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The Japanese Employment System (Summary)⁺

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1. Introduction

“The long-term employment and the seniority-based wage, which are characteristics of the employment system in Japan, have been one of the factors hindering economic recovery.” This criticism emerged in the mid-1990s and has grown as the economy deteriorated rapidly from the autumn of 1997. During the 1980s, however, it was said that the so-called Japanese Employment System was one of the main factors contributing to the economic success in Japan. Thus, the recent criticisms of the Japanese Employment System must be examined to see whether people merely blame the employment system for the stagnant economy and excess employment or if there are factors that impede the functioning of the employment system. From this viewpoint, we analyze the Japanese Employment System in this paper.

2. Characteristics of the Japanese Employment System

Long-term employment and seniority-based wage have been generally given as characteristics of the Japanese Employment System. In comparison with other countries using data as recent as possible, it can be confirmed that long-term employment and seniority-based wage are still characteristics of the Japanese Employment System since:

- (a) In regard to long-term employment, the average tenure of a worker is longer and the ratio of employees working for a short period of time is lower compared to the

⁺ Views expressed in this paper are those of the authors and do not necessarily reflect those of the Bank of Japan or the Research and Statistics Department.

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United States and United Kingdom, in particular (Chart 1).

- (b) In terms of seniority-based wage, the slope of the age-wage profile is much steeper compared not only to the United States and United Kingdom, but also to Germany and France (Chart 2).

From the 1980s, the following changes have been observed in both long-term employment and seniority-based wage.

- (a) For long-term employment, a bipolarization is observed as the labor mobility of the mid-to-senior age group remains low while that of the young age group is becoming higher. The average tenure is increasing gradually overall, mainly due to a rise in the retirement age. According to a breakdown of each age group, however, working years in one company are lengthening for the mid-to-senior age group but shortening for the young age group (Chart 3).
- (b) For the seniority-based wage, the age-wage profile is becoming flat, particularly for university graduate male workers. According to a breakdown of the overall age-wage profile by size of firm, a significant change is not confirmed from the 1980s to the 1990s (Chart 4). By school career (educational achievement), however, the age-wage profile is becoming flat, especially among university graduate male workers for whom the seniority-based wage is conspicuous (Chart 5). This is because firms have gradually modified the profile to mitigate the upward pressure on wages caused by the “aging and higher education of workers.”¹

Regarding the seniority-based wage during the 1990s (data from 1992 to 1997), the flattening of the age-wage profile seems to have stopped. This is because firms faced the downward rigidity of nominal wages, that is, the difficulties of flattening the profile by reducing the wages of the mid-to-senior age group, in a situation where there is no leeway to increase total wages. Firms flattened the profile by setting the gap in the increasing rate of wages according to each age group until the beginning of the 1990s, when total wages were rising.

¹ Changes are not observed overall in the age-wage profile, even though the profile is becoming flatter by school career (educational achievement), because the ratio of university graduates within the mid-to-senior age group of which receives much higher wages, is rising.

3. Prerequisites for the Japanese Employment System to function

One of the hypotheses explaining long-term employment and seniority-based wage is this: “The steep age-wage profile indicates that wages are low for young workers compared to the labor productivity, while wages are higher than their labor productivity justifies for mid-to-senior age workers. Thus, an implicit contract exists between firms and employees regarding long-term employment, and future make-up for the wage loss.”² This contract is said to have advantages: It will lead to an increase in labor productivity through the accumulation of firm-specific human capital.

Based on this idea, the Japanese Employment System requires the following four prerequisites. However, the economic environment has been changing, especially from the 1990s, and moving in a direction that makes it difficult for the Japanese Employment System to function.

(1) Balanced age composition of workers (retaining the balance between labor productivity and wages overall)

In order to keep the slope of the age-wage profile steep, the ratio of mid-to-senior age group to total workers, receiving more wages than their labor productivity justifies, should be no more than that of the young age group receiving wages less than their labor productivity within a firm. When the former surpasses the latter, corporate profits are squeezed and the employment environment may become unstable.³ With respect to developments in age composition in Japan (Chart 7), although the population was gradually aging until the 1980s, there were more people in the young age group or

² It is difficult to verify the relationship between labor productivity and wages for each age group from the data. Survey results from firms (Chart 6), however, show that the ratio of employees whose “wages surpass his or her contribution to the company” increases gradually from around 40 years old.

³ The concept of the age-wage profile indicates that for each worker, wages are to increase as he or she ages and does not necessarily explain the income transfer among age groups at a given stage. Therefore, in theory, when the lifetime wage equals the lifetime labor productivity, the seniority-based wage system is to be maintained even if the society ages and the decline in the growth rate progresses. This theory, however, only holds true on the unrealistic premise that firms are perfectly projecting future aging, growth rate and labor-productivity. Moreover, even if firms have accumulated excess stock of profits from the young age group in the past and their projections on aging etc. are correct, in reality, firms will receive negative pressure from the capital market and banks when the present flow of profits deteriorates.

the number was about the same for both the young and mid-to-senior age groups. From the 1990s, however, as the “*dankai no sedai* (baby-boom generation born just after World War II)” is getting older, this relationship is starting to reverse (Chart 8). In the future, the ratio of the mid-to-senior age group in firms is expected to rise further.

(2) High economic growth

The unexpected rapid decline in the economic growth rate seems to be one of the reasons for mounting criticism of the Japanese Employment System. The seniority-based wage system has a mechanism that “restricts wages at the young stage → accumulates undistributed profits within the company → increases business fixed investment → expands the company → pays high wages to workers when they reach the mid-to-senior age group.” Through this mechanism, the seniority-based wage system encourages firms to grow: In other words, the system works on the premise of economic growth. Moreover, when high economic growth continues, the benefits are shared by all workers even if aging progresses. However, economic growth has been recently weak and the mid-term expected growth rate of firms is also declining sharply. In the long run, a return to the high economic growth is unlikely mainly due to the decrease in the population growth rate.

(3) Reliance on the future existence of firms

The young age group accepts wages less than their labor productivity on the premises that firms will make up for their wage loss in the future. Under the “implicit contract,” many workers deposit their lifetime wages at firms as safety assets. Thus, the young age group workers conform to the contract believing that the company will exist when they reach the mid-to-senior age group. Nevertheless since 1997, the number of bankruptcies of large firms is increasing (Chart 9) and so the workers’ faith in the future existence of firms is collapsing. This is, of course, mainly due to the financial system shock from the autumn of 1997 and faith will recover to some extent when this shock is completely alleviated. Structural adjustment pressures, however, are intensifying along with the revolutionary progress in information and communications technologies and the globalization of the economy. Consequently, it is natural that workers tend to have more doubts that their firms will exist when they reach the mid-to-senior age

group. Hence, the incentives for the young age group to accept lower wages than their labor productivity would suggest seem to be declining.

(4) Stable economic growth and industrial structure

Under the long-term employment system, firms retain labor while workers accumulate firm-specific skills. Therefore, this system is relevant when economic growth and industrial structure (and the demand firms face) are stable. Recently, however, the globalization of the economy and the progress in information and communications technologies (and deregulation) exert idiosyncratic effects on each industry and firm. Under these circumstances, overall economic growth is becoming unstable, showing both mixed positive and negative figures, and the growth rate varies greatly among industries and firms (Chart 10). Amid this strong structural adjustment pressure, there are increasing risks for firms to retain labor.

Therefore, the prerequisites for the Japanese Employment System seem to be no longer satisfactory in the 1990s owing to “the aging of population and the declining birth rate” (this especially affects prerequisites (1) and (2)) and “the revolutionary progress in information and communications technologies and the globalization of the economy” (this especially (3) and (4)).⁴

4. Influences on wages from aging of workers and the difficulty of maintaining the seniority-based wage system

Firms are insisting that “the Japanese Employment System is one of the main factors for the squeeze of corporate profits.” To confirm this, we analyze how changes in the age composition affect average wages under the seniority-based wage system. As a result, the rising rate of wages per person in the 1990s (from 1992 to 1997) is mainly due to the aging and higher education⁵ factor of employees. At large firms, in particular,

⁴ Pressures promoting changes in the employment system, which had been latent throughout the 1990s, emerged rapidly due to the financial system shock from the autumn of 1997. This led to a strong recognition of the problems surrounding this system.

⁵ Here, we consider the rise in the ratio of university graduate workers (higher education) as well as aging. This is because changes in the weight of university graduate workers, where the mid-to-senior age group receives much higher salary (where the seniority-based wage is most distinct),

where the slope of the age-wage profile is steep, this factor indicates a rise of up to 2 percent on an annualized basis (Chart 11).⁶ This shows that the upward pressure on wages from aging and higher education, in conjunction with the downward rigidity of nominal wages, especially in the mid-to-senior age group, and disinflation have raised labor's share of income in the 1990s and further squeezed corporate profits. In the future, the aging and higher education factor will continue to exert upward pressure on wages, according to simulated results based on several assumptions (Chart 12).⁷ This wage rising factor is not a problem when the growth rate is high, but in the present situation where the expected growth rate is decreasing and labor's share needs to be lowered, firms cannot ignore this factor.

Firms have flattened the slope of the age-wage profile in response to aging and higher education, but the slope needs to be flattened even more to ease the continuing upward pressure on wages. The profile was flattened by “not increasing wages of the mid-to-senior age group as much as the young age group” when there was leeway for the total

affect the average wages of all workers even if there are no wage changes in each cohort.

⁶ The “aging and higher education factor” is changes in average wages of all workers accounted for by the aging and higher educational achievement. This is calculated on the assumption that the average wage level of workers in each cohort stays the same as the previous period.

Specifically, the decomposition is calculated as follows:

To simplify the explanation, we divide workers into two groups; younger group, A and older group, B (the factor of higher educational achievement is excluded here). The number of workers in each group is indicated as L^A, L^B , and wage per person in each group is indicated as w^A, w^B . Compare two periods, $i = 0, 1$. Then the nominal wage per person in period i is written as;

$$W_i = \frac{w_i^A L_i^A + w_i^B L_i^B}{L_i^A + L_i^B} = w_i^A l_i^A + w_i^B l_i^B \quad i = 0, 1$$

$$\text{where } l_i^A = \frac{L_i^A}{L_i^A + L_i^B}, \quad l_i^B = \frac{L_i^B}{L_i^A + L_i^B}$$

Thus, the following decomposition of the changes in nominal wage per person is possible:

$$\begin{aligned} \frac{W_1 - W_0}{W_0} &= \frac{w_1^A l_1^A + w_1^B l_1^B - w_0^A l_0^A - w_0^B l_0^B}{W_0} \\ &= \frac{(w_1^A - w_0^A) l_1^A}{W_0} + \frac{(w_1^B - w_0^B) l_1^B}{W_0} + \frac{(l_1^A - l_0^A) w_0^A}{W_0} + \frac{(l_1^B - l_0^B) w_0^B}{W_0} \end{aligned}$$

The sum of the first and second terms represents “factor of wage changes in each cohort,” and the sum of the third and fourth terms, “aging and higher education factor.”

As regards the latter sum, since the aging and higher education factor sets the wage of each worker at a basis point, it may be counted as the “real” wage rising factor.

⁷ The following two main factors explain why the above simulated results show that the outlook for aging and higher education factor is smaller. First, the age-wage profile has become flatter particularly for university graduates and second, the upward pressure on wages caused by the “*dankai no sedai*” will decrease.

wage to rise. However, the environment surrounding Japanese firms has changed: High economic growth is now unlikely, and as a result of the globalization of the economy, firms are forced to put more emphasis on capital efficiency (capital profitability). Under these circumstances, the total wage is expected to be restricted in the future. Hence, the profile may be flattened by “reducing the wages of the mid-to-senior age group, which is considered to be receiving higher wages than their labor productivity justifies.” In this regard, the rapid wage adjustment from the second half of 1998 may indicate that the revision of the seniority-based wage is becoming full-scale and wages of the mid-to-senior age group are being cut largely.⁸ This, however, means that firms breach their “implicit contract” with the mid-to-senior age group workers regarding the make-up for their previous wage loss.⁹ As this is important for the group, it is difficult to tell how fast the revision will progress.

5. Future of the long-term employment system

As of above, the seniority-based wage will be changing even more in the future. With respect to the “implicit contract,” these changes are likely to affect long-term employment. We now examine the possibilities of changes in long-term employment from several viewpoints.

According to industry data, “the age-wage profile is flatter in industries with higher average age and then the average working tenure in the young age group is shorter in such industries” (Chart 13). This means that in industries in which workers are getting older, it is difficult for firms to maintain the seniority-based wage and this has a negative impact on long-term employment.¹⁰

⁸ From the viewpoint of corporate profits, now may be the best time to change the seniority-based wage as the “*dankai no sedai*” is currently reaching its peak in the age-wage profile (that is, when the personnel expenses cut becomes the largest).

⁹ The mid-to-senior age group workers plan their lifestyle based on this “implicit contract.” This means that they are likely to show strong resistance to the reduction in nominal wages as they have already signed nominal fixed contracts of payment such as housing loans.

¹⁰ When plotting the “time-series changes” from the 1980s to the 1990s, there is no clear correlation (Chart 13). Two reasons explain this: Systems that prevent labor mobility apart from the wage system (for example, corporate pension plans and the retirement allowance system discourage workers to look for new jobs in the labor market to obtain higher wages), and the wage differentials among industries (workers who work at industries where the average wage level is high are likely to remain at their present firms instead of going to other industries even if their age-wage profile becomes flatter to some extent).

As the environment surrounding the Japanese Employment System changes, the young age group's view of long-term employment is definitely changing: They accept higher labor mobility (Chart 14). Systems, which had been preventing labor mobility, are gradually being changed (e.g. the introduction of the defined-contribution pension scheme and deregulation of job-placement businesses). Therefore, it is possible that workers' intention to stay within the same firm for a lifetime may further weaken, particularly among the young age group, if the age-wage profile becomes flatter.

On the other hand, firms' views on the wage system are changing rapidly. Firms are planning to adopt "performance-based wages" (Chart 15). According to recent survey results, most firms have answered that they will revise their seniority-based wage system by introducing performance-based wages. Furthermore, from 1997 to 1998, an increasing number of firms have responded that their future wage system will be "completely performance-based wages." Meanwhile, many firms indicate that they will maintain long-term employment. Another recent survey result shows that under 20 percent of firms replied that the system "needs to be revised thoroughly," while most firms answered that they will "maintain the current system" (over 30 percent) or "have to revise partially" (over 40 percent). However, as intensifying structural adjustment causes heightened uncertainty, firms are likely to feel increasing concern about the cost of retaining workers. Thus, it is expected that firms will gradually lose their intention to stick to long-term employment.

The long-term employment system as well as the seniority-based wage system may be revised. However, it is difficult to tell how fast this process will take as changes depend on the tempo of revisions in the seniority-based wage system and changes in other systems such as corporate pension plans.

6. Concluding remarks

To conclude, we want to briefly mention what is likely to happen when labor mobility increases in Japan.

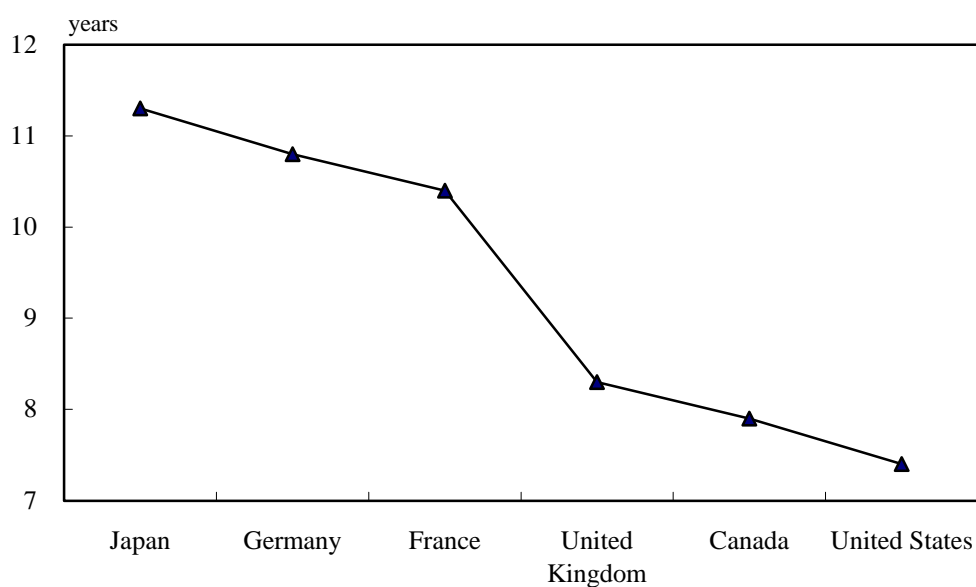
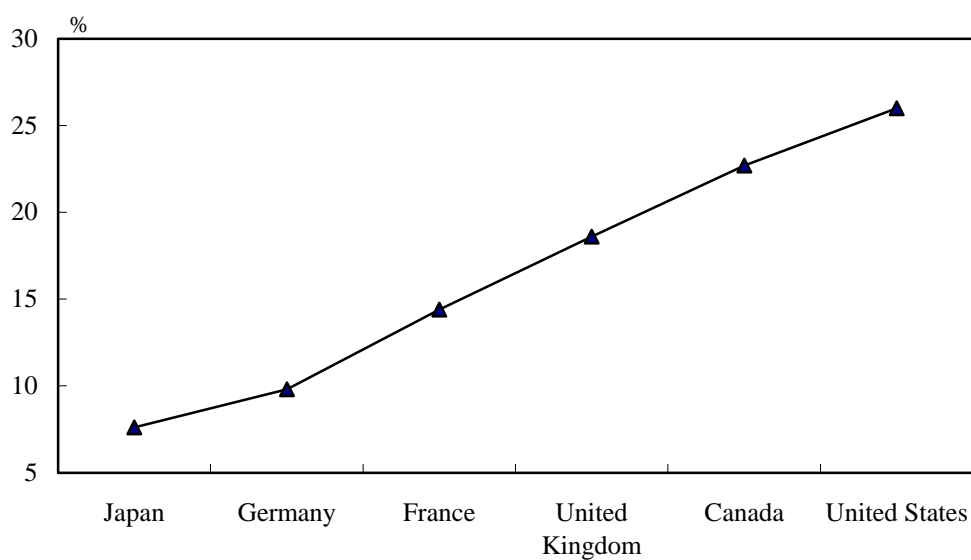
We examine the relationship between labor mobility, the unemployment rate and wage differentials among workers, using data of developed countries. We found that through the 1990s, in countries such as Japan and those in the European continent,

where labor mobility is low, the wage differential has stayed generally small and the unemployment rate has risen. On the other hand, in countries with high labor mobility, such as the United States and United Kingdom, the unemployment rate declines and the wage differentials expand (Chart 16). This indicates that while structural adjustment pressures strengthen in each country from the globalization of the economy and the progress in information and communications technologies, the improvements in macroeconomic performance (smooth progress of structural adjustment and the decline in the unemployment rate) and the expansion in wage differentials through wage setting that reflects the labor productivity may have been caused by high labor mobility.

Even in Japan, from the 1990s, wage differentials among university graduate workers of the senior age group is expanding slowly. Given the recent extension of the performance-based wage system, increasing labor mobility could well lead to growing wage differentials. As for the relationship between economic performance and labor mobility, careful consideration is needed in the case of Japan. Unlike the United States, where labor mobility has always been high, many workers in Japan have accumulated skills that are only useful within the firms on the premises that they will be engaged in long-term employment. In the process of structural adjustment, the rise in the unemployment rate is likely. Hence, to prevent this, measures to smoothly transfer labor forces to developing industries are desirable, such as the enhancement of re-education programs for the unemployed. Furthermore, in the long run, it is essential to adopt more part-time workers, so as to make structural adjustment smooth and to enable firms to cope with uncertainty. Since part-time workers are expected to promote a rise in the labor force participation rate,¹¹ this may help solve the Japanese economy's long-term problem: "the decline in the labor force caused by the aging of population and the declining birth rate."

¹¹ In particular, among female workers in Japan, it is necessary to further raise the labor force participation rate from the valley point of the so-called "M-type" (the 25 to 44 age group where the labor force participation rate is lower compared to closer age groups mainly because of child care), because the rate remains low compared to other countries (Chart 17).

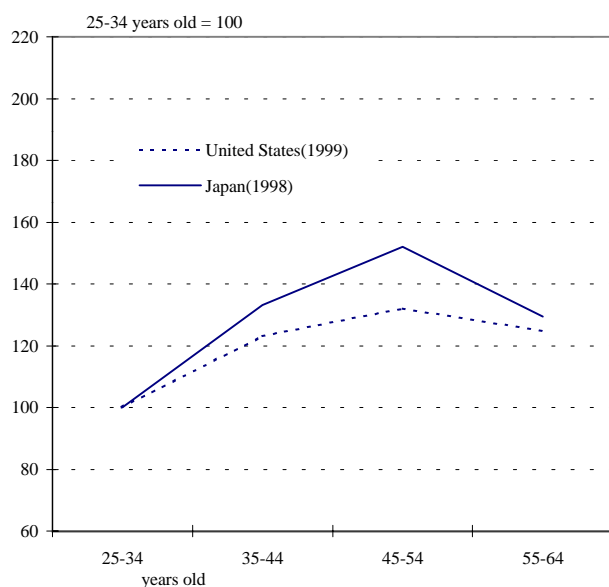
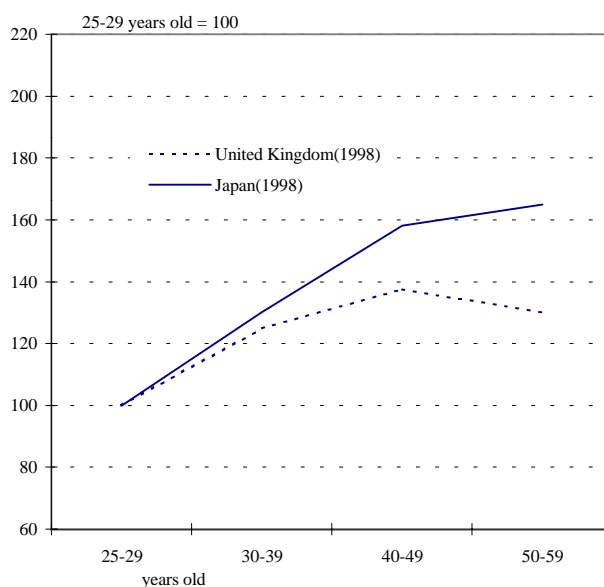
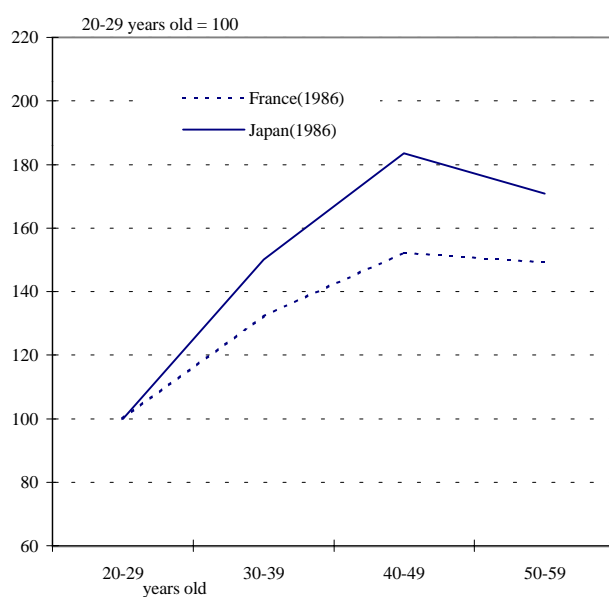
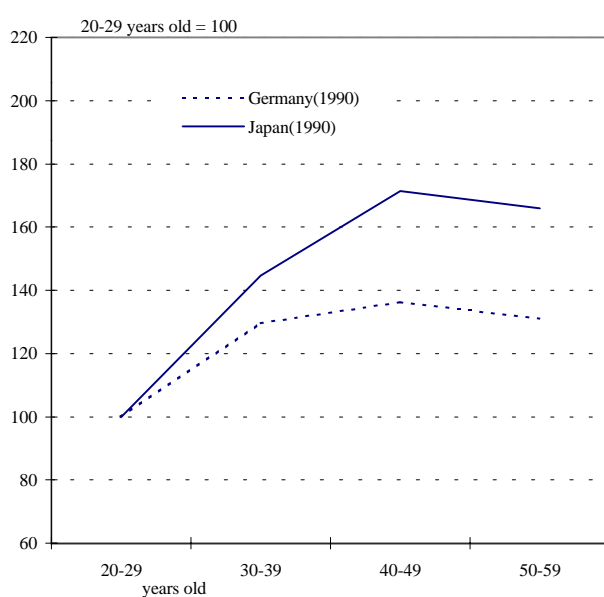
Long-term Employment: International Comparison

(1) Average tenure of employees**(2) Ratio of employees with tenure of under 1 year**

Note: Data for 1995, except for Germany(1994) and the United States(1996).

Source: OECD "Employment Outlook 1997"

Age-Wage Profile: International Comparison

(1) United States²(2) United Kingdom³(3) France⁴(4) Germany⁵

Notes: 1. Male workers (full-time; white-collar and blue-collar).

2. (United States) median of average weekly earnings; (Japan) median of scheduled cash earnings.

3. (United Kingdom) average hourly earnings;

(Japan) contractual cash earnings / (scheduled hours worked + overtime hours worked).

4. (France) average annual earnings;

(Japan) contractual cash earnings (including overtime allowance) \times 12 + annual special cash earnings.

5. (German) average weekly wage (data of workers residing in the former West Germany district.);

(Japan) scheduled cash earnings.

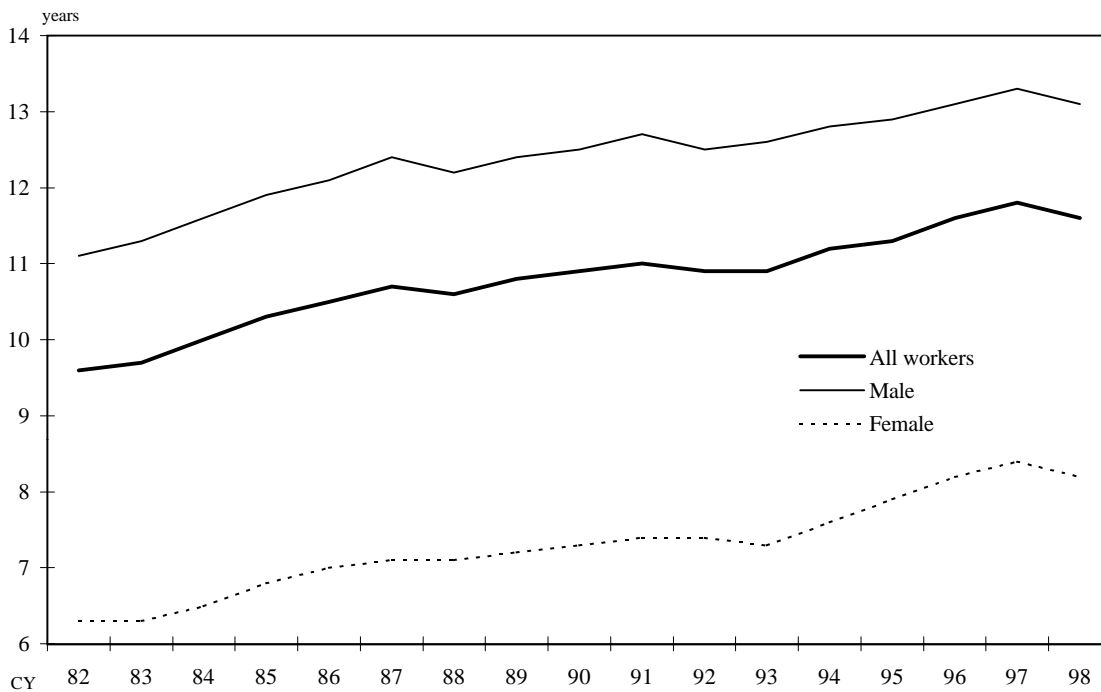
Sources: United States: *Current Population Survey*,

Germany: Tachibanaki ed.[1994], France: Tachibanaki ed.[1998],

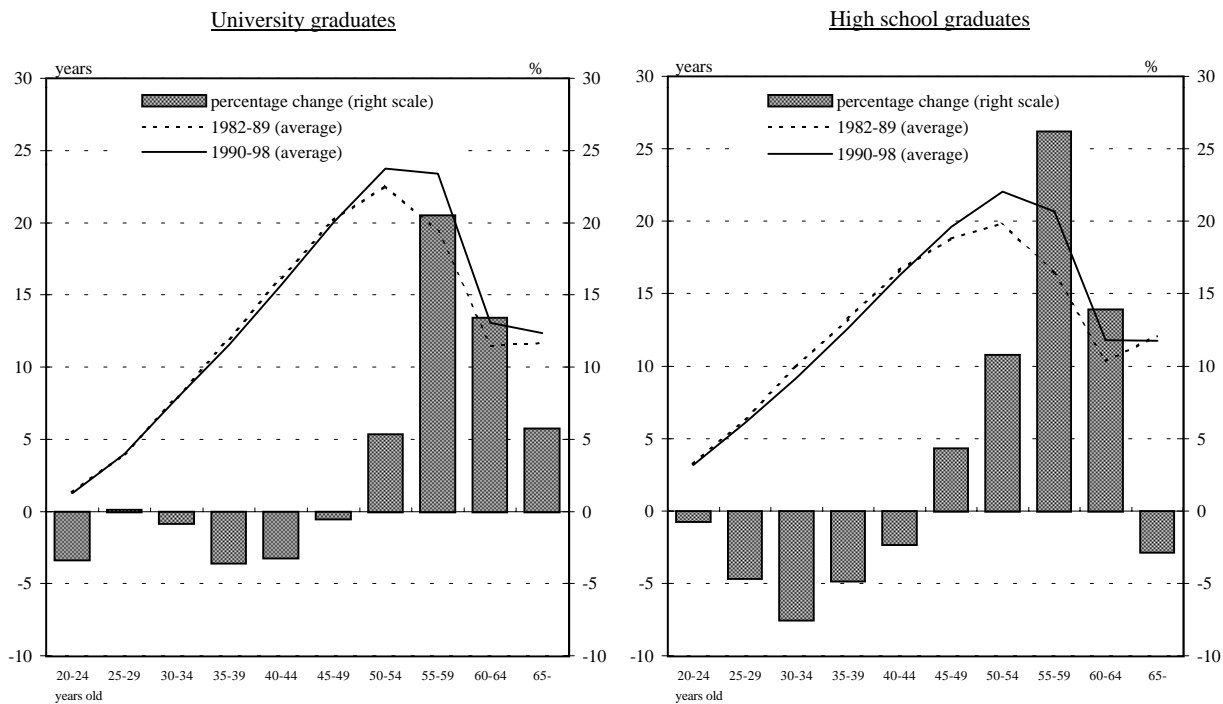
United Kingdom: *New Earnings Survey*, Japan: *Basic Survey of Wage Structure*

Average Tenure

(1) All workers



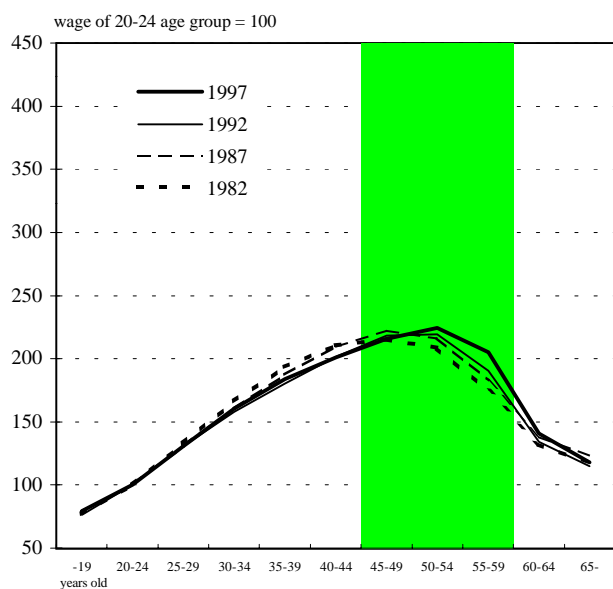
(2) Average tenure in each category (male workers)



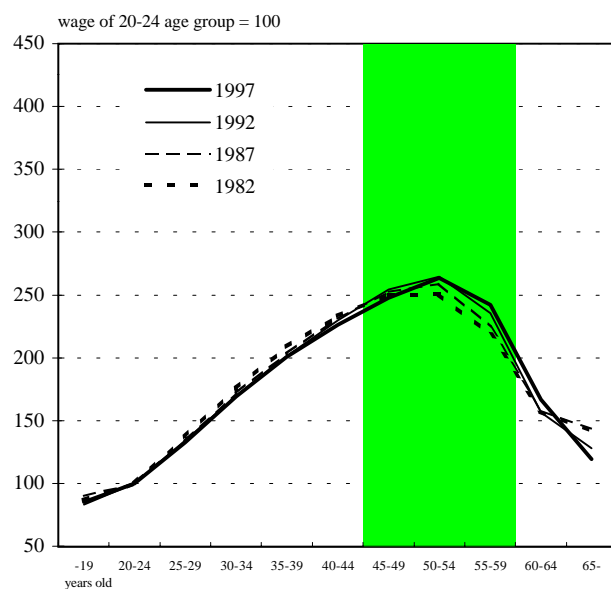
Source: Ministry of Labour, "Basic Survey of Wage Structure."

Age-wage Profile (by Size of Firm)

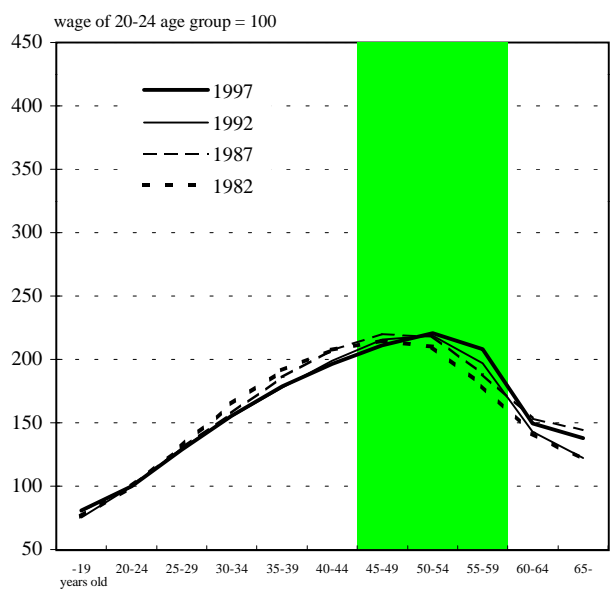
(1) All firms



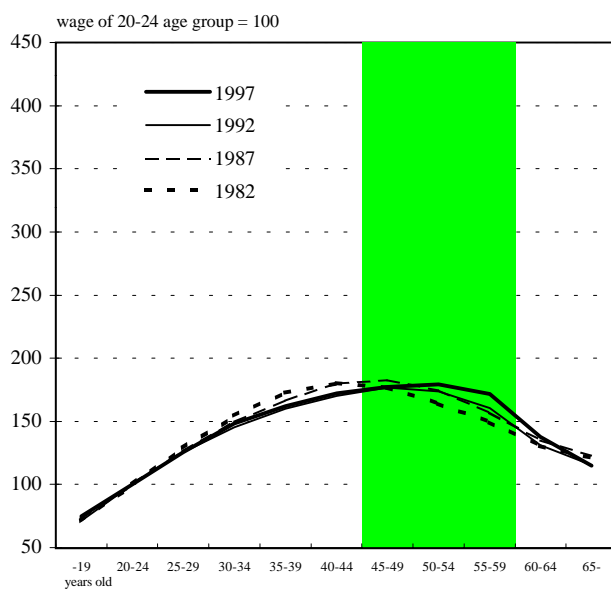
(2) Large firms <30.8%>



(3) Middle-sized firms <35.4%>



(4) Small firms <33.8%>

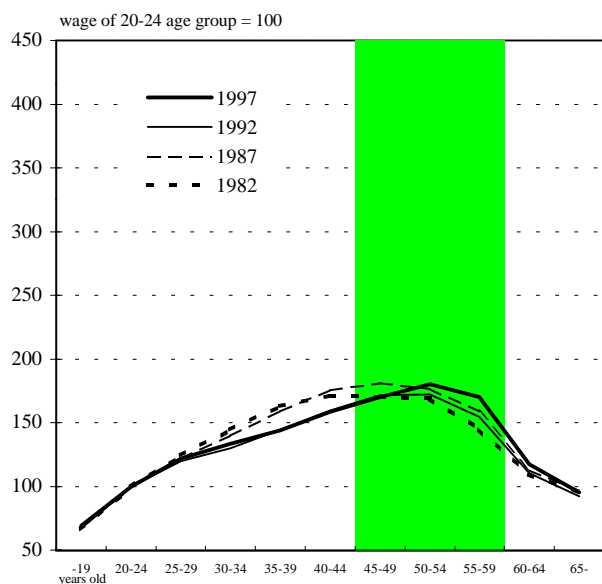


- Notes: 1. Data are based on male workers.
- 2. Figures in brackets are the ratio of employment for each category to total employment in 1997.
- 3. Shaded areas indicate the range of age groups with the highest salary.

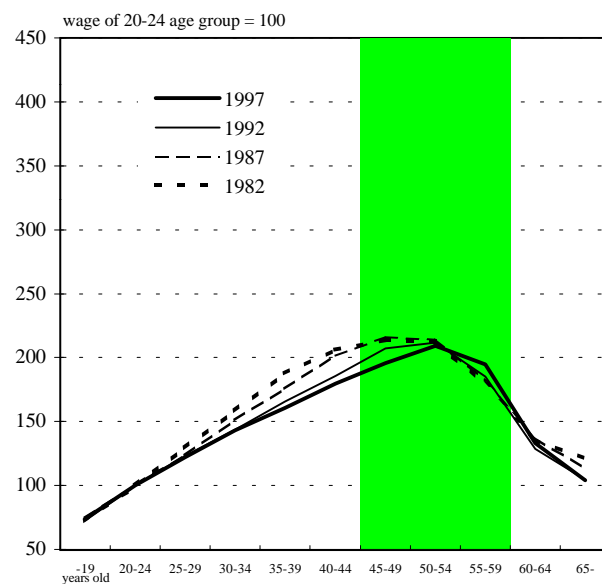
Source: Ministry of Labour, "Basic Survey on Wage Structure."

Age-wage Profile (by School Career)

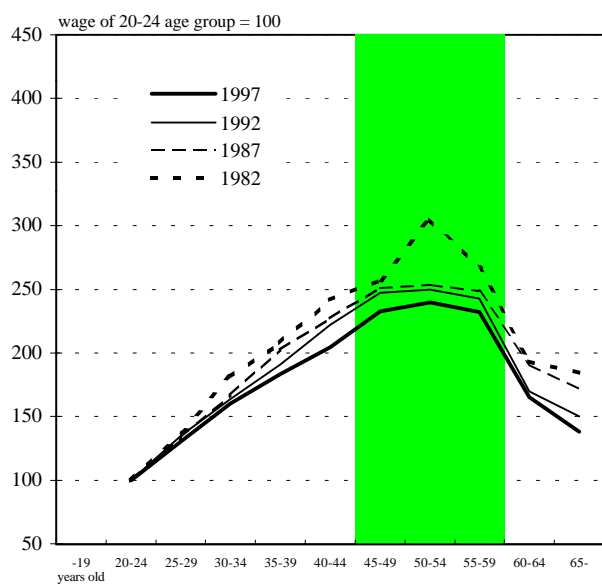
(1) Junior high school graduates <13.2%>



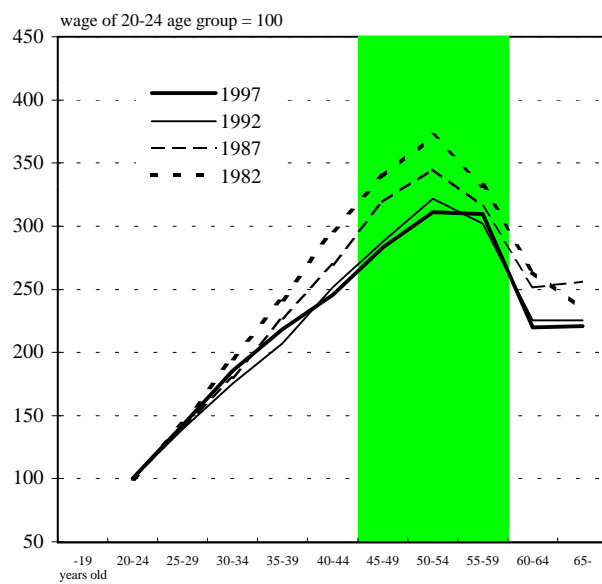
(2) High school graduates <50.8%>



(3) Junior college graduates <7.4%>



(4) University graduates <28.6%>



Notes: 1. Data are based on male workers.

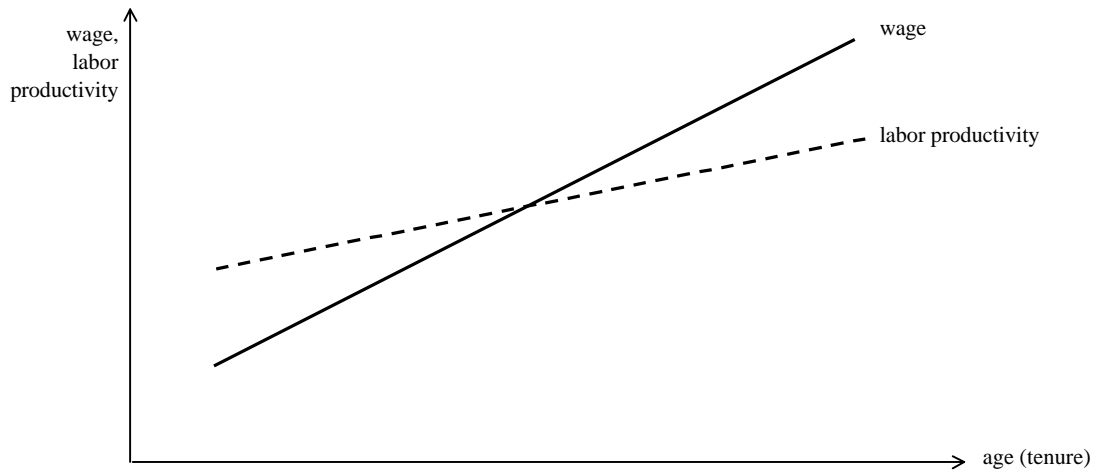
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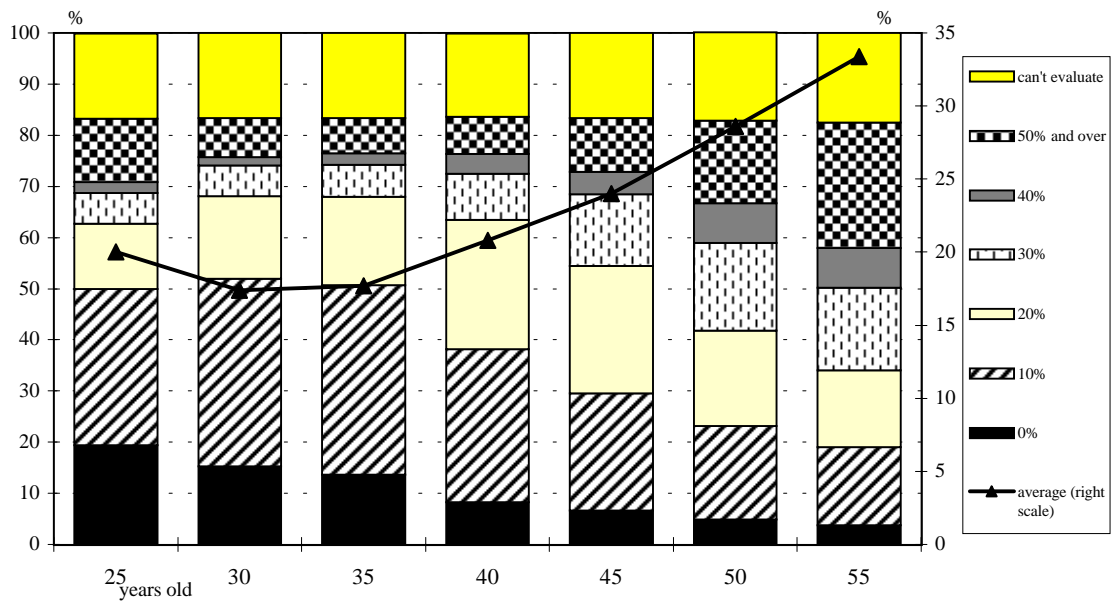
Source: Ministry of Labour, "Basic Survey on Wage Structure."

Balance of Productivity and Wage

(1) Balance of productivity and wage based on "implicit contracts" (Concept)



(2) Firms' views

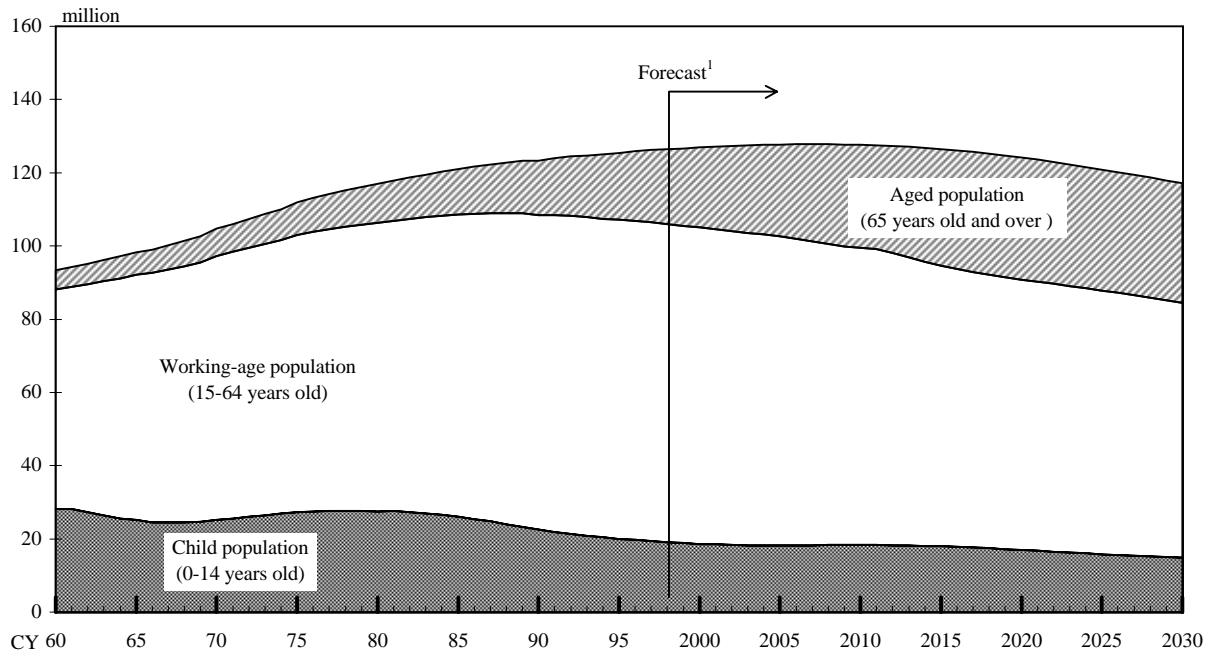


Notes: 1. This is the answer to the question, "How many university graduate regular workers in your firm receive more wage than their labor productivity justifies (in each age group) ?"
 2. Sample: 2,000 firms with more than 1,147 workers (Jan.-Feb. 1994 survey).

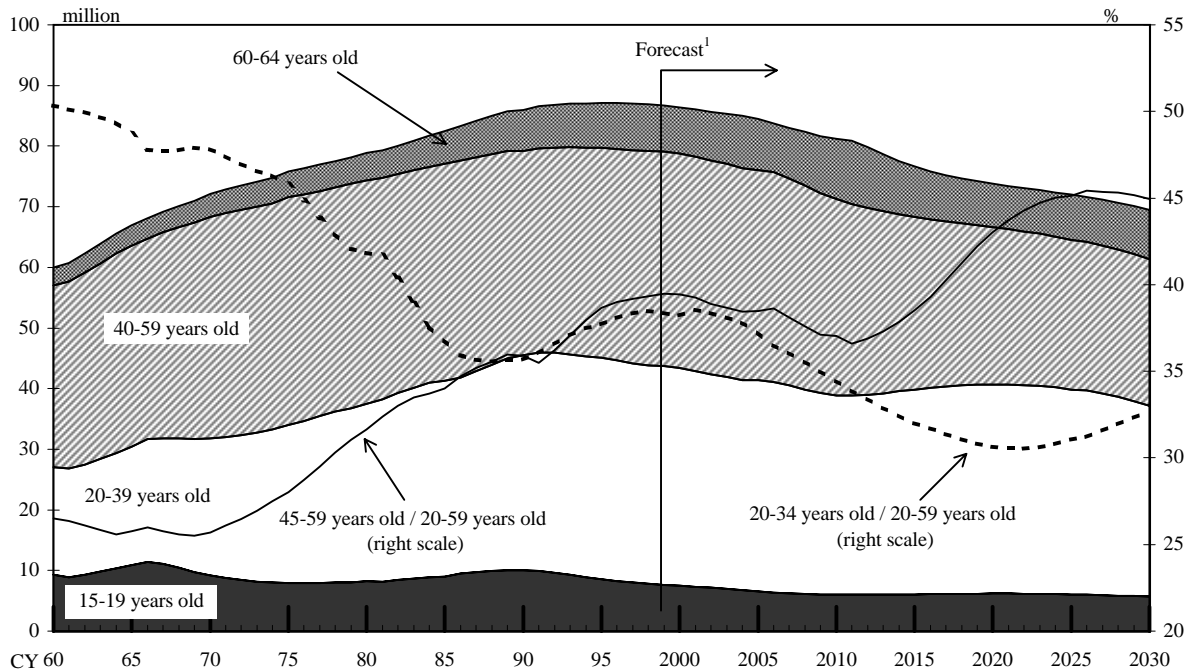
Source: Ministry of Labour, "Nihon-teki Koyou Seido No Genjou To Tenbou (Survey on the Japanese Employment System)."

Age Composition in Japan

(1) Total population



(2) Working-age population



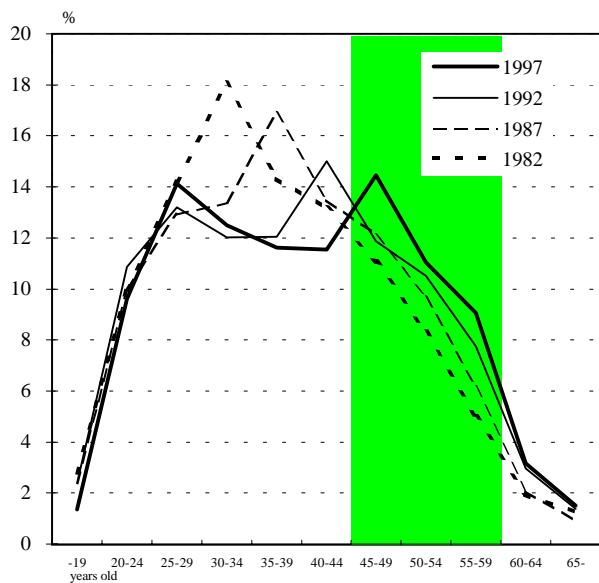
Note: 1. Data from the National Institute of Population and Social Security Research.

Resources: Management and Coordination Agency, "Population Census of Japan";

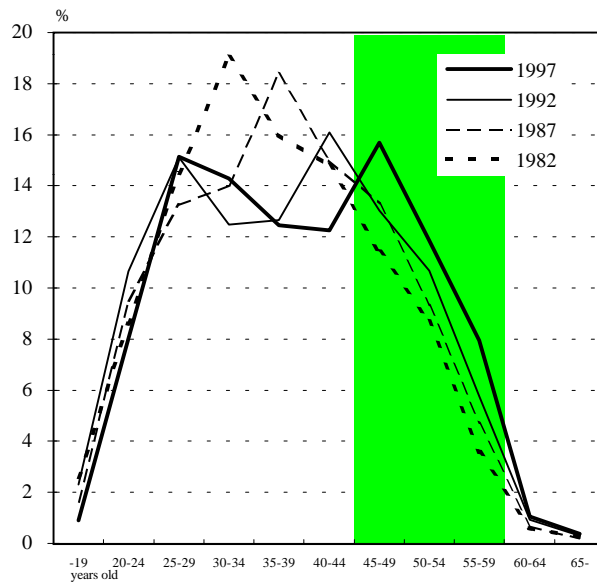
National Institute of Population and Social Security Research, "Population Projections for Japan."

Age Composition of Workers (by Size of Firm)

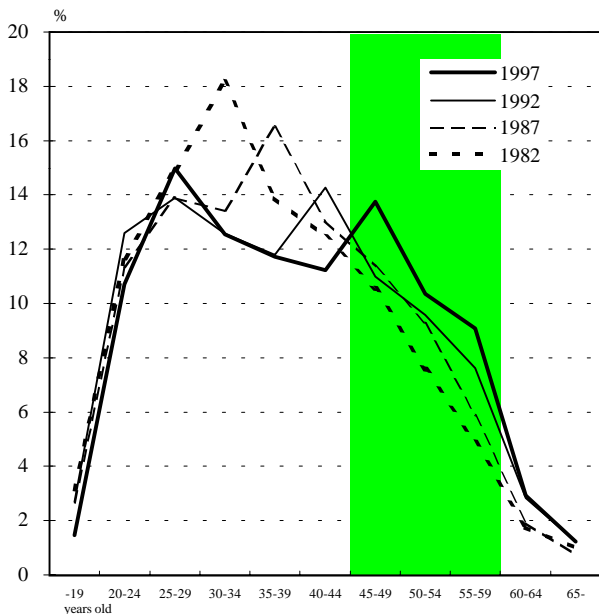
(1) All firms



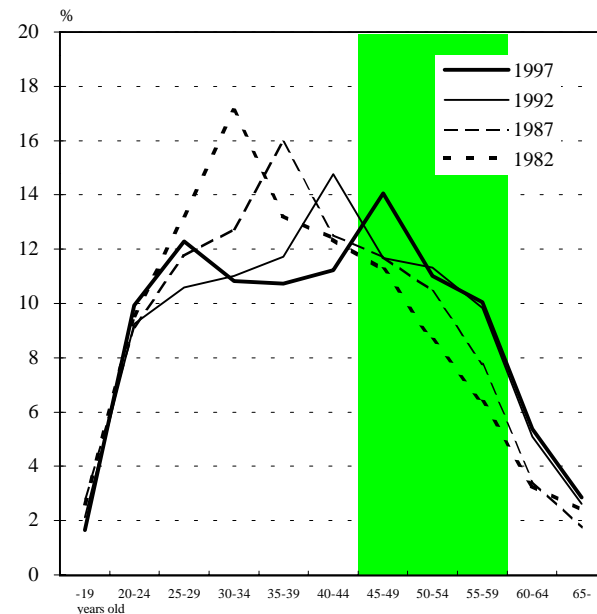
(2) Large firms



(3) Middle-sized firms



(4) Small firms



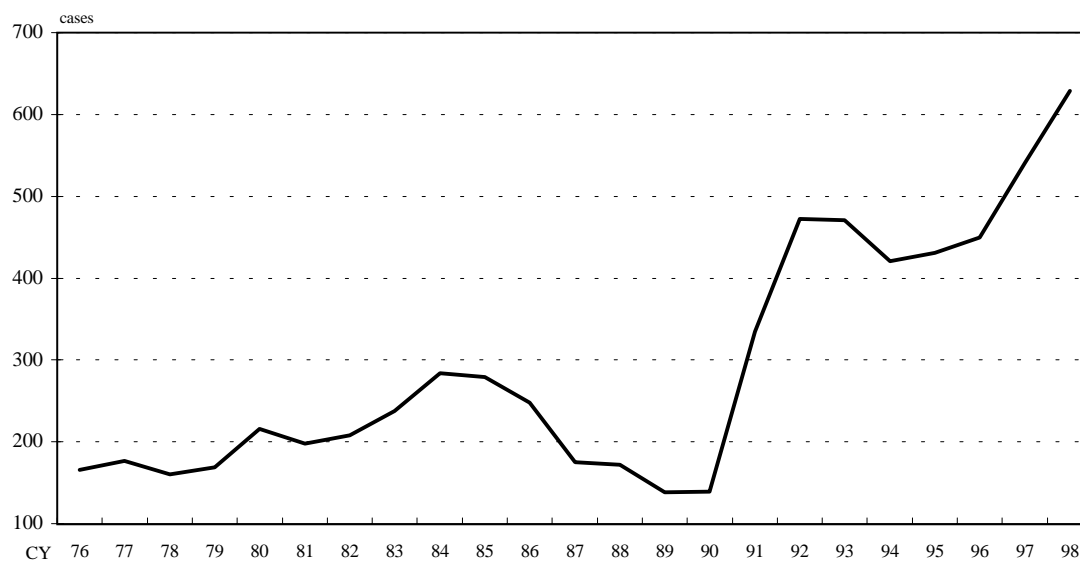
Notes: 1. Data are based on male workers.

2. Shaded areas indicate the range of age groups with the highest salary.

Source: Ministry of Labour, "Basic Survey on Wage Structure."

 Bankruptcies of Large Firms¹

(1) Number of bankruptcies

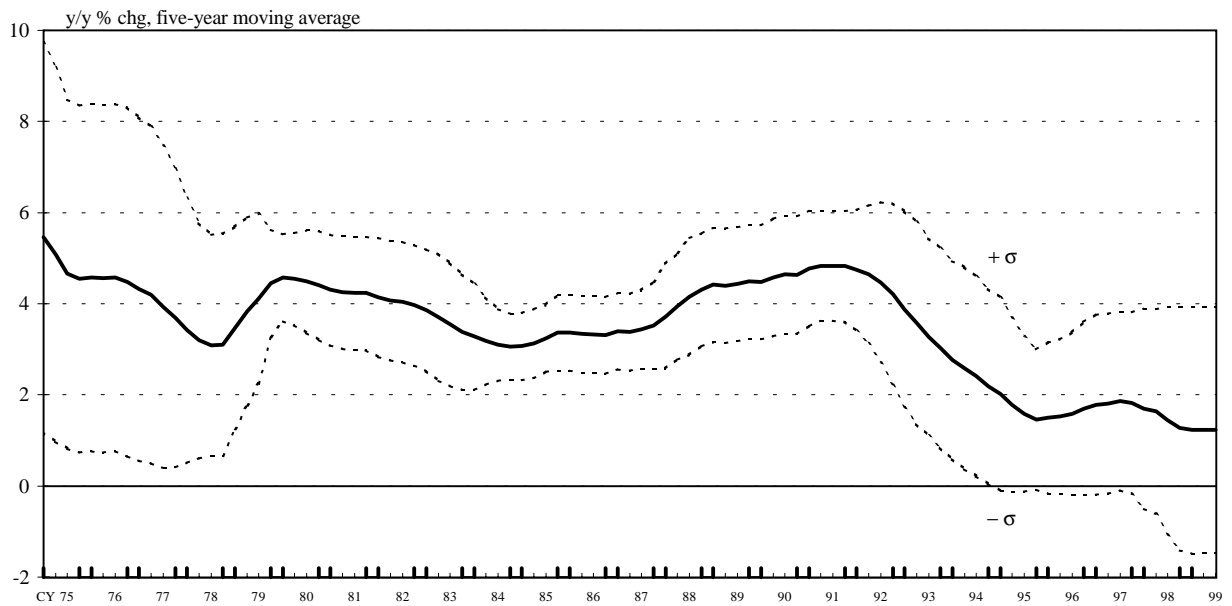
(2) Number of bankruptcies² / number of firms³

- Notes: 1. Firms with capital of more than ¥100 million.
 2. Suspension of transactions with banks.
 3. Based on a survey conducted by the Ministry of Finance.

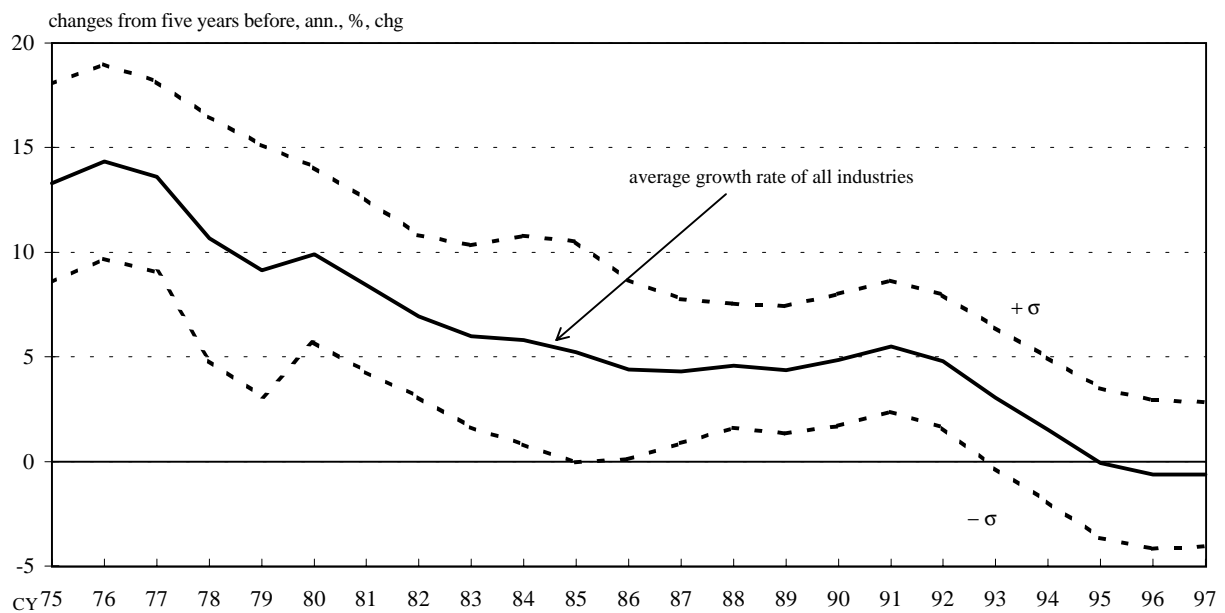
Sources: Japan Bankers Associations, "Suspension of Transaction with Banks";
 Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly."

Uncertainty on Economic Growth

(1) Growth rate of real GDP and its volatility²



(2) Growth rate of nominal GDP in each industry³ and its dispersion



Notes: 1. σ : Standard Deviation

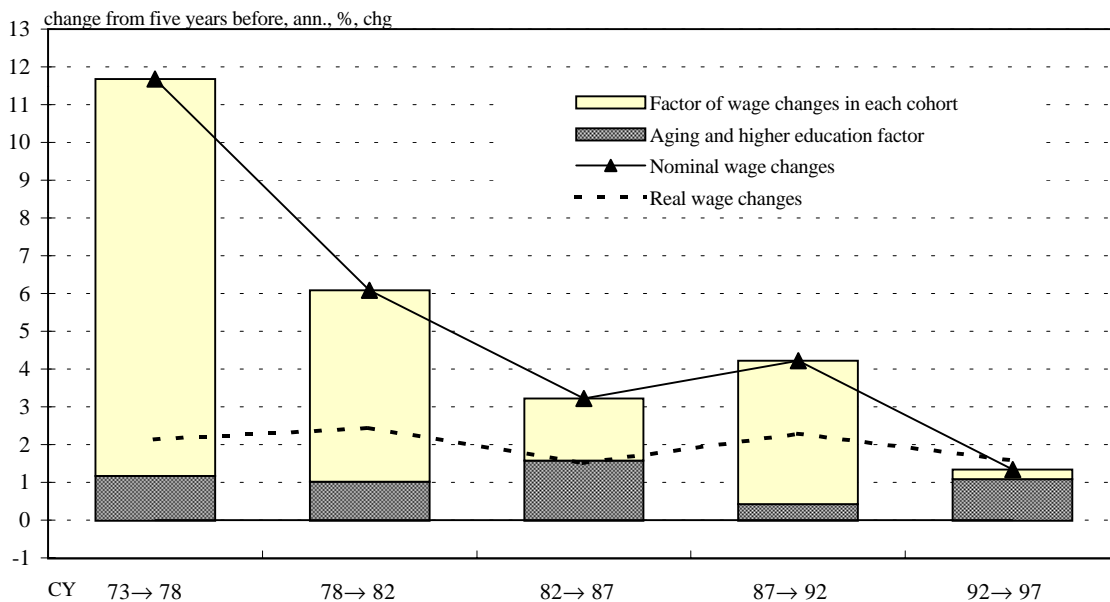
2. σ in (1) represents the volatility of the growth rates of real GDP for last five years (20 quarters).

3. Excludes finance&insurance and housing rent industries.

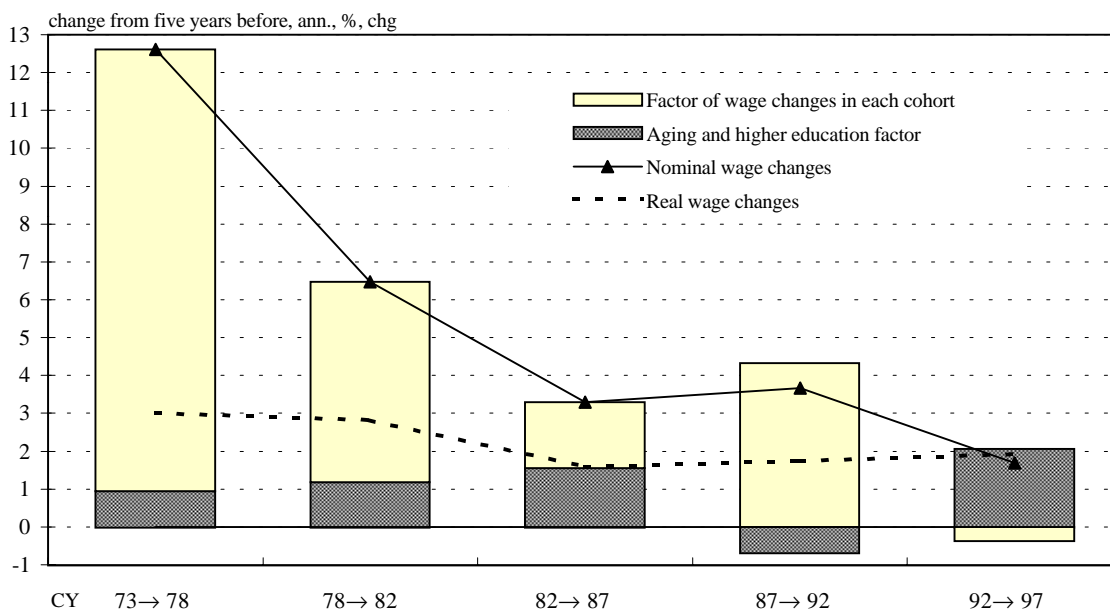
Source: Economic Planning Agency, "National Income Statistics."

Decomposition of Nominal Wage Changes

(1) All firms



(2) Large firms



Notes: 1. Real wage is deflated by the GDP deflator.

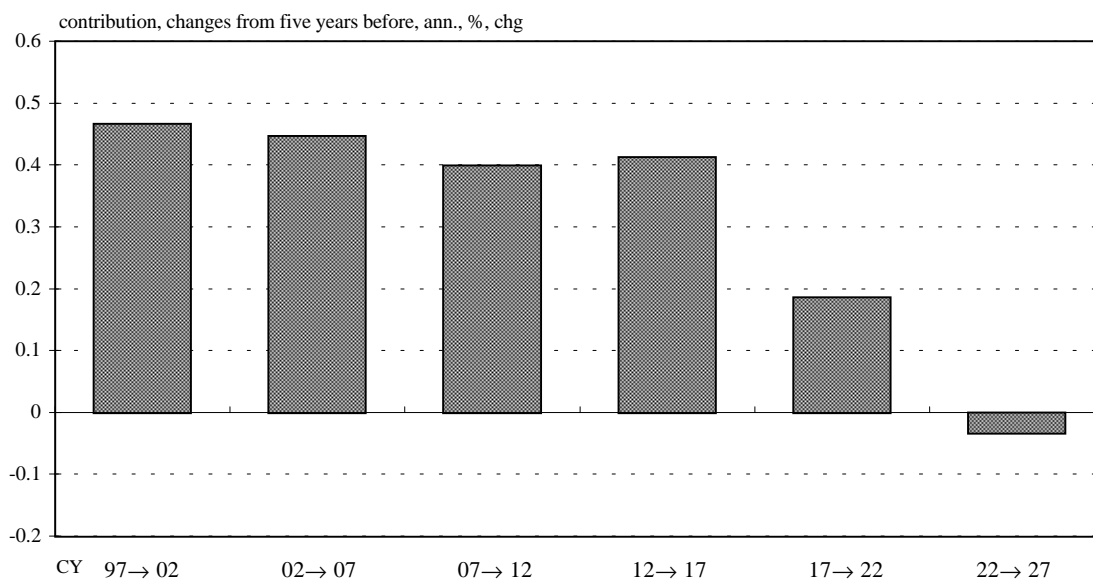
2. The "Aging and higher education factor" is the changes in average wages of all workers accounted for by the aging and higher educational achievement. This is calculated on the assumption that the average wage level of workers in each cohort stays the same as the previous period. See text for more details.

3. Because of data availability, the change in CY78→82 is a change from four years before.

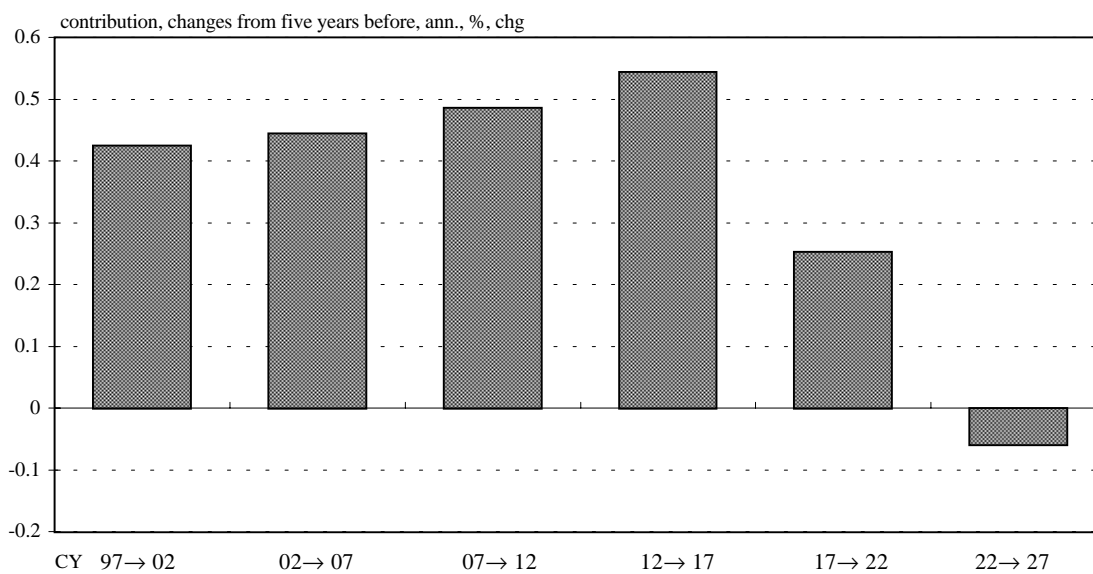
Sources: Ministry of Labour, "Basic Survey of Wage Structure";
Economic Planning Agency, "National Income Statistics."

 Upward Pressure on Wages by Aging (Simulated Calculation)

(1) All firms



(2) Large firms



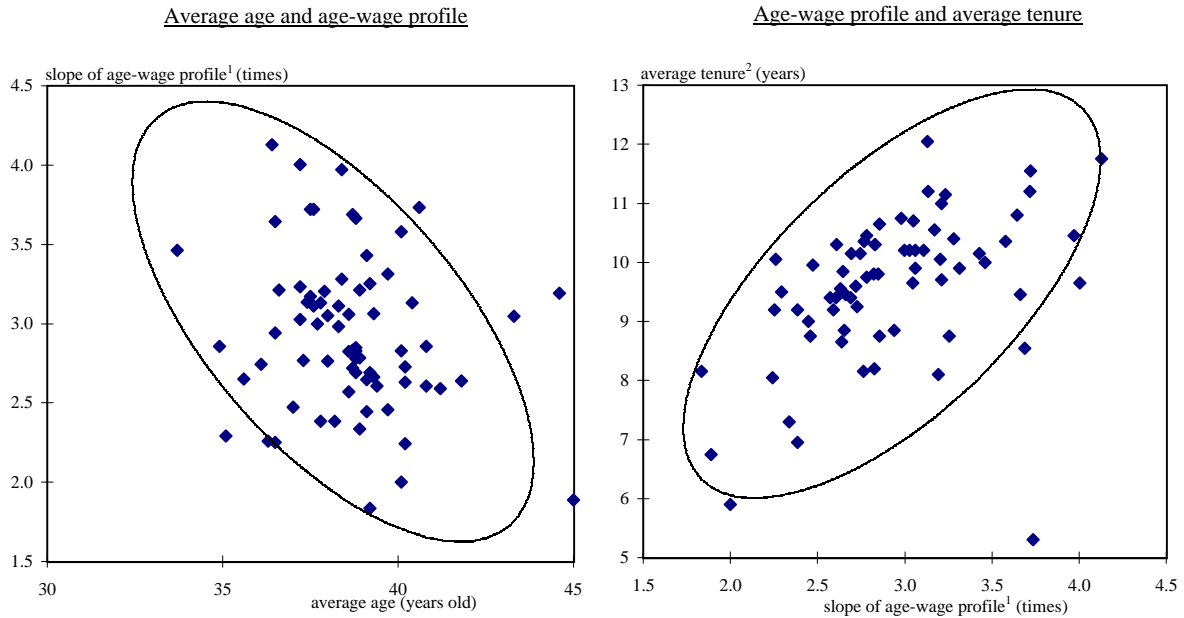
[assumptions]

1. The ratio of employees to total population in each age group stays the same as in 1997.
2. The slope of the age-wage profile by school career (university graduates, and others) stays the same as in 1997.
3. The ratio of university graduates to total employees in age A group stays the same when it reaches the older age group; the ratio for 40-44 age group at present = the ratio for 45-49 age group five years later.

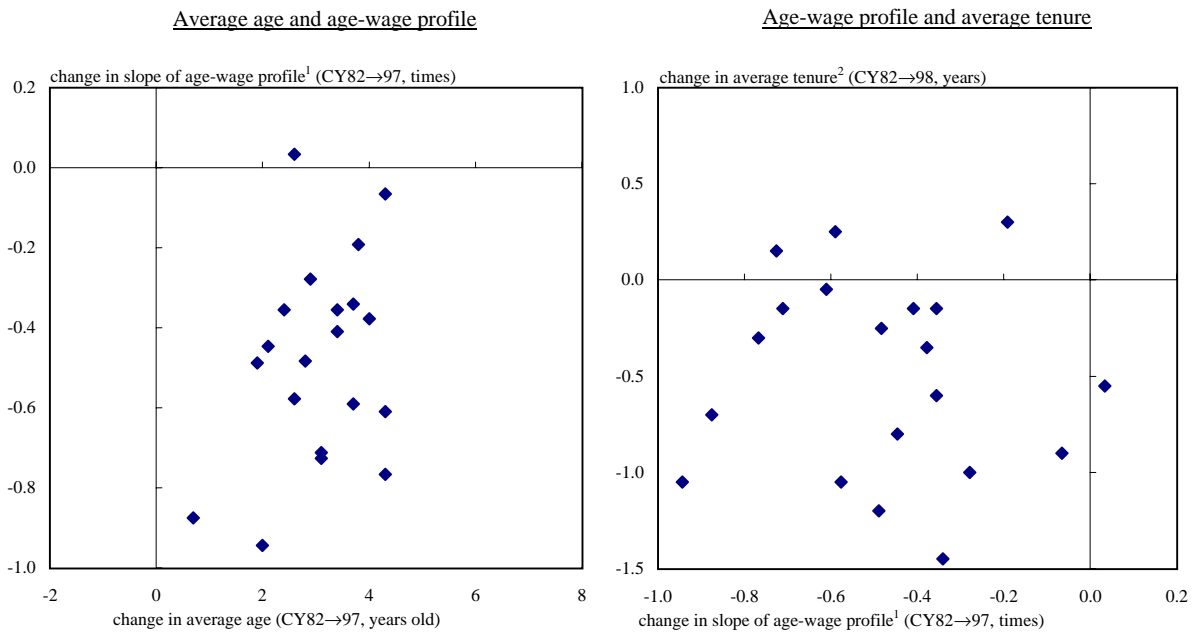
Source: Ministry of Labour, "Basic Survey of Wage Structure."

Seniority-based Wages and Long-term Employment

(1) Average age, age-wage profile, and average tenure (in 1997, male, university graduates)



(2) Changes from the 1980s to the 1990s

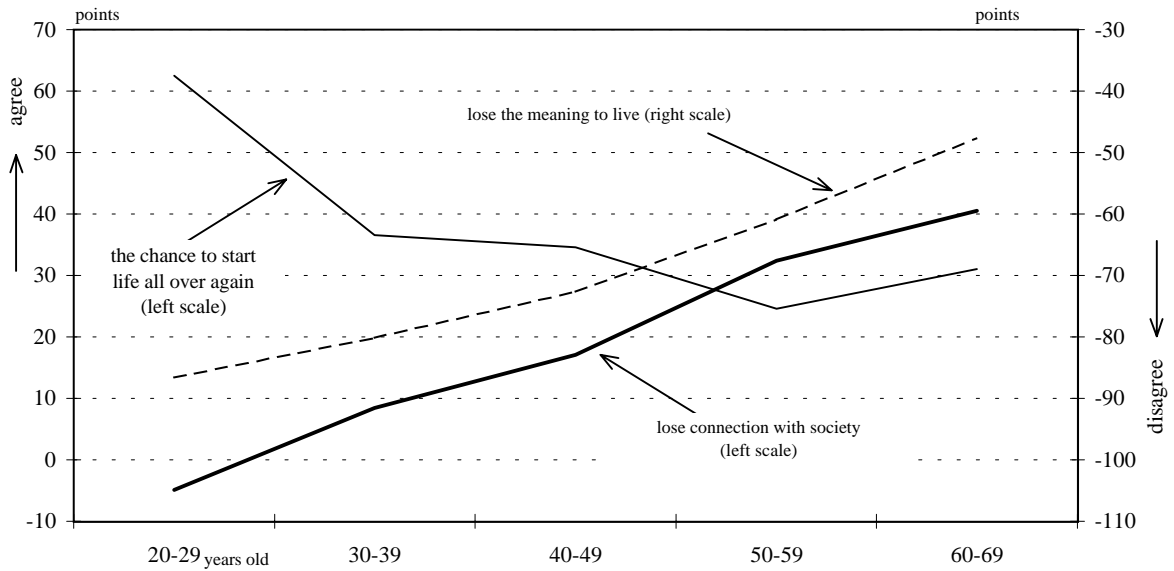


Notes: 1. = wage of 50-54 years old / wage of 20-24 years old
 2. Data for 30-39 years old.

Source: Ministry of Labour, "Basic Survey of Wage Structure."

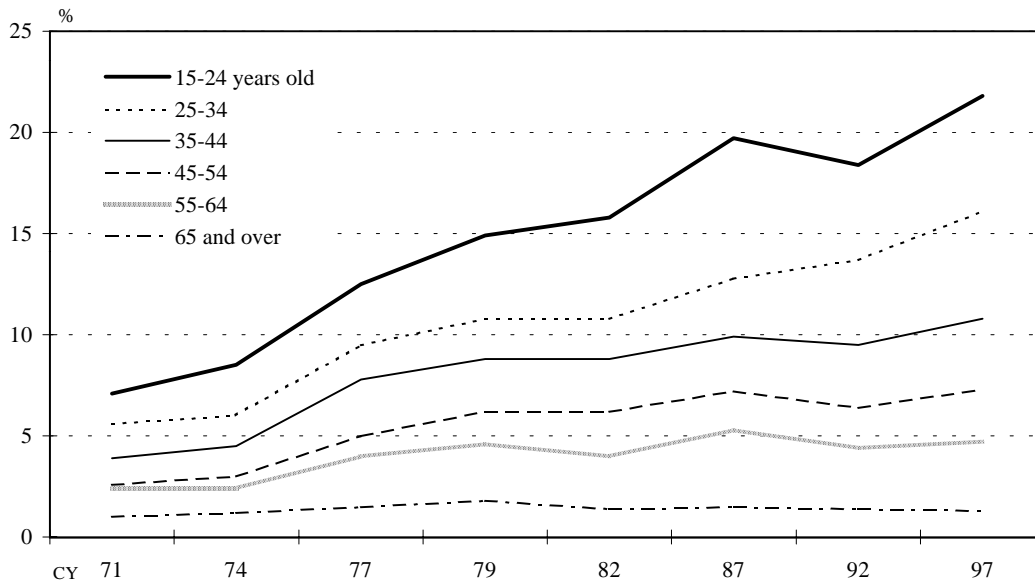
View of the Young Age Group on Switching Jobs

(1) Views on losing jobs



Note: The points are the weighted average of the percentage share of the number of respondents; "completely agree" (2 points), "agree" (1 point), "disagree" (-1 point), "completely disagree" (-2 points).

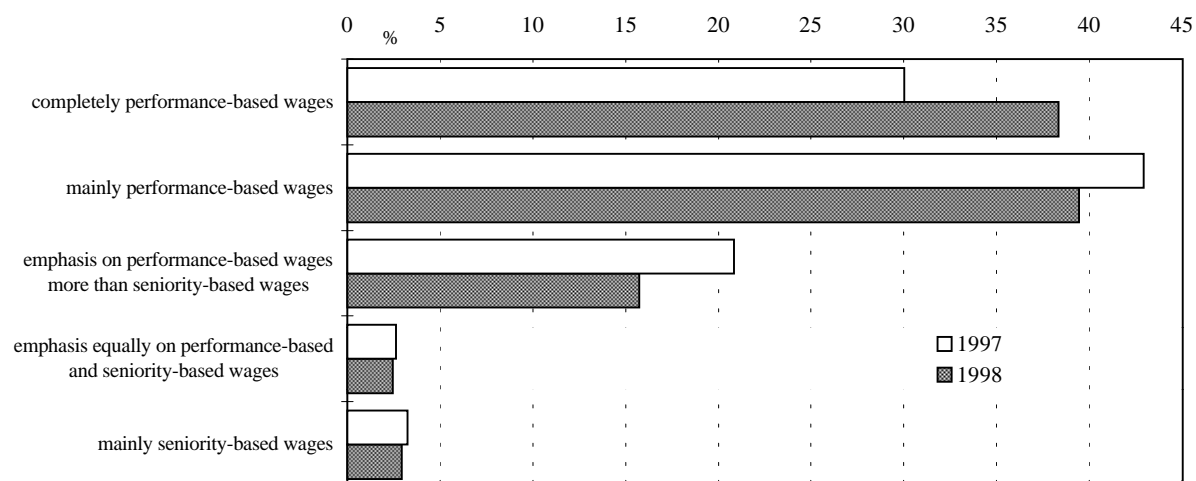
(2) Ratio of people who wish to switch jobs



Sources: Ministry of Labour, "White Paper, 1999";
 Management and Coordination Agency, "Employment Status Survey";
 The Japan Institute of Labour, "Kinrou Seikatsu Ni Kansuru Chousa (Survey on Employee's Life)."

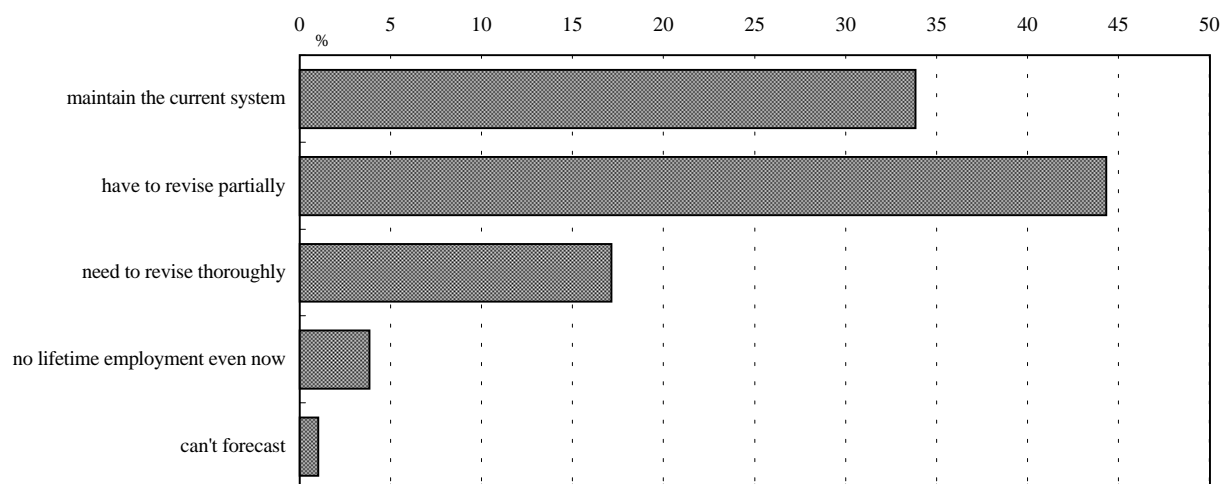
Firms' Views on the Japanese Employment System

(1) Future wage system (of managers)



Notes: 1. Surveyed by Japan Productivity Center for Socio-Economic Development.
2. Sample: 2,368 listed firms (valid responses 376 <Oct. 1998 survey>).

(2) Future lifetime employment system

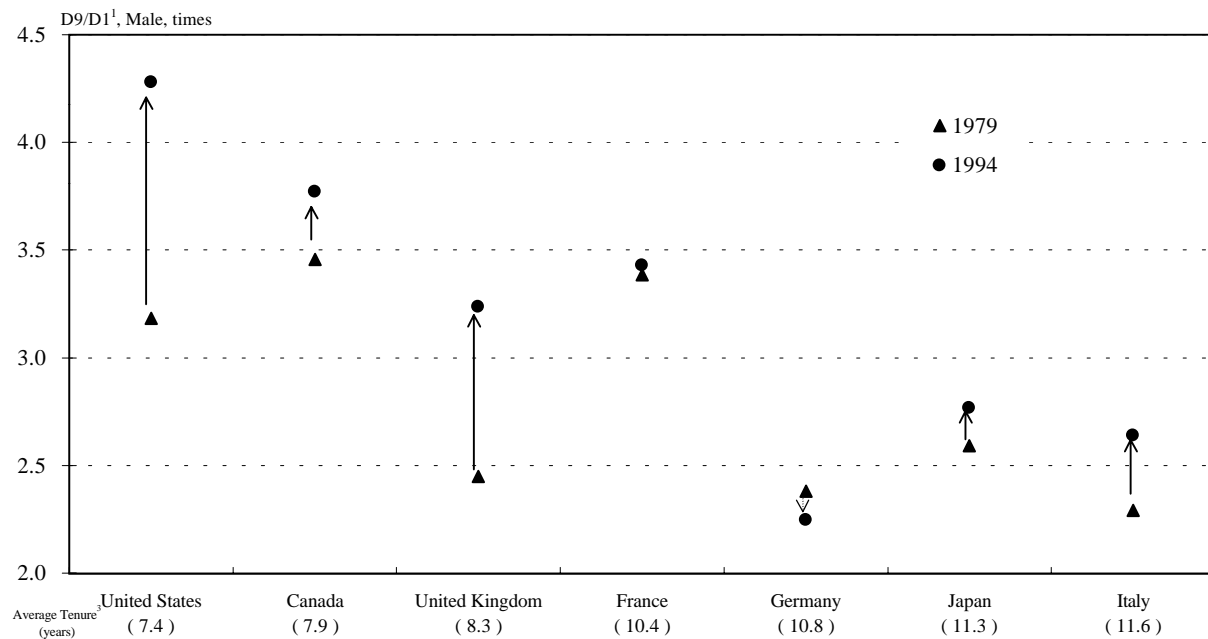


Notes: 1. Surveyed by *Kigyō-keiei Kōyō-kankō Senmon Inkai*, held by the Policy Planning and Research Department, Minister's Secretariat, Ministry of Labour.
2. Sample: 2,370 large firms with more than 1,000 employees (valid responses 690 <Feb.-Mar. 1999 survey>).

Sources: Japan Productivity Center for Socio-Economic Development, "*Nihon-teki Jinji Seido No Genjō To Tenbou* (Survey on Japanese Personnel Administration System)"; *Kigyō-keiei Kōyō-kankō Senmon Inkai* (Special Committee upon Business Administration and Employment System), "Interim Report (June. 1999)."

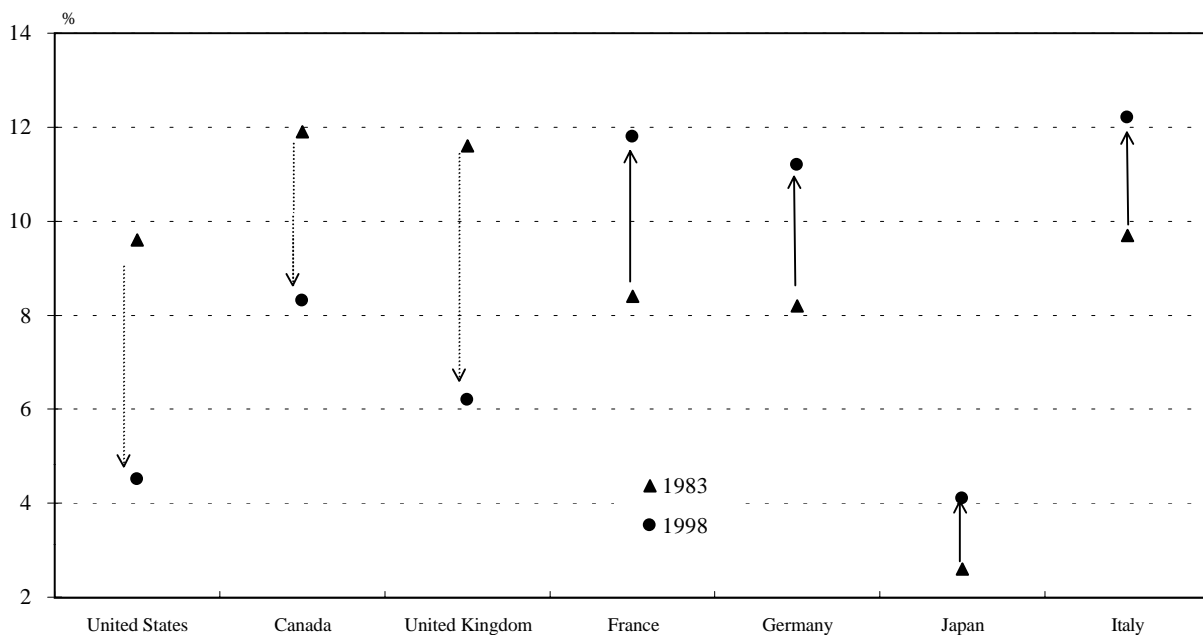
Wage Differentials and the Labor Market: International Comparison

(1) Wage differentials



- Notes: 1. D1 and D9 denote the 10th and 90th percentiles from lowest of the earnings distribution.
- 2. Because of data availability, the following periods are used: Germany is 1983 → 1993, Canada 1981 → 1994, Italy 1979 → 1993.
- 3. Data for 1995.

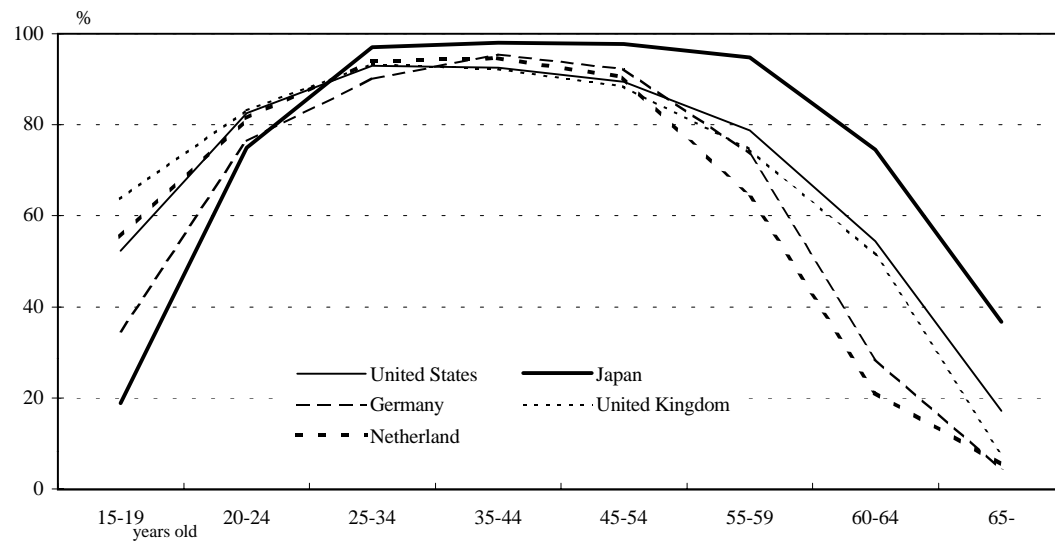
(2) Unemployment rate



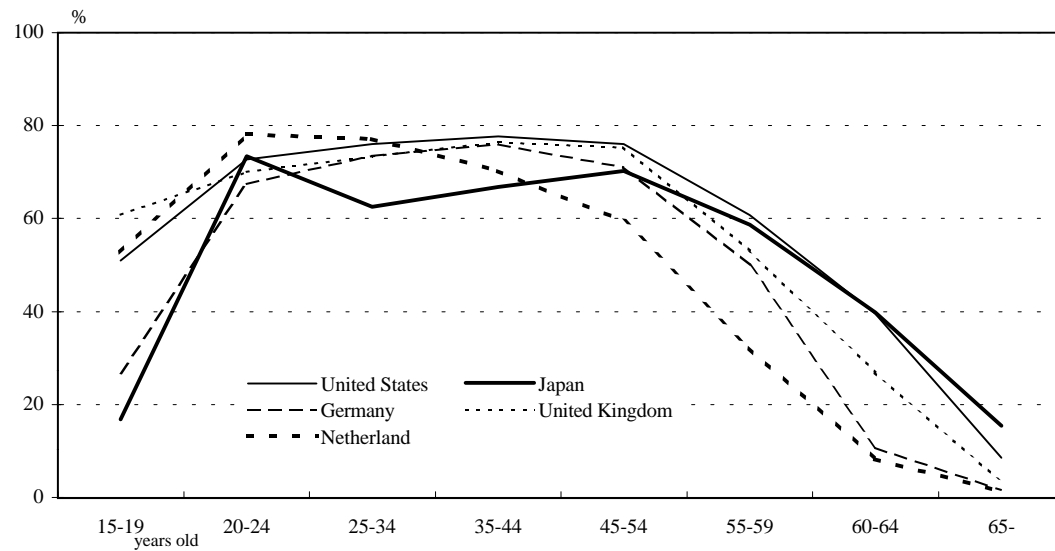
Source: OECD, "Employment Outlook 1984, 1996 and 1999."

 Total Labor Force / Total Population : International Comparison

(1) Male workers



(2) Female workers



Note: Data for 1997.

Source: OECD, "Labour Force Statistics."