to be making employment decisions in consideration of the levels of public pension benefits. On average, they are also making employment decisions in consideration of wage levels (though to a lesser extent).

Employment of the elderly has a major impact in the aging society with the falling birthrate, in terms of securing labor and maintenance of health (this is also related to medical expenses). Employment provides the elderly with goals and a sense of purpose, encourages them to keep regular hours, and helps them maintain and revitalize their physical and mental activities through communication with other people. In this sense, maintenance of health is an essential condition for employment. It is also important to secure income to ensure a fulfilling life after age-limit retirement. There are many people who do not have sufficient pension benefits or savings, and they have to supplement income by taking jobs. Many people wish to work after they reach the retirement age in preparation for the possible loss of health or need for nursing care and also for sustaining a comfortable life without dipping deep into savings. Measures to

support employment of the elderly should meet these expectations.

### **(3) Chapter 9 Preliminary Study on Employment Decisions by Middle-Aged and Elderly Persons Based on Longitudinal Survey of Middle-Aged and Elderly Persons**

In this chapter, we make the concurrent estimation by considering the endogeneity of employment decisions and health (physical and mental) of middle-aged and elderly generations using individual data of “First Longitudinal Survey of Middle-Aged and Elderly Persons” (conducted on men and women aged between 50 and 59 across Japan as of October 2005) of the Ministry of Health, Labour and Welfare. The survey provides detailed information not only on physical health but also the degree of mental health. As the framework of analysis, we assume the concurrent estimation model that takes into account the sample selection bias of employment decisions as well as the mutual endogeneity between health,  $\ln$  (the wage rate) and employment decisions. In the case of males aged between 50 and 59, the estimation is limited to employed workers, and we look at health both with and without the consideration of the degree of mental health.

The result of the estimation of the wage rate structure function, contrary to our expectations, is not statistically significant about the health condition (estimates). The degree of mental health had no influence, either. When the level of mental health is not added, there is no problem about the sample selection bias.

The result of the estimation of the health function produces no effect of age, and this is presumably because the ages of samples are relatively young. Not smoking raises the level of health statistically significantly, but not drinking does not have a statistically significant influence on the level of health. Spending money on the treatment of injury or disease lowers the level of health. Spending money on the maintenance of health (health club workout, for example) is not statistically significant, but exercises of medium or high degree raise the level of health statistically significantly. Contracting a variety of diseases lowers the level of health. Hobbies and cultural activities have a statistically significant positive influence on the increase in the level of health. Having mental health problem (high values suggest mental unhealthfulness) has a statistically significant negative influence. The effect of the level of mental health is smaller than physical diseases.

In the result of the estimation of the employment structure function (for men), the level of health, contrary to our expectations, has a statistically significant negative influence in the sample age bracket of 50-54. Hypothetically, if people are young in age and have a high level of health, they may have shifted to occupations they had originally wanted to take up, such as self-owned business. By the nature of things, the

level of health may have nothing related to employment for people in this age bracket. Wages have a statistically significant positive influence. The size of company has a significant positive influence in the case of elderly people working at companies with the workforce of 99 or less. Savings and home ownership increases the probability of people becoming employed. While housing loans are not statistically significant, people engaged in activities related to hobbies and culture have the higher probability of employment. Spouse income also has a statistically significant positive influence, and this is presumably because people covered are relatively young. Not smoking has a statistically significant positive influence, while drinking is not significant. People who had health checks have the higher probability of employment. Contracting a variety of diseases is negative but not statistically significant, while people who experienced hospitalization have the lower probability of employment. Finally, the level of mental ill health has a statistically significant negative influence, and we found that a worse (or higher) value for this reduces the probability of employment.

For the sample in the age bracket of 55-59, the level of health is not statistically significant, but wages have a statistically significant positive influence. The size of a company had a statistically significant positive influence on people working at companies with the workforce of 99 or less, companies with the workforce of 1,000 or more, and government offices. Savings were not statistically significant for this age bracket. The pattern of home ownership increasing the probability of employment was observed for this age bracket as well. Housing loans were not statistically significant. Hobbies and cultural activities were not statistically significant for this age bracket. Spouse income has a statistically significant positive influence on employment of this age bracket as well. Smoking is no longer statistically significant. People who had health checks have the higher probability of employment, as with the case of the other age bracket. Also, contracting a variety of diseases is negative but not statistically significant, while people who experienced hospitalization have the lower probability of employment. Finally, the level of mental health was not statistically significant.

The result of the estimation of the employment function shows that the effect of the indicator of the level of mental health is different between the age brackets. It reduces the probability of employment for the age bracket of 50-54 statistically significantly, but is not for the age bracket of 55-59. The age bracket of 50-54 overlaps the peak age of suicides, and reducing suicides by people in their 50s is a policy issue of urgency in Japan. The biggest reason for suicides is economic and livelihood problems, followed by health problems. It is noteworthy that the level of mental ill health has a statistically significant negative influence on employment of people in the age bracket of 50-54. This

includes cases of people who want to keep working but cannot do so due to mental problems. Needless to say, most of the people surveyed are mentally healthy. Since this survey was not subjected to clinical screening, this coefficient should be interpreted carefully.

Summing up the above, it became evident that the enhanced level of health increases the probability of employment. This result is consistent with Oishi (2008). As a result of the analysis that considered the indicator of the level of mental health, the level of mental health is found to be highly likely to have a significant influence on employment decisions.

In terms of data problems, there is the problem of whether it is possible to clearly distinguish between the level of physical health and the level of mental health. In the estimation, this represents the problem of multicollinearity, which should be addressed in the future.

### **3) The Employment Situation of the Elderly and Policies in European Countries and Suggestions for Japan**

#### **“Chapter 10 The Employment Situation of the Elderly in Europe and Japan – Comprehensive and Powerful Policies Needed to Respond to the Advent of the Full-Fledged Aging Society”**

In recent years, countries in the European Union (EU) are putting efforts into the promotion of employment of the elderly. In the face of increasing tax and social security burdens stemming from the aging of the population, they made an across-the-board and clear shift toward the “active aging” policy in the latter half of the 1990s. The EU also issued a report on employment of the elderly. In this chapter, we summarize the characteristics of and factors for the expansion of employment of the elderly in EU countries in recent years as well as policy responses for the promotion of employment of the elderly, and discuss policy implications for Japan.

In Japan, where the aging of the population is progressing rapidly, it is more important than in EU countries for a greater portion of the elderly to go to the side of supporting the society (as defrayers of taxes and social insurance premiums). For example, in Japan in 2020, 2.83 working people would have to support an elderly person (aged 70 or over), even when the working generation is expanded to those aged between 20 and 70. This ratio is almost equivalent to the average 2.78 working people in European countries with the working population aged between 20 and 65, meaning that Japan stands on par with European countries with Japanese people working five years longer. In addition, pensions in Japan, in particular the level of basic old-age pensions

(national pensions) are not necessarily high by international standards. Given the progress of the aging society with fewer children, it is extremely important to expand employment of the elderly and improve the quality of their work.

Looking at the content of the increased employment of the elderly in EU countries (2000-2006), we note: (i) the large increase in employment of women; larger increases in (ii) employed workers, (iii) regular employees, and (iv) full-timers; and (v) the shift to more knowledge-intensive jobs. In Japan, the content of increased employment is different from Europe, with the larger increase for men, and large increases in part-timers and fixed-term workers (temporary and contract employees).

As factors affecting the increase in the employment rate of the elderly, the “Employment in Europe Report 2007” cited (1) income after retirement, including pensions; (2) factors affecting the employability of elderly workers ((i) change in the industrial structure (the employment rate of the elderly is high in countries where the ratio of employees in service industries is high, but the correlation is not particularly high); (ii) age discrimination by employers; (iii) seniority-based wages and productivity (while there are analyses showing that seniority-based wages and the employment rate of the elderly are negatively correlated, other analyses see little effect of purely age alone); (iv) employment protection legislation (there is usually a weak negative correlation between EPL indicators of the Organisation for Economic Co-operation and Development (OECD) and the employment rate of the elderly (aged between 55 and 64); (v) health and occupational safety at workplaces (the inactivity rate is higher for disabled persons than for non-disabled persons; the advancing age increases persons with disabilities); (vi) technical levels and lifelong learning (the labor force participation rate is higher for highly-educated people; international comparison of the relationship between the training session participation rate and the employment rate of the elderly shows the statistically significant positive relationship); (3) attractiveness of work to the elderly (terms of employment) (the quality of work is a very important factor that keeps the elderly in employment and encourages their return to work, and it is important to make work attractive to the elderly ((i) workplaces where gradual reductions in working hours and the establishment of varied working hours are possible; (ii) workplace development and job designs, etc. that pay heed to ergonomics); and (4) comprehensive approaches focusing on work (adaptation) abilities and the quality of labor (“work (adaptation) abilities” influence the appropriate balance between work and personal qualities (health throughout life, professional capabilities and values), and failures to maintain work (adaptation) abilities are believed to undermine the appropriate balance and lead to departures from jobs or retirement. Indicators of

terms of employment and the employment rate of the elderly are highly correlated).

European countries are taking multifaceted initiatives to influence the various factors described above:

(1) Pension reform and other reforms of social security systems (in recent years, almost all EU member states implemented reforms to enhance incentives for individual elderly people by narrowing paths to early retirement and facilitating the extension of the employment age. In many countries, links between insurance premiums and pension benefits were strengthened, making it difficult to utilize the early retirement system for reasons of disabilities and illness, etc. Particularly noteworthy is that an increasing number of countries decided to raise or are seriously considering the raising of the standard starting age for pension benefits to 67 or 68. In addition, most countries tightened regulations on early retirement); (2) active initiatives to rectify age discrimination and realize the equality between men and women (based on the EU Directive for establishing a general framework for equal treatment in employment and occupation that prohibits employment discrimination on the grounds of religion or belief, disability, age or sexual orientation, all EU member states have enforced legislation against employment discrimination. Changes in social norms for women's advance into the labor market have made it easier for women to enhance their skills and pursue both jobs and family life, leading to the higher employment rate of women of all generation from younger to elderly women.); (3) learning and educational training (under the EU employment strategy, member countries implemented measures to raise the participation rate of the elderly in adult education programs. The EU gives great importance to the employment expansion effect throughout the lifetime of early-in-life education.); (4) encouragement of workplace campaigns for employment environment improvements; (5) open coordination processes on the employment strategy, social protection and social integration (under the European employment strategy, a series of comprehensive employment policy improvement procedures were implemented, and similar processes were launched in such areas as the fight against social exclusion, pension strategy, medical and nursing-care services. The pension strategy emphasizes the "strengthening of incentives for the extension of employment periods." At the EU Summit held in Stockholm, the goal of raising the employment rate of the elderly (aged between 55 and 64) to 50% was added.

In Japan, where the aging of the population is progressing more rapidly than in Europe, more active initiatives than in Europe are being called for, and more comprehensive approaches of labor policy and social security policy based on a multifaceted analysis are required. The issues facing Japan and implications learned

from European policies are summarized below:

(1) Improvement of the Content of Continued Employment for People in the First Half of Their 60s and Promotion of Employment Up to the Age of 70

(i) Improvement of the content of continued employment: While continued employment of people in the first half of their 60s has progressed steadily in quantitative terms following the 2004 revision to the Act on Stabilization of Employment of Elderly Persons there remain many problems in qualitative terms, including big changes in wages and bonuses, forms of employment and grades, despite little change in the content of work under the continued employment from that prior to the retirement age. In recent years, European countries are taking active initiatives to improve the quality of work and promote the participation of the elderly in educational and training sessions. It is also necessary in Japan to strive to further utilize the capabilities of elderly people by improving occupational fields, developing the better environment, such as occupational education and training, and improving wages for people aged 60 or older.

(ii) Promotion of employment up to the age of 70: EU countries are aiming for employment of the elderly until they reach the age of around 65. Given the difference in the demographic composition, Japan needs to promote employment up to the age of 70. Japan must change the policy positioning of people in the second half of their 60s at an early time in order to realize a society where people can have an active working life. People aged 65 or older are currently out of the coverage of employment insurance. This is based on the policy division idea assuming the standard age of 65 for retirement from the labor market that people under the age of 65 should be covered by employment policy and people aged 65 or older should be covered by public pensions. However, under the pension reform in 1999, people aged 65 to less than 70 who are employed are no longer considered as retirees in the scheme of public pensions. In the area of employment policy, initiatives were launched to promote measures for “companies where people can work up to the age of 70.” By clearly positioning people in the second half of their 60s in the mixing area of employment and public pensions, it is necessary to promote active measures to promote employment up to the age of 70, including (i) gradual start of disbursements of various employment grants and subsidies to employers as support based on the employment insurance coverage of people aged between 65 and less than 70; and (ii) active encouragement of various forms of social participation, including self-employment and NPOs, etc. It is also necessary to take full note that in Europe, an increasing number of countries have decided to raise or are considering the raising of the starting age for pension benefits to 67 or 68.

(2) Comprehensive Policy for the Active Aging

In Japan, strategic initiatives based on specific goal setting are spreading in individual policy areas. But Japan is advancing on the path of the aging of the population at one of the fastest speeds in the world. In addition to active policies for promoting employment of the elderly, it is of vital importance to enforce comprehensive and powerful measures toward realizing the “active aging society,” including (i) promotion of employment of young people and women and improvement of income from employment; (ii) maintenance of health and competence development throughout one’s lifetime; (iii) measures for income security for low-income elderly people who cannot earn income at the level of basic pensions; (iv) the expanded coverage of pension and other social insurance for non-regular workers. Japan can draw upon policy responses by European countries, including initiatives that focus on work (adaptation) abilities and the quality of labor.

#### **4. Suggestions from the Results of Analysis**

Suggestions from the results of analysis from various angles in the chapters described above include the following:

First of all, in promoting employment of the elderly, the personnel management system, and the wage system in particular, is of vital importance. It is necessary to design and administer an appropriate system by taking employment needs of the elderly into account.

The results of analysis suggest that for the full-scale promotion of employment of the elderly aged 60 or older, including the raising of the retirement age or the upper-limit age for continued employment to 61 or above, the direction of the review of the wage and personnel systems should focus on reduced age constraints and a review of the wage system that currently gives importance to the age factor (modification of the wage profile). However, the review of the wage system does not mean the total elimination of seniority factors and it is necessary that the review gives heed to the motivation and stable livelihood of the elderly (seniority factors should also be taken into account). In promoting continued employment, wage levels during continued employment should not be cut substantially from prior levels and, instead of creating overly large differentials, wage levels need to take into account employment conditions (including the eagerness to work) and livelihood, etc. of the elderly.

For the promotion of employment of the elderly, how to mobilize the “workforce potential” of the elderly and whether they have occupational capabilities are important not only to employer companies but also to workers. What is important is how to enhance occupational capabilities of the elderly and how appropriately employer

companies grasp, rate and utilize abilities of elderly employees. Occupational capabilities of the elderly basically have been cultivated on their work experiences in their earlier working life, and hence, working styles before their old age are quite important. A mechanism for accurately evaluating occupational capabilities of the elderly is also important, as is guidance, etc. for workers to adequately grasp their own occupational capabilities. In order to make continued employment at old age possible, the development of opportunities to maintain and improve occupational capabilities and competence development opportunities to adapt to employment at new workplaces and in new jobs is also important. Government support is of importance as well.

Companies that provide job security for employees in their 50s, recruit elderly people in mid-career and utilize elderly people, including the securing of employment beyond the age of 65, are believed to be ahead in realizing the workforce potential of the elderly. In addition, the eagerness to work of the elderly seems likely to be high. Consequently, it is understood, wage levels of the elderly are high, elderly employees aged 60 or older strongly wish for continued employment, the employment ratio of elderly employees aged 60 or older is high, and employment of the elderly has advanced in other aspects.

Ways of work and an occupational career before reaching the age of 60 influence employment decisions of the elderly aged 60 or older, and as such, are very important. The results of analysis of the survey on individuals, as well as the survey on companies, show that an occupational career before the age of 60 influences the choice of forms of employment by the elderly aged 60 or older. Thus, it is important for companies to develop personnel management and human resources development schemes from the long-term perspective, provide opportunities for life planning with a view to long working life, and help workers' career development.

Concerning the institutional impact on employment of the elderly, our research suggests that it is necessary to focus on corporate pension plans (employee retirement benefits), in addition to the retirement age/continued employment systems and public benefits. Following the revision to the Act on Stabilization of Employment of Elderly Persons and other developments, it is becoming important to study the impact of the retirement age system, including the continued employment system. Regarding public benefits, the analysis of the survey on individuals found that the employment-suppressing effect of public pension benefits, when considering the endogeneity of health, was observed in 1983-1992, but is hardly statistically significant in 1996 and 2000. In addition, the influence of public pension benefits was larger in 2004 than in 2000. The analysis suggests the influence of public pension benefits has been diminishing over the long term. The analysis of the survey on companies suggests

that old-age pension benefits for active employees and employment continuation benefits for the aged are not the employment-suppressing factor for the elderly, as they are verified to have the employment grant effect on companies and also their use for maintaining annual income are found not to be affecting continued employment. As for corporate pensions, meanwhile, the analysis of the survey on companies suggests that the use of corporate pensions for maintaining annual income does reduce the continued employment rate and corporate pensions are influencing employment of the elderly partly due to the problem of projected benefit obligations (in particular, with respect to employees' pension funds and defined benefit corporate pensions).

In relation to employment abilities of the elderly, it was confirmed that the health factor is influencing employment decisions by the elderly, even in consideration of its endogeneity. In addition, it is important to note that our research suggests that not only physical health but also mental health influence employment decisions by the elderly (aged between 50 and 54).

At present, there is a wide gap in companies' approaches to employment of the elderly. Measures to secure employment for elderly people up to the age of 65 center on measures to cover elderly people conforming to employment criteria under the continued employment system. Quality problems (wages, treatment, etc.) with continued employment may also be cited. Many companies have not taken or considered to take measures to secure employment beyond the age of 65. On the other hand, companies that have taken measures to secure employment beyond the age of 65 are making responses according to their actual conditions instead of resorting to the retirement age system or the continued employment system, employing elderly people with the workforce potential largely on an ad hoc basis. However, considering that the first group of the baby boomers will be 65 years old in 2012, that the starting age for pension benefits of the earnings-related component will also be raised beginning in fiscal 2013 and that people in the first half of their 60s start becoming ineligible to receive any pension benefits in phases, companies will be required to utilize even more elderly people in the first half of their 60s than before (full employment) and also utilize occupational capabilities of the elderly aged 65 or older. In other words, companies need to further realize the workforce potential of the elderly. It is considered necessary for companies to review the wage and personnel treatment systems (including the retirement age system and the continued employment system), including those for periods before employees reach the age of 60, and improve the workplace environment, in light of employment needs of the elderly.

In particular, given the diversity of employment needs, work capabilities and physical

strength of individual elderly people, employment of the elderly beyond the age of 65 is presumed to involve measures and institutional responses different from those for employment of the elderly up to the age of 65. The analysis of the survey on companies suggests that companies are making use of various forms of employment for the elderly.

There are limitations to our latest research. We were unable to make a full analysis of labor-management joint initiatives for employment of the elderly, the company-wide personnel management system (including welfare benefits) or the relationship between corporate behaviors and employment of the elderly. The analysis of the survey on companies includes results that suggest the influence of labor unions on employment of the elderly, but other analyses show their influence is not statistically significant. It is necessary to make further examinations, including the possibility of the influence of labor unions serving as a proxy variable for something else.

For the promotion of employment of the elderly, it is deemed necessary to collect more information, including hearing surveys, analyze, deepen knowledge and share knowhow about corporate strategies and employment of the elderly, labor-management joint initiatives for employment of the elderly, and in particular institutional and practical characteristics of companies that are actively utilizing the elderly.

In addition, it is important to capture varied employment needs of the elderly, as are ways of work not dependent on companies going forward (including social participation). We need to conduct surveys on individual elderly people to grasp the actual conditions surrounding these matters.

In the end, regarding measures to support employment of the elderly, the important challenge going forward seems to be how to develop measures to secure employment for the promotion of full employment up to the age of 65 and employment beyond the age of 65. In addition, institutional designs (pensions, for example) that do not dampen the eagerness to work of the elderly, support for competence development, development of the environment conducive to employment of the elderly, support for career development and measures for the maintenance of health of the elderly are required. Collection and analysis of and information provision on excellent cases of employment of the elderly should also be useful. From the experiences of European countries, allowing for some overlapping, we can note the importance of policies for enhancing work (adaptation) abilities and the quality of labor and comprehensive policies (integrated deployment of social security and labor policies (including those for young people and women). Since the macroeconomic (demand) factor can influence employment of the elderly, macroeconomic policy is also important, in terms of improving the employment environment.

We summarized the results of analysis in this report above. The analysis reaffirmed the results of analysis contained in the interim report that employment of the elderly is influenced by (i) institutional factors such as pensions and the retirement age system (the influence of pensions and the retirement age system is diminishing in recent years); (ii) the consciousness and work abilities of employees (individuals' job abilities, health and family circumstances, such as nursing-care needs); (iii) personnel management initiatives of employer companies (in particular, quality problems with continued employment and the negative impact of corporate restructuring on employees' wishes for continued employment); and (iv) ways of work in periods before the age of 60 (responses by both companies and workers), and produced more detailed (new) knowledge and findings. We also identified issues that require further examinations going forward. Based on the results of the latest analysis, we are committed to deeper research on the promotion of employment of the elderly, through hearing investigations and surveys on individuals.