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An Examination of Structural Changes in Employment and Wages in Japan[*]

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(Introduction and Summary)

Examining the recent employment situation in Japan, we see that in the recession starting at the end of 2000, the number of employees quickly responded to the economic downturn and subsequently fell sharply. Industrial production declined more steeply in this recession than those in the past and other signs were seen that the recession had taken a turn for the worse. The worsening of labor market conditions, therefore, appears to some extent to have reflected the severity of the economic downturn. In view of traditional Japanese employment practices characterized by long-term employment and labor hoarding during recessionary periods, however, the quick and clear decline in employment may indicate that structural changes in corporate behavior had taken place.

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This paper will examine the relationships between economic fluctuations on the one hand, and employment and furthermore wages on the other, to see how these relationships have changed in recent years, to determine what factors have affected them, and to assess whether these relationships arise from changes in employment practices peculiar to Japan. In addition to macroeconomic developments in employment and wages, we will identify characteristics of employment and wages by industry, and then examine the relationships between the labor market and structural adjustment pressures that are confronting the Japanese economy. To end the paper, we will give a brief discussion of future developments in the labor market, the implications for the macroeconomy, and the perspective of employment policy.

The main points of this paper can be summarized as follows:

1. Examining recent developments in employment and wages per employee in Japan in relation to economic fluctuations, we observe that employment and wages recovered at a modest pace during economic upturns, and dropped sharply during economic downturns. To grasp this point more accurately, we examine the statistical relationships between economic fluctuations, and employment and wages for two periods: from the 1980s to the first half of the 1990s, and since the mid-1990s. In the period since the mid-1990s, we confirm that employment and wages have become more responsive to economic fluctuations, and that growth rates have been structurally lowered for both employment and wages.

2. As the statistical results show, Japanese companies have increased their flexibility with regard to employment and wages, and have reduced labor costs as a whole. There are several factors behind these changes. First, environmental changes such as globalization, progress in information and communications technologies, and the aging of Japanese society, have undermined the economic rationale for the Japanese employment practices, which are characterized by seniority-based wage profiles and long-term employment. These changes are promoting the reevaluation of seniority-based wage profiles, and the increased flexibility of the

employment system itself. Second, with the protracted sluggishness of the economy in the 1990s, the labor share rose sharply, due partly to Japanese employment practices, and the need to correct excess employment and high wages became a major issue. Third, increasingly active international capital flows have led to heightened scrutiny of corporate profitability. Fourth, under balance sheet adjustment pressures after the burst of the bubble economy, many companies were forced to reduce labor costs to raise funds to repay debt; in extreme cases, companies went bankrupt, which led to the total restructuring of their workforces.

3. Companies, seeking to increase flexibility in their labor costs, have become more dependent on non-regular employees. While many of these non-regular employees are still part-time workers, the number of contract and temporary workers has been rising. In terms of the type of jobs, the number of non-regular employees has been increasing not only in office and retail jobs but also in high value-added professional and technical positions. Companies are increasing non-regular employees for the following reasons. First, they find it difficult to change traditional employment practices quickly with regular employees, so they are compelled to increase the weight of non-regular employees to realize their goals of increasing labor cost flexibility. Second, progress in information and communications technologies has made it feasible to use a larger number of unskilled workers. Third, institutional improvements such as deregulation of temporary employment services have made it easier to smoothly match supply and demand in the labor market.

   The share of non-regular employees is particularly high in Japan by international comparison. In terms of the relationship between the economy and the overall number of employees, however, the responsiveness of employment to the economic fluctuation in Japan is still much weaker than in other countries such as the U.S. Thus, the flexibility of Japan's labor market is mainly due to adjustments at the margins and is still low by international standards, although it

has increased to some extent. Therefore, it would not be appropriate to conclude that Japan's employment practices have been fundamentally changed.

4. Regarding wages, flexibility has been high in Japan due to great flexibility in bonuses. Recently, however, regular wages, the largest component of total wages, have become more flexible compared to the period before the mid-1990s, when there was little flexibility in regular wages. To a great extent, this reflects the higher weight in total employment of non-regular employees, whose wages change depending on the number of hours or days they work. At present, it is hard to conclude that the flexibility of nominal wages as a whole is much higher than the period before the mid-1990s. However, the increasing flexibility of regular wages could lead to a higher flexibility of nominal wages as a whole, and thus a higher flexibility of real wages, even if prices continue to fall. In that sense, we must keep a close watch on how the process of regular wage determination for regular employees, which already shows signs of changing, continues to change in the future.

5. Looking at developments in employment and wages by industry, we can observe the impact of the structural adjustment pressures that confront the Japanese economy. One of the most obvious features is the increased competitive pressure on labor-intensive manufacturing industries, which has stemmed from the expanding supply of labor in East Asia. Labor-intensive manufacturing industries such as textiles and electrical appliances have reduced employment most conspicuously. Construction contractors, financial services companies, wholesalers and other non-manufacturing companies also face changing business environments; deregulation, fiscal reform and balance-sheet adjustment pressures have contributed to weakness in the employment and wages of those industries. In these environments, the two sectors, manufacturing and non-manufacturing, have shown slightly different approaches to reducing labor costs. While manufacturers have made deeper labor cuts than non-manufacturers, the latter have lowered wages more than the former. Some background factors for the

difference are as follows. First, in the past, wages were relatively high in many non-manufacturing sectors because these sectors were more protected by regulations. Second, non-manufacturers also generally found it more difficult than manufacturers to change their labor-intensive structure. Third, non-manufacturing companies employed a relatively high number of unskilled workers, for whom the supply-demand conditions became significantly loose, partly because of globalization.

6. While restraints on employment have become severe in many industries, new employment opportunities are beginning to arise. This is because new industries gradually grow, and newly emerging companies expand their businesses even in traditional industries. New job offers and employment are relatively high in social welfare-related and health care industries as a result of Japan's aging society, and also in information services and outsourcing business-related industries such as temporary employment services. Overall employment is weak for retailers and wholesalers, but new job offers are on an increasing trend, due mainly to the expansion of newly emerging companies. These new employment opportunities, which could result from firms' making use of low wage workers, may indicate that the wage adjustment mechanism has begun to function in Japan. However, it is still no more than a marginal phenomenon. While new job offers are at a high level in the macroeconomy, overall employment has not been increasing. This indicates a growing mismatch in the labor market: in areas where demand for part-time and professional workers is strong, supply cannot keep pace.

7. As can be seen in the above discussion, important changes are taking place in Japan's labor market. Japanese employment practices are also in a process of change. As demonstrated by the high labor share, "structural" excess employment and high wages remain, indicating that labor resource allocation is still inefficient. As a result, if the economy heads for a recovery, overall employment and wages are likely to remain under restraining pressures for a long

time to come, although some improvement will be observed in the supply-demand balance for non-regular employees. These pressures may also exert negative influences on household spending and services prices. In addition, it will be interesting to see whether the characteristics of Japan's business cycles, which are heavily influenced by business fixed investment, will become more affected by household spending, as the flexibility in employment and wages increases.

8. We believe that Japan's labor market will continue to undergo structural changes, and that in the medium- to long-term view, these are an inevitable process that will help make the Japanese economy more efficient. Therefore, it is essential to improve the structure of the employment system for the overall labor market to become more flexible. In doing so, priority must be given to a revision of the institution that limits labor supply for non-regular employees, who are becoming increasingly important in the labor market. While the labor market is becoming more flexible, Japanese companies maintain traditional employment practices with regular employees, and have refrained from hiring new graduates. As a result, a serious problem of rising youth unemployment has emerged. Therefore, in reviewing current labor policies, which have mainly focused on workers middle-aged and older, it would be also important to give a consideration to the formation of the human capital of youth.

1. Relationships between economic fluctuations and both employment and wages

(1) Responses of employment and of wages to business cycles

In the introduction, we discussed the developments in the labor market during the recession that started at the end of the year 2000. In the following, we would like to make a few observations about the characteristics of each phase of economic recovery and recession, in terms of the relationships between economic fluctuations on the one hand, and employment and wages on the other.

Chart 1 shows how the employment situation has responded to economic fluctuations. Of note are a modest pace of recovery during economic upturns and a sharp decline during economic downturns since the mid-1990s.

1) During more recent periods of economic recovery, the pace of increase in the number of employees has been slow compared with the periods that preceded the early 1990s. During the recovery of 1999-2000, this tendency was particularly strong and the employment situation was especially weak for regular workers. Specifically, the number of employees rose, albeit only gradually in 2000, according to the *Labor Force Survey* which covers overall employees including part-time and other non-regular workers; by contrast, the *Monthly Labor Survey*, in which the proportion of regular employees is higher, showed a decline in the number of employees during the same period.[1]

[1] The *Labor Force Survey* (compiled by the Ministry of Public Management, Home Affairs, Posts and Telecommunications) is a questionnaire survey covering individuals 15 years of age and older in 40,000 households nationwide (about 100,000 people). The questionnaire defines employed persons as those who have worked at least one hour during the survey period (last week of each month). Employees are employed persons minus the self-employed and family workers.
The *Monthly Labor Survey* (compiled by the Ministry of Health, Labor and Welfare), which covers approximately 33,000 business establishments with five or more employees, is conducted at the end of each month. It defines employees as 1) people who have been employed for an unspecified time period or for more than one month, or 2) those who, while employed on a day-to-day basis or for a period of less than one month, have worked 18 days or more in each of the last two consecutive months. Under this definition, part-time workers under a contract of one month or less would not qualify as employees unless they had worked 18 days or more for the last two consecutive months. In addition, registered temporary workers, who account for more than half of temporary workers, are considered as employees of temporary employment agencies only for the duration of work actually

2) On the other hand, the pace of decline in the number of employees has accelerated during economic downturns. In particular, during the recession that started in late 2000, the number of overall employees peaked soon after the recession began, and dropped steeply thereafter. For the number of employees measured by the *Monthly Labor Survey*, which had remained weak even during the recovery, there were no major changes in the downward trend after the recession began.

3) For employed persons, the weakness in times of economic recovery and the steep decline during downturns are even more conspicuous than they are for employees, due in part to the declining numbers of self-employed and family workers in recent years. Consequently, the pace of increase in the unemployment rate has also accelerated during recent downturns.

Looking at movements in nominal wages over several phases of the business cycle (Chart 2), we observe a similar phenomenon: in recent years, the pace of recovery during economic expansions has been sluggish, while the pace of decline during periods of contraction has been steep. These are similar to the developments observed in employment. However, since the mid-1990s, real wages—nominal wages adjusted for the cost of living—have not been as conspicuously weak as nominal wages due to falling prices.

(2) Statistical evidence of the relationships between economic fluctuations and both employment and wages

To evaluate the above points more accurately, it is necessary to examine the statistical relationships between economic fluctuations and both employment and wages over time. A statistical examination of these relationships during the two time periods—first from the 1980s into the early 1990s, and then from the mid-1990s onwards—confirms two conclusions: that employment and wages have become more responsive to economic fluctuations since the mid-1990s, and that growth rates for both employment and nominal wages have undergone a structural decline during the same time period.

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assigned, and thus in many cases they are not counted as employees (For further details, see Osawa

1) Looking at the number of employees in the *Labor Force Survey*, which represents overall employment, and its relation to real gross domestic product (GDP), as shown in Chart 3(1), we observe the following: up until the first half of the 1990s the correlation coefficient was at its highest when rates of change in employment lagged those in real GDP by three quarters, but since the mid-1990s the lag has shortened to one quarter and the correlation coefficient has risen. In addition, "structural growth rates" in employment, which are represented by the constant term in the estimated regression equation (vertical-axis in graph), have clearly fallen for a given growth rate of real GDP in the period since the mid-1990s.

2) As for the relationship between real GDP and the number of employees reported in the *Monthly Labor Survey*, which has a higher share of regular employees (Chart 3[2]), both the correlation coefficient and the short-term elasticity have clearly fallen since the mid-1990s, illustrating a substantial weakening of this relationship over the short term, concurrent with negative structural changes in the number of employees. Since the recovery period of 1999-2000, the number of employees has declined at a more or less constant pace, regardless of movements in real GDP. This fact may indicate that companies have been steadily reducing the number of their regular workers, irrespective of fluctuations in the real economy.

3) Examining the statistical relationship between nominal wages and nominal GDP per employee (Chart 4[1]), the most apparent change is the structural decline in growth rates. Growth rates in nominal wages, in relation to nominal GDP per employee, have been one to two percentage points lower since the mid-1990s than in the preceding period. This margin of decline is even larger than the one percentage point structural decline in the growth rate of employment. On the other hand, nominal wages have been more flexible than employment in terms of their responsiveness to economic fluctuations, and there have been no significant changes in this respect since the mid-1990s. It is worth noting, however, that the lag with changes in GDP has nearly disappeared (the correlation coefficient shows its highest value when there

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exists no lag) and the short-term elasticity has also risen, both of which indicate that this responsiveness has increased to some extent.

2. Background of structural changes in employment and wages

In the previous section, we examined how the relationships have changed since the mid-1990s between economic fluctuations on the one hand, and employment and wages on the other. The changes in these relationships reflect the fact that Japanese companies have increased the flexibility of their labor costs while lowering overall employment costs. In the following, we consider the factors behind these changes in corporate behavior.

First of all, changes in the environment surrounding Japanese companies have diminished the economic rationale for maintaining Japanese employment practices characterized by seniority-based wage profiles and long-term employment. These changes have promoted a reevaluation of seniority-based wage profiles and have led to greater flexibility in the employment system. For workers, traditional Japanese employment practices had the merit of securing them a long-term job, while at the same time these practices provided companies with a stable labor force and contributed to an increase in labor productivity through the accumulation of firm-specific human capital. For these traditional employment practices to be economically rational, however, certain conditions are required: 1) the age structure of the work force must form a neat pyramid; 2) there must be expectations of steady future growth; and 3) the industrial structure must be stable, making it unnecessary to hastily reallocate labor resources across companies.

Since the 1990s, the environment has changed substantially. 1) Japan's low birth rate and population-aging trends have become more pronounced. 2) Under the influence

of these trends, expectations of steady future growth have been eroded.[2] 3) The expansion of other East Asian countries' capacity to supply a wide variety of goods (globalization) and rapid advances in information and communications technologies have raised the pace of change in both the industrial structure and the technologies that generate profits. These kinds of changes in the environment have severely undermined the rationale both for seniority-based wage profiles, which were backed by accumulated firm-specific labor skills, and for long-term employment, which had difficulties in responding to changes in the economic environment. As a result, it is natural that in recent years companies have looked to reduce excess seniority-based wages paid to middle-aged and older workers (Chart 5), and have tried to construct a more flexible employment system.

Secondly, faced with severe economic downturns in the 1990s, Japanese companies could not adjust employment and real wages as smoothly as required, due in part to these Japanese employment practices as well as to the influence of falling prices. As a result, the labor share rose, and the reduction of excess employment and high wages became an important issue for companies.[3] After a decline in the late 1980s during the bubble-economy period, the labor share rose during the early 1990s, and increased again in 1997-98 during a period of negative growth (Chart 6). Since the labor share displays a modest upward trend, it is somewhat difficult to make assessments concerning its specific level. Considering the long-term equilibrium between real wages and labor productivity (co-integration relations), however, we may conclude that employment costs rose excessively in the 1990s. This point is consistent with the view that the excessive

[2] Surveys of Japanese companies by the Cabinet Office show that expectations of medium-term (five-year average) future real economic growth were 3-4 percent around 1990, dropping to just over 2 percent by the mid-1990s, and to just over 1 percent in recent years.

[3] Traditional Japanese employment practices contributed to a rise in the labor share for the following reasons. First, the practice of long-term employment prevents smooth adjustment of the labor force. Second, the seniority-based wage profile tends to raise average wages as the labor force grows older on average. This has been exacerbated since the baby boom generation has reached the age group which receives the highest payments of the employment life cycle. For a more detailed discussion of the phenomenon, see Hattori and Maeda (2000).

number of employees among Japanese companies remained high in the 1990s as indicated in the employment DI (Diffusion Index) of the Bank of Japan's *Tankan* survey.

Thirdly, pressure to meet global standards in corporate finance led many major Japanese companies to place greater emphasis on profitability than before. International capital flows have become increasingly active since the 1990s, and the stock market is now characterized by an increased foreign investor presence keenly attuned to return on equity. Japan's financial system suffered from the financial system shocks in 1997-98 that visibly reduced the ability of commercial banks to perform their intermediation function; this forced major companies to become more conscious of capital markets and especially of foreign investors, in order to meet their financing needs. In addition, profitability trended lower for the reasons noted above, thus forcing itself upon the attention of major firms.[4] Under these circumstances, the restructuring of firms and businesses became more widespread, and this was reflected in a sharp increase in M&A (mergers and acquisitions) activity (Chart 7[1]). Some of these developments were associated with large reductions in labor costs.

Fourthly, we should also point out the impact on employment and wages of the pressure on firms to adjust their balance sheets (another structural problem that developed during the bubble era). Starting in the early 1990s, firms, saddled with excessive levels of debt, have sought to lower their labor costs as part of a strategy to increase the funds available for repaying their debts. Following the shocks to the financial system in 1997-98, banks have become more selective when making loans to firms, scrutinizing both their profitability and their creditworthiness. In recent years, this trend has become even stronger; and in extreme cases corporate bankruptcies have led to the total restructuring of workforces (Chart 7[2]).

[4] For a more detailed discussion of this point, see Maeda and Yoshida(1999).

3. Increasing flexibility in employment and wages

(1) Increase in the proportion of non-regular employees

For reasons outlined in the previous section, Japanese companies have been increasing their flexibility with regard to employment and wages, but their major means of achieving this improved flexibility has been the increased use of part-time and other non-regular employees.[5] The proportion of non-regular employees (*Report on the Special Survey of the Labor Force Survey*; Chart 8) has risen sharply since the mid-1990s, and is now nearly 30 percent of Japan's total employees. By industry, the rise has been particularly conspicuous for the wholesale and retail trade industries and for services, but it is observed across a broad range of industries. It is widely accepted that a higher proportion of non-regular employees makes workforce adjustment easier through hiring and firing. At the same time, it also makes it easier to adjust wages, by changing the number of hours or days that the non-regular employees work. In terms of the relationship between economic fluctuations and changes in the number of part-time and regular workers, as reported by the *Monthly Labor Survey* (Chart 9),[6] the lag behind real GDP is shorter for part-time workers than for regular workers, and both the correlation coefficient and the short-term elasticity are higher.[7] Working hours also reveal higher responsiveness to economic fluctuations for part-time workers (Chart 10).

Part-time workers continue to provide the core of non-regular workers (Chart 11[1]), but the proportion of contract workers and temporary workers has risen.[8] The

[5] For a definition of non-regular employees, see the note to Chart 8.

[6] In *Monthly Labor Survey* data, part-time workers are defined as those whose working hours a day are fewer than regular workers, or those who work fewer days a week than regular workers.

[7] Instead of using part-time employees in the *Monthly Labor Survey*, we examined this relationship by using the difference between employees in the *Labor Force Survey* and those in the *Monthly Labor Survey* as an alternative measure for "non-regular employees." The conclusion (that the lag is shorter and the elasticity higher for non-regular workers) does not change, as regression results indicate that the lag of "non-regular employees" is short (one quarter) and short-term elasticity is high (1.33) in relation to real GDP.

[8] Chart 11(1) shows data through 1999, but according to other statistics from the Ministry of Health, Labor and Welfare ("*Roudousha haken jigyou houkoku*" <Report on temporary employment agencies;

proportion of professional and technical workers is high in these categories of non-regular workers (Chart 11[3]). A breakdown by occupation (Chart 11[2]) clearly shows that not just office and retail workers but also high value-added professional and technical workers make up a growing part of non-regular employees.

Companies have been increasing the flexibility of their labor costs by raising the share of non-regular employees, and the following are considered to have played a major role in the decision to use more non-regular employees.

1) Above all, since it has been difficult for Japanese companies to make drastic changes in the traditional employment practices governing regular employees, they are compelled to raise the proportion of non-regular employees so as to make their labor costs more flexible. Companies have kept many of their existing regular employees on the payroll, but have severely restrained their hiring of new graduates. This has led to a large surplus of labor among young people, who are hired in the form of non-regular workers. Statistical breakdowns by age clearly show that among young people, the number of regular employees has fallen while that of non-regular employees has risen (Chart 12). This is the logical consequence of the change in corporate behavior.

2) The information and communications technology revolution has made possible the further use of unskilled workers, which has also contributed to the increased proportion of non-regular employees. For example, the further use of POS (point of sales) systems in the retail industry has made it easier for even unskilled workers to conduct some tasks. In addition, the use of personal computers and multi-purpose software has helped to standardize back-office tasks, effectively expanding the use of temporary workers. Firms' responses to questionnaires (Chart 13) also indicate that progress in information and communications technologies has contributed to

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available only in Japanese>), the number of temporary workers grew 66 percent in the five years from 1994 to 1999, from 238,000 to 395,000. Thereafter, deregulation helped boost the number another 36 percent to 537,000 by 2000 in just one year.

reductions in the number of regular employees and the increased use of temporary and part-time workers.

3) From an institutional perspective, deregulation of the market for temporary employment services, which has made it easier to smoothly match labor supply of and demand for non-regular employees, has also had an important impact. Deregulation aimed at the temporary employment market has been progressing since the 1980s (Chart 14), and a particularly drastic piece of deregulation was conducted in 1999, when the decision was taken to list only those businesses that had still not secured approval, rather than a limited number of specifically approved businesses. It is worth noting that the number of female non-regular workers has displayed relatively high growth for middle-aged and older as well as younger workers (Chart 12). This indicates that deregulation has helped to unearth a latent supply of female workers, as married women have returned to the labor market.

In comparative international terms, this rise in the proportion of non-regular workers has been particularly apparent in Japan. The ratio of part-time to total workers in Japan has risen to become the highest among advanced industrial nations, with the single exception of the Netherlands where an institutional improvement in the labor conditions of part-time workers has boosted the ratio to extreme heights (Chart 15).

In terms of the responsiveness of the overall number of employees to changes in the real economy, Japan is still well behind the U.S. and other countries (Chart 16). For instance, U.S. companies make employment adjustments flexibly, even with regard to regular workers, in response to economic fluctuations. In this respect, while employment flexibility has risen in Japan, this is still mainly a matter of marginal adjustments made to the number of non-regular workers. It is premature to conclude that Japanese employment practices have been fundamentally transformed.

(2) Changes in wages

Regarding wages, the most visible change since the mid-1990s has been the sharp and structural decline in the growth rate, as noted in Section 1. As far as flexibility is concerned, Japan has long been regarded as a country with a high degree of flexibility in wages, and thus the flexibility of wages has not changed as much as that of employment. Still, since the mid-1990s, wages have also become somewhat more sensitive to economic fluctuations.

The high flexibility of wages has been largely attributed to the fact that bonuses, which are themselves highly flexible, make up a significant proportion of total earnings. This remains the case, and if any recent change is to be noted, it is the higher degree of flexibility in regular wages. There was virtually no correlation between nominal GDP per employee and regular wages (Chart 4[2]) until the early 1990s, but since the mid-1990s the correlation has become stronger, and the correlation coefficient has reached its highest level with no lag. The debate continues over whether this higher flexibility in regular wages reflects 1) the higher proportion of non-regular employees, whose earnings vary with the number of days or hours worked, as discussed above, or 2) greater flexibility in earnings for regular workers. To shed light on the latter possibility, we statistically analyze the flexibility of regular hourly wages (Chart 17), observing that recently the coefficient on lagged regular hourly wages has become smaller, while the coefficient on hourly nominal GDP has become larger. These changes are minimal, and at present it is not certain whether the flexibility of hourly regular wages has risen. It is true, however, that in recent years many companies have shifted away from seniority-based wage systems, which inflated wages especially for managers, and moved toward annual salary systems (Chart 18); thus qualitatively speaking, the process of regular wage determination for regular employees has changed to a more flexible structure than before.[9] Still, at present, it would be appropriate to conclude that the increased flexibility of regular wages for overall employees is basically due to the higher proportion of non-

[9] In the 1990s, companies reduced bonus payments almost constantly. As a result, the margin for adjusting wages by using bonuses shrank and companies had to reduce regular wages in order to cut

regular employees, for whom costs can be easily adjusted by changing the number of days or hours worked.

Since the 1990s, even as the country has confronted economic stagnation and price declines, Japan's seniority-based wage system in conjunction with the aging of its workforce have conspired to exacerbate the problems of higher wages inherent in its employment structure. In addition, since Japan has experienced some downward rigidity in nominal wages, real wages remain at high levels. As we have already seen, it is difficult to conclude at present that overall wages are significantly more flexible than before. If the flexibility of regular wages increases in the future, that of nominal wages will follow and rise more than before. As a result, even if prices continue to fall, greater flexibility in real wages will possibly be achieved. In that sense, we must keep a close watch on the process of regular wage determination for regular employees, which already shows some signs of changing, as evidenced by the temporary reductions in regular wages achieved by some companies in the latest spring wage negotiations, and we must observe how this develops in the future.

4. Characteristics of employment and wages by industry

Until this point, we have been discussing structural changes in employment and wages from a macroeconomic perspective, but situations are slightly different from industry to industry. Growth rates of new job offers have increasingly varied across industries since the mid-1990s, while the variance of growth rates of employment have also increased gradually, though not as quickly as those of new job offers (Chart 19). This suggests that there must have been inter-sectoral shocks to labor demand, and indicates that the Japanese economy has been faced with major structural adjustment pressures.

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their overall personnel costs. The proportion of regular wages as a share of total earnings rose from about 70 percent in 1990 to about 75 percent by 2001.

The weakness in employment and wages is mostly explained by the protracted economic downturns, the background to which has been Japan's confrontation with various structural adjustment pressures—the country has found it difficult to adapt to these pressures. In this section, we point out the characteristics of employment and wages in various industries, and examine them in light of the structural adjustment pressures which the Japanese economy is facing. We also see how new jobs are created amid overall weakness in the job market, and what problems this entails.

(1) Characteristics of employment and wages

Looking first at developments in employment by industry, the following characteristics are apparent in recent years.

1) While the decreasing trend in employment observed in manufacturing industries is seen to have intensified, the increasing rate of employment in non-manufacturing industries has slowed (Chart 20[1]). Employment in the services sector continues to grow steadily, but a clear decline is observed in the construction, and finance and insurance industries. Transport and communications industries also show strong signs of peaking. In the wholesale and retail trade sectors, the growth in the number of employees is apparently lower than in the 1980s and early 1990s.

2) Since the 1990s, most manufacturing sectors have experienced declines in the number of employees (Chart 21). In particular, labor-intensive industries (those with low levels of value-added per worker), facing severe competition from imports, have suffered large declines in the number of employees. In the textiles industry, for example, the decline in the number of employees accelerated in the latter half of the 1990s due presumably to the increased competition from Chinese imports. The electrical and precision machinery industries are also highly labor-intensive, showing a conspicuous decline in the number of employees. However, it would not be appropriate to classify all such industries together as "labor-intensive." Examining the electrical and precision machinery industries in more detail, those sectors producing lower-value-added products such as household electric appliances, optical

devices and watches, have suffered severe declines in employment and have contributed to the decrease in the number of employees as a whole (Chart 22).

At the same time, however, within the electrical and precision machinery industries, employment in sectors producing higher-value-added products such as electronic components, communications equipment and medical equipment, has been steady or has in some cases even increased. Unlike textiles, since the mid-1990s, the electrical and precision machinery industries as a whole have not suffered accelerating rates of decline in the number of employees. This seems to be largely because of the boom in information technologies, which has sustained employment in these sectors. From another point of view, these sectors have tended to shift to higher value-added production, differentiating their products from those made in East Asia.

3) The downward trend in the numbers of self-employed and family workers has been intensifying in recent years, to an extent even greater than that observed for employees (Chart 23). Looking at individual sectors, the decline is significant in the manufacturing sector as well as in the wholesale and retail trade sectors. This is considered to reflect the fact that individual establishments have been strongly influenced by competition from East Asian countries as well as by deregulation and the revolution in distribution.

Self-employed and family workers, whose number has been on a declining trend, used to play a buffer role against economic fluctuations for the labor market. While numbers of self-employed and family workers would become employees during booms such as the bubble era, these workers tended to remain in place during recessions. However, the recent sharp decline in the number of such workers in circumstances in which firms' ability to absorb new employees has been diminished due to economic recession, seems to indicate that they are no longer playing this buffer role. This phenomenon is thought to be the result of increasing pressure on individual establishments to close down their businesses as part of the process of structural adjustment.

Turning to the picture for wages in various industries, the following characteristics have become apparent in recent years:

1) Wages are weaker for non-manufacturers than manufacturers (Chart 20[2]). The decline in wages has been most prominent for construction, wholesale and retail trade companies.

2) As for manufacturers, those facing severe competition from imported products have tended to see rather high increases in wages (Chart 24). This is probably because firms in these industries have in general tried to reduce their participation in labor-intensive fields and shift their resources instead to higher-value-added segments that are more capital- and technology-intensive, in order to differentiate their products from imports. This contrasts with smaller producers, however, for whom such a shift is more difficult, with the result that the rate of decrease in their wage payments has been sharp since the mid-1990s.

(2) Significance of pressures for adjustment of the industrial structure

One prominent feature of the pressures for structural adjustment which confront Japanese industries is the rising competitive pressure upon labor-intensive manufacturing industries that stems from the expansion of supply capacity in East Asia, particularly in China. Meanwhile deregulation, fiscal reforms, advances in information and communications technologies, increasingly active international capital flows, and balance sheet problems have forced non-manufacturing industries to enhance their efficiency.[10]

The characteristics of employment and wages in individual industries discussed above are generally in accordance with these overall trends. Among manufacturers, for example, labor-intensive industries such as textiles and household appliances have shown a conspicuous decline in employment. Both the construction sector, in which the expected growth rate of demand in the medium-term has turned negative as fiscal reforms

[10] For a more detailed discussion of the structural adjustment pressures facing the Japanese economy, see Maeda, Higo, and Nishizaki [2001].

have progressed, as well as the finance and insurance industries, which face the problem of non-performing loans, have experienced an apparent decline in employment and wages.[11] In the wholesale and retail trade sectors, where the process of deregulation (for example, the amendment of the Large-Scale Retail Store Law) has been proceeding and the entry of newly-emerging firms with new business models has been remarkable, the weakness in wages and the decrease in self-employed and family workers are conspicuous.

Faced with such environments, manufacturers and non-manufacturers have taken somewhat different approaches to reducing labor costs. While manufacturers have made deeper cuts in the number of employees than non-manufacturers, the latter have lowered wages more than the former. Some background factors for this difference are as follows, though they are not necessarily conclusive:

1) In many non-manufacturing sectors, wage levels have been high, presumably due to regulatory protection and high levels of public investment (Chart 25).

2) Non-manufacturers have also found it more difficult than manufacturers to change their labor-intensive structures. Many manufacturing industries, especially those subject to intensifying competition from East Asia, have reduced the number of unskilled workers they employ and have shifted production of low-value-added goods overseas, as discussed above. At the same time, they have built up the capital- and technology-intensive fields of their domestic operations, increasing labor productivity as a whole. For many non-manufacturing sectors, such means of increasing productivity have not been easily available.[12]

[11] According to the Cabinet Office's *Survey of Corporate Behavior*, the medium-term (five-year average) expected growth rate of demand in the construction industry fell from 4.7 percent in 1990 to 2.5 percent in 1995, and dropped to a negative -0.5 percent in 2000. In 2002 when the direction of fiscal reforms became clear, that figure fell further to -2.0 percent.

[12] Increased outsourcing of office functions has promoted a shift in labor demand from the manufacturing to the non-manufacturing (services) sector, which has also contributed to the different rates of change in employment in the two sectors.

3) The stronger downward pressure on the wages of unskilled workers could also have caused the difference in wage adjustments between manufacturers and non-manufacturers. The economic value of unskilled workers, of whom non-manufacturers make greater use than manufacturers, has decreased as a result of external competitive pressures, and their wage has headed downwards as supply-demand conditions have become significantly looser. While there are no concrete data on wages for unskilled workers, wages for production workers in manufacturing industries have been weakening in recent years relative to those for non-production workers (Chart 26). This implies that in manufacturing industries, price competition with East Asia has exerted relatively strong downward pressure on wages for production workers, among whom the proportion of unskilled workers is seemingly high. In addition, an examination of the relationship between the degree of labor-intensiveness and wages across various non-manufacturing sectors reveals that wages in sectors that use unskilled labor more intensively tended to suffer a larger decline (Chart 27). This could result from the fact that firms in these sectors (especially wholesalers, retailers, and some firms in services sectors such as social welfare, entertainment, and lodging) employed part-time workers as unskilled laborers, and there is an increasing excess supply of part-time labor in the macroeconomy as a whole.[13]

(3) New job creation

In the previous section, we considered the relationship between structural adjustments and the characteristics of the developments of employment and wages across industries. However, we also see new job creation in various industries. This is because new industries have been expanding, albeit gradually, and at the same time newly-emerging companies have been creating demand for new jobs.

[13] The services industry in general is more labor intensive than the wholesale and retail trade sector, but the drop in wages is relatively small (Chart 27[1]). This could be because the services sector comprises a great variety of subsectors, which include skilled labor-intensive (technology-intensive) subsectors such as medical care, education and information services (Chart 27[2]).

The expansion of new industries is reflected in the steady growth in the number of workers in the services industry. A close examination of the number of new job offers and employees in the services industry shows prominent growth in the following sectors: social welfare services (or home nursing care services) and medical care for both of which labor demand is increasing due to the aging of the Japanese society; also information services, temporary employment services, and building services, areas in which labor demand is rising as companies rely more heavily on information and communications technologies and outsourcing (Chart 28).[14]

At the same time, new job offers are rising even in the wholesale and retail trade sectors where growth rates in overall employment have fallen; this could be one piece of evidence that labor demand from newly-emerging companies has been increasing. Analyzing the relationship between new job offers and the *Tankan*'s employment DI, we note that the employment DI reveals substantial excess labor holdings as well as a low number of new job offers in the manufacturing and construction sectors (Chart 29). On the other hand, in the services, wholesale and retail trade sectors, although the employment DI continues to suggest that labor holdings are excessive, new job offers are still at relatively high levels compared with those observed in the first half of the 1990s. This probably indicates that while employment in many existing companies is excessive, new industries and newly-emerging companies in traditional industries have large new employment needs. The services industry as a whole also shows steady growth in employment, and thus new business sectors must be making a major contribution to the increase in new job offers. On the other hand, growth in the number of employees in the wholesale and retail trade sectors as a whole has fallen even as new job opportunities have been on the increase. The suggestion here is that this increase in new job offers

[14] For examples of how companies have responded to newly-emerging business opportunities, see a report submitted to the Council on Economic and Fiscal Policy on May 21, 2002 by BOJ Governor Masaru Hayami, a member of the Council (available only in Japanese; see http://www5.cao.go.jp/shimon/2002/0521/0521agenda.html). The report, based on interviews with companies, refers to cases in which Japanese companies are able to enter new businesses thanks to deregulation and also to take advantage of new business opportunities in fields such as environmental protection, home nursing care, and medical care.

reflects an expansion in the employment needs of both newly-emerging companies and winners among existing companies.

Still, new job creation of this sort has been no more than a marginal phenomenon, and has not been of sufficient magnitude to increase the overall number of employees. In addition, there has been a tendency in recent years for the increase in the number of employees to be less than the increase in new job offers in the economy as a whole, implying a growing mismatch in the labor market (Chart 30). Examining new job offers in more detail across new industries (for example, social welfare and business services) and across newly-emerging companies in traditional industries, we observe that most of the new job offers are for part-time workers (Chart 31). A breakdown by occupation reveals that the increase in professional and technical workers is even stronger than that for workers engaged in sales and services (Chart 32[1]).

This growing mismatch in the labor market is also adversely affected by Japanese employment practices and various institutional aspects, such as non-transferable corporate pension programs, which have prevented the smooth reallocation of labor resources. First, Japan's seniority-based wage profile as well as corporate pension and retirement allowance programs have discouraged middle-aged and older workers from changing their jobs. Second, while there has been a conspicuous increase in the demand for professional and technical workers, as noted above, the increase in the supply of workers who possess these skills has not been sufficient to meet the demand (Chart 32[2]). This type of mismatch is another major consequence of Japanese employment practices. In recent years, the rapid pace of technological progress, including the revolution in information and communications technologies, has instigated drastic changes in Japan's industrial structure, and people with outstanding skills in these new fields have become more sought after than ever. This alone would have been enough to create a shortage in these particular human resources. Yet Japanese employment practices have worsened the mismatch further since, having given priority to the accumulation of firm-specific skills, they have hindered the responses of workers to these changes in their economic environment. In addition to these factors for regular workers,

unfavorable institutional conditions governing part-time workers may also have contributed to the mismatch in the part-time labor market.

From a slightly different perspective, we can see how labor immobility across industries also contributes to a mismatch in the labor market (Chart 33). A growing mismatch is inevitable when technological progress is rapid or industrial changes are drastic, because workers display a fundamental tendency to remain in one industry. In addition, workers engaging in construction or in production processes in the manufacturing sector, whose numbers have declined conspicuously in Japan in recent years, seem to have experienced particular difficulties in shifting to other industrial sectors. Such industry-specific employment characteristics have also exacerbated the labor market mismatch in recent years.

5. A perspective on the labor market and employment policies

(1) Future developments in employment and wages, and their macroeconomic implications

As we have seen in the discussion above, Japanese companies have made substantial efforts to restrain their overall labor costs while increasing the flexibility of employment and wages. As a result, while the economic downturn of 2001 was extremely severe, the pace of increase in the labor share was just about equivalent to or slightly milder than that during the economic downturns of the 1990s (Chart 6). Evaluating this development from a current perspective, we note that even though there is a somewhat greater degree of flexibility in firms' employment, the basic framework of Japanese employment practices remains in place, with the result that firms have been unable to deal fully with structurally excessive employment and high wages, and the inefficient allocation of labor resources that these entail. Moreover, trends in new job creation are still only marginal phenomena.

Needless to say, Japan's future employment situation will depend on how the economy evolves and the extent to which new job creation spreads throughout the economy. Based on the analysis in this paper, even if the economy heads upwards in the near future, overall employment and wages are likely to remain under pressure for a long time to come, although some improvement will be observed in the supply-demand balance for non-regular employees. In fact, recent employment data show that the recovery in industrial production has led to a clear improvement in new job offers for part-time workers. In contrast to this, the decline in the number of employees reported in the *Monthly Labor Survey*, in which the proportion of regular workers is relatively high, is still accelerating to some extent. Total wages per worker clearly decline as labor demand shifts towards part-time workers, whose unit wage is low, while at the same time overtime cash earnings are improving. By industry, as described previously, manufacturers are reducing labor costs and non-manufacturers such as construction and distribution companies have been under increasing pressure to improve efficiency. Against this background, employment and wages are expected to remain weak. While these restraining forces persist in the labor market, the unemployment rate may also remain at a high level (For a more detailed discussion of the unemployment rate, see Box 1).

For the reasons discussed above, from a macroeconomic point of view, forces restraining employment and wages are expected to remain for the foreseeable future. In the short term, these forces could lead to reductions in household spending through income decreases and job insecurity, and also to downward pressure on prices, especially on services prices, which are highly sensitive to wage movements (Chart 34).[15]

In the somewhat longer term, higher flexibility in employment and wages could bring about changes in the characteristics of Japan's business cycle. In the past,

[15] A statistical examination of the relationship between wages and services prices shows that regular wages exhibit a slightly stronger correlation with services prices than total wages including bonuses. The reasons for this, although hypothetical, are as follows: 1) firms consider bonuses as a profit buffer, but in setting their prices, they regard regular wages as part of their production cost; 2) in the retail trade and services industries, the ratio of part-time employees is relatively high, and their total wages depend almost entirely on their regular wages.

corporate profits have fluctuated drastically under Japanese employment practices and fluctuations in business fixed investment have been large, while household spending trends have remained relatively stable, lagging slightly behind the overall economic cycle. If labor costs, and therefore household income (in particular the income of non-regular employees) react more sensitively to business cycles, developments in household spending may possibly become more important in determining business cycles. At present, we cannot confirm whether such a change has already occurred. However, it will be interesting to see how the increasing flexibility of employment and wages and its impact on household spending will change the characteristics of the Japanese business cycle in the future.

(2) The importance of structural change in the labor market and a perspective on current employment policies

As discussed above, firms' efforts to restrain employment and wages are likely to exert downward pressure on the economy and prices in the short run. In the medium to long run, however, reducing excess employment and high wages are an inevitable part of the process of improving efficiency and profitability in Japan's economy as a whole. Obviously, it is inappropriate to simply say that wages in Japan will inevitably fall because they are higher than those in other East Asian countries. Yet, we have already observed pressure for wage adjustment emerging in the industries protected by regulations, compression of the seniority-based part of the wages of middle-aged and older workers, and further wage reductions for unskilled workers. These phenomena reflect the fact that the market value of some labor resources has fallen in a new economic environment characterized by globalization and the maturation of the Japanese economy. In fact, it is through this wage adjustment mechanism that labor resources which have become obsolete are able to be reborn as economic resources generating new economic value. This process is enhanced by the expansion of businesses that require the use of low-wage labor resources and by increasing incentives for labor market participants to raise their levels of technical and professional skills. New job creation in some services and retail trade industries, as described above, imply that this adjustment mechanism has started to function. Through this kind of process, Japan will be able to

make progress in the expansion of new business models and in improving its productivity, leading to a rise in household income in the long run.

The improved flexibility of employment is, at present, marginal, focusing on the increased use of non-regular employees. If employment continues to become more flexible through wage adjustment, however, it will make possible the rapid reallocation of resources needed at times of sharp change in the economic environment, and this in turn will result in an improvement in Japan's potential economic growth.

Structural changes in the labor market in recent years can be evaluated as favorable from a medium- to long-term perspective. In this context, it is essential that the institutional environment also be modified so that the flexibility of the labor market as a whole is able to increase unhindered. Specifically, it is important to reconsider the institutional arrangements governing corporate pensions and retirement allowances, to deregulate temporary employment services, and to have employees acquire cross-corporate skills rather than firm-specific skills. A vigorous debate on these issues has been taking place in recent years, and progress has been made on institutional reforms on several fronts. In the future, further deliberations are needed to ensure that no aspect has been overlooked, such as the reexamination of tax systems with regard to retirement allowances.

Even with such institutional reforms, however, it is difficult to imagine that Japan's traditional employment practices will be transformed rapidly. It is likely, therefore, that at least for the next several years, the flexibility of the labor market will increase mainly through the use of part-time and other non-regular employees. As long as Japanese companies are obliged to incorporate the baby boom generation within the corporate age pyramid, they are likely to refrain from hiring new graduates as regular employees.

Hence, while enacting policies to enhance steadily the flexibility of the labor market, high priority needs to be placed on revising the institutional arrangements

perceived as restricting the supply of non-regular workers, particularly part-time workers. These institutional arrangements include differences in the treatment of regular and non-regular workers with regard to employment insurance, employees' pension programs (Chart 35), spousal tax deductions, and retirement allowances. There is also a significant difference in the wages received by regular and non-regular employees, and a debate is necessary on whether to forcibly narrow this gap in wages. Since their roles and functions differ, some gap is inevitable; however, this wage gap is particularly large in Japan, compared with the US and European countries (Chart 36). Furthermore, we should note also that the share of part-time and other non-regular employees has become extremely significant, and the recent diversification of lifestyles implies the existence of various latent types of labor supply. Considering these various facts, it is necessary to review whether or not there exist institutional factors which could be preventing the labor market from functioning appropriately and thus have brought about the substantial differences in labor conditions between regular and non-regular workers.[16]

As for youth employment, with firms still restraining their hiring of new graduates, Japan's youth unemployment rate is among the highest in advanced countries (Chart 38). Therefore, in reviewing current labor policies, which have mainly focused on middle-aged and older workers, it is also essential that due consideration is paid to the formation of human capital among the nation's youth.[17]

[16] The *Report on the Special Survey of the Labor Force Survey* shows that the proportion of workers engaging in part-time work who hope to find full-time work, as a percentage of the total labor force, rose from about 2 percent in 1991 to about 4 percent in 2001, far more than in the U.S. (2 percent), where the unemployment rate is about the same as Japan (Chart 37). Regarding this point, there is considerable room for debate about whether there exist institutional factors that are not only responsible for the differences observed among types of labor but that are also generating distortions in the labor supply.

[17] For further discussion of the youth unemployment problem and policy shortcomings, see BOX 2.

[BOX 1] Recent developments in the unemployment rate

Since the beginning of the 1990s, Japan's unemployment rate has been on an upward trend, without significant declines even in times of economic expansion (BOX 1 Chart 1[1]). Several factors lie behind this trend: 1) The continued decrease in the number of employees, caused by corporate restructuring and bankruptcies; 2) The decline in numbers of self-employed and family workers under strong structural adjustment pressures. In addition to 1) and 2) above, which have reduced the demand for labor, another factor behind the upward trend of the unemployment rate is 3) the growing mismatch in the labor market (Chart 30). As discussed in the main text, this growing mismatch is due to several factors which have been hampering smooth labor mobility and which, with Japan facing drastic changes in its economic environment, have imposed different shocks on different industries. Many of these factors have their roots in traditional Japanese employment practices and related institutional arrangements such as company-specific pension programs. Hence, for middle-aged and older workers, who have been deeply affected by these traditional practices, the unemployment period has been protracted remarkably (BOX 1 Chart 2).

On the other hand, in recent years, the number of unemployed persons has not risen in proportion to the decrease in numbers of employees, the self-employed, and family workers (BOX 1 Chart 1[2]). This indicates that there has been a decline in the labor force and that, against this background, there is also an ongoing decline in the labor force participation rate (labor force divided by total number of persons aged 15 years old and over; BOX 1 Chart 3). The key factors behind this decline in the labor force participation rate may be considered to be as follows:

Aging population: The labor force participation rate has generally been low among the elderly. As this generation makes up an increasing proportion of the population, the overall labor participation rate declines. In other words, with the aging of the Japanese population, more people naturally leave the labor market.

Declining labor force participation rate among the older generation: There has also been a remarkable decline in the labor force participation rate for elderly males. The following factors are likely to be behind this trend: 1) the number of those self-employed, whose age composition is skewed toward elderly persons (over 50 percent of self-employed workers are 55 years old and over), has sharply decreased in recent years, and many of them have simply moved out of the workforce after losing their jobs; 2) among elderly employees losing their jobs through corporate restructuring, many have left the labor market after giving up the search for a job due to the severe employment situation.

Declining labor force participation rate among the younger generation: The labor force participation rate is gradually falling for young people, both male and female. This is presumably due to the fact that a high portion of the younger generation give up job-searching as firms continue to restrain their hiring of new graduates.

Future trends for the unemployment rate will also be influenced by the factors described above: the weakened demand for labor, the mismatch in the labor market, and the lower labor force participation rate. It is, therefore, difficult to predict which path the unemployment rate will follow. Even if the economy starts to recover, a significant decline in the unemployment rate is unlikely because the weakness in labor demand and an intensified mismatch are expected to continue for some time.

[BOX 2] The youth employment issue and employment policy

As noted in the main text, the youth unemployment rate in Japan has been rising more rapidly than the overall unemployment rate, and now stands at one of the highest rates among industrialized nations (Chart 38). At the same time, it has been observed that a relatively high proportion of unemployed youths has voluntarily quit their jobs (BOX 2 Chart 1).

From these facts, there are two ways of interpreting youth unemployment: one that stresses demand factors, and the other that emphasizes supply factors such as changes in the lifestyles of the nation's young people and their desire to work. Genda [2001], a proponent of the former view, argues that firms' restraint in hiring new graduates is reducing the opportunities available for many young people to be employed at their companies of choice and thus their motivation to continue working at temporary jobs which they had to take up reluctantly does not last long. By contrast, those who advocate the latter view point out that young people do not necessarily have any desire to become regular employees and that an increasing proportion of the nation's youth is engaging in temporary jobs. The reasons for this are that they want to enjoy more spare time and that they want to take their time thinking carefully about what kind of work they plan to pursue in the future. These changes in attitude have become possible in part because the parental generation is supporting the younger generation financially and thus young people may not feel a pressing need to find work as regular corporate employees in order to support themselves.

Although there is no doubt that both of these factors are contributing to the problem of youth unemployment, we believe that the demand factors play a larger role, based on the following observations.

1. First of all, the increase in youth unemployment is closely connected to reductions in the hiring of new graduates, and this is basically determined by the state of corporate Japan (BOX 2 Chart 2). According to a survey conducted by

the Ministry of Health, Labor and Welfare covering the measures taken by firms to adjust their levels of employment, most firms responded that they "reduced or terminated the hiring of new graduates." As noted in the main text, Japanese firms have restrained their hiring of new graduates because they have found it difficult to rapidly change the present employment framework that governs their existing regular employees. The survey result emphasizes this point.

2. Next, we consider the argument that youth unemployment is to some extent self-induced (BOX 2 Chart 1). It is indisputable that the proportion of workers who voluntarily quit their jobs is higher among the younger generation (ages 15-34), but this is not a new phenomenon. In fact, the proportion who voluntarily quit their jobs has been falling in recent years, while the proportions of workers who left their jobs involuntarily and of new graduates who have not yet found work have been rising.

3. Regarding the argument that many young people prefer to choose temporary jobs, mostly represented by the so-called "*Furiitaa*," we believe that many of them have chosen to take up these kinds of jobs due to a lack of available alternatives. Looking at the reasons for being a part-time worker indicated in the *Report on the Special Survey of the Labor Force Survey* in 2001 (BOX 2 Chart 3[2]), the proportion of those who responded "planning to continue part-time work, have no desire to work full-time," was lower among the 15-34 year olds than for the whole group. In addition, the proportion of those who responded "working part-time now, but hope to work full-time in the future" was higher among the 15-34 year olds. Furthermore, among the 15-24 year olds, a large percentage responded "now temporarily working part-time from reasons due to employers or businesses."

Policy makers have not responded actively to the problem of youth unemployment (BOX 2 Chart 4). In fact, employment policies thus far have focused on protecting jobs for those already employed, and maintaining and creating employment of middle-aged and older workers. The main purpose of government subsidies for

employment adjustment, for example, has been to preserve the jobs of existing employees, and this has resulted in firms restraining new hiring. Japan's system of subsidizing education and training programs is also not available to those who have not paid unemployment insurance premiums for a considerable length of time. In addition, funds to encourage the creation of new jobs are designed mainly for employees who are 30 years old and over.

However, the public has begun to realize that the problem of youth unemployment must be taken seriously. For example, the recent conspicuous rise in unemployment among the country's youth could, over the medium term, result in insufficient human capital formation which could in turn lower Japan's potential economic growth. In light of this, further enhancement of the institutional arrangements for providing training, education and subsidies that encourage the accumulation of human capital, thus matching the needs of Japanese firms, is required. Lastly, with part-time work becoming the main form of employment for younger workers, we also need to conduct an in-depth examination of the institutional structure of the working environment to ensure that it is not disadvantageous to such workers.

References

Osawa, Naoto, 2002, "*Saikin no Koyouchousei no Tokuchou: Rouchou Koyousha to Maikin Jyouyouroudousha no Kairi ni Chuumoku shite* (Features of recent employment adjustments: focusing on differences between employees measured in the Labor Force Survey and employees in the Monthly Labor Survey; available only in Japanese)," Keizai Tenbyo 2002-01, Research and Statistics Department, Bank of Japan.

Genda, Yuji, 2001, " *Shigoto no Naka no Aimai na Fuan* (Ambiguous job insecurity; available only in Japanese)," Chuo Kouron-sha.

Nishizaki, Kenji and Tomohiro Sugo, 2001, "*Wagakuni ni okeru Roudoubunpairitsu ni tsuite no Ichikousatsu* (On Japan's labor share; available only in Japanese)," Working Paper 01-8, Research and Statistics Department, Bank of Japan.

Hattori, Ryota and Eiji Maeda, 2000, "The Japanese Employment System." Bank of Japan Monthly Bulletin, January.

Fujita, Shigeru, 1998, "*Roudou no Saibunpai Shokku to Keizaihendou* (Labor reallocation shocks and economic fluctuations; available only in Japanese)," Working Paper 98-8, Research and Statistics Department, Bank of Japan.

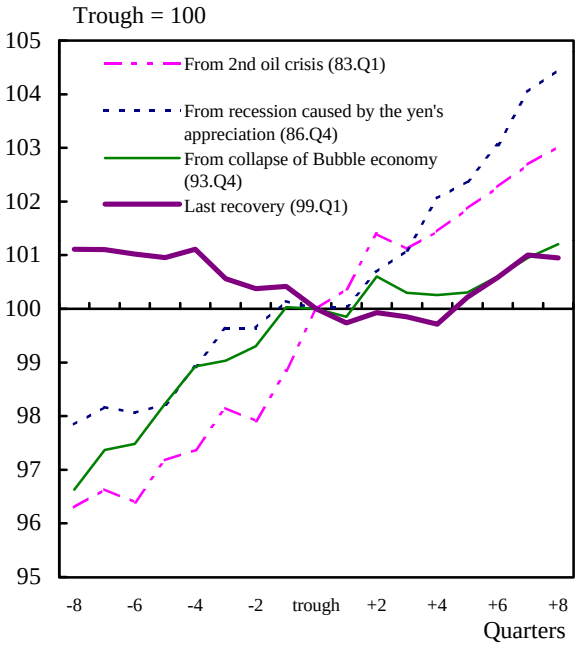
Maeda, Eiji, Masahiro Higo and Kenji Nishizaki, 2001, "*Wagakuni no Keizaikouzouchousei ni tsuite no Ichikousatsu* (On Japan's economic structural adjustments; available only in Japanese)," Bank of Japan Monthly Bulletin, July.

Maeda, Eiji and Kotaro Yoshida, 1999, "*Shihon Kouritsu wo meguru Mondai ni tsuite* (Some issues regarding capital efficiency; available only in Japanese)," Bank of Japan Monthly Bulletin, October.

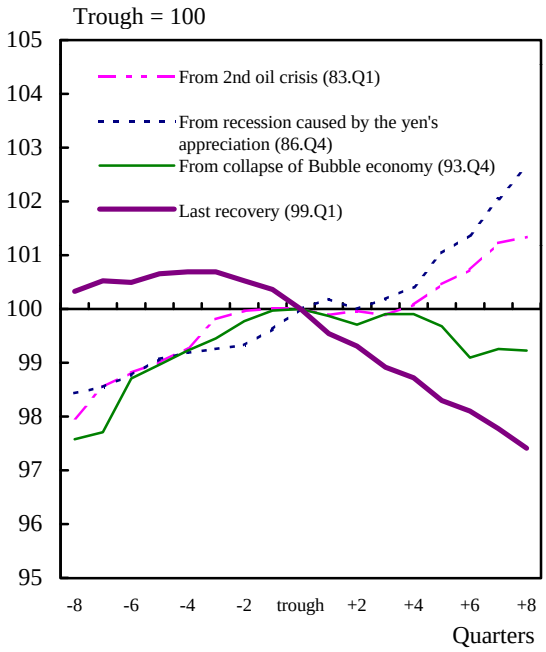
Comparisons of Labor Market by Business Cycle (1)

1. During recoveries

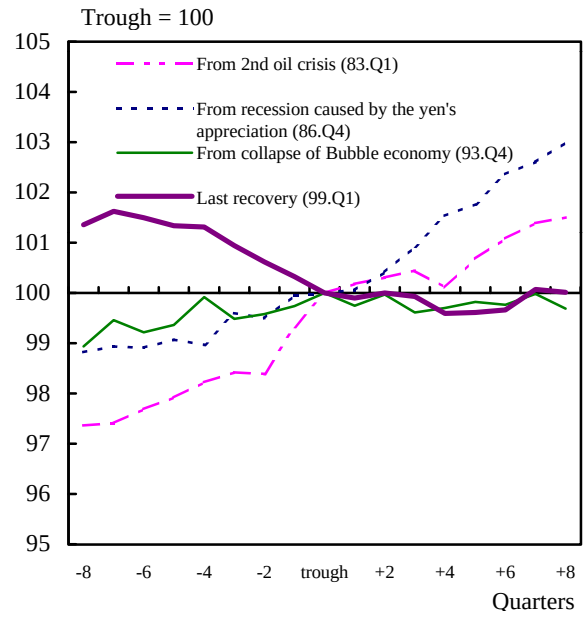
(1) Employees--*Labor Force Survey*



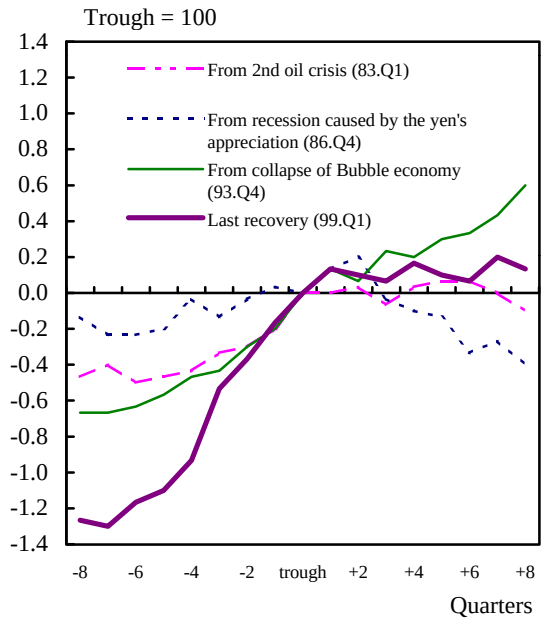
(2) Employees--*Monthly Labor Survey*



(3) Employed persons--*Labor Force Survey*



(4) Unemployment rate--*Labor Force Survey*



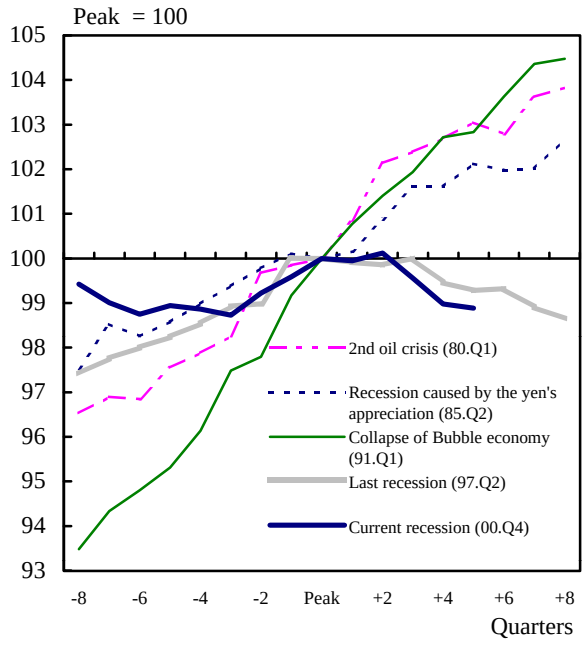
Notes: 1. Data on employees from the *Monthly Labor Survey* are for establishments with 30 employees or more. (Hereafter the same, unless otherwise noted.)
2. Seasonally adjusted.
3. Figures in (4) are the differences from the trough (% points).

Sources: Ministry of Health, Labor and Welfare, "Monthly Labor Survey"; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey."

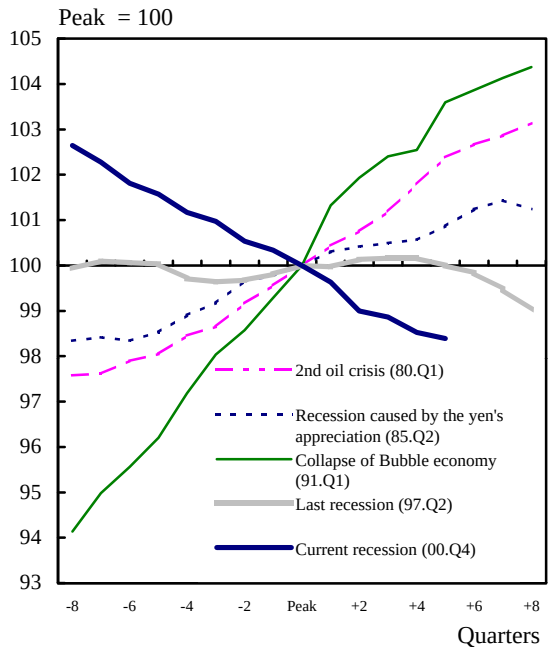
Comparisons of Labor Market by Business Cycle (2)

2. During recessions

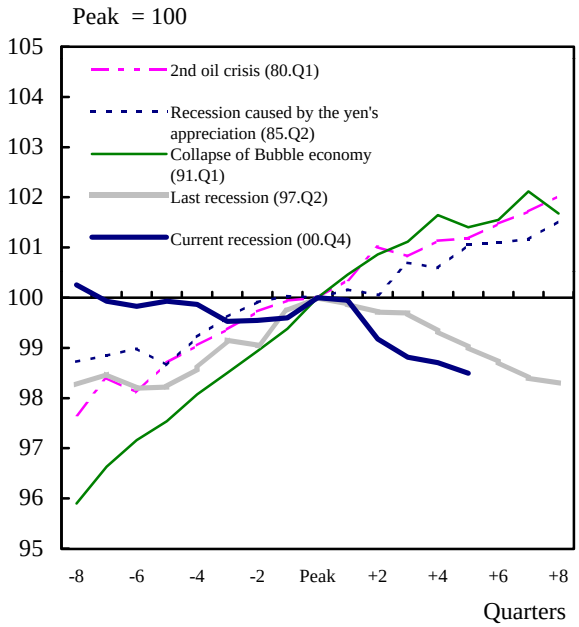
(1) Employees--*Labor Force Survey*



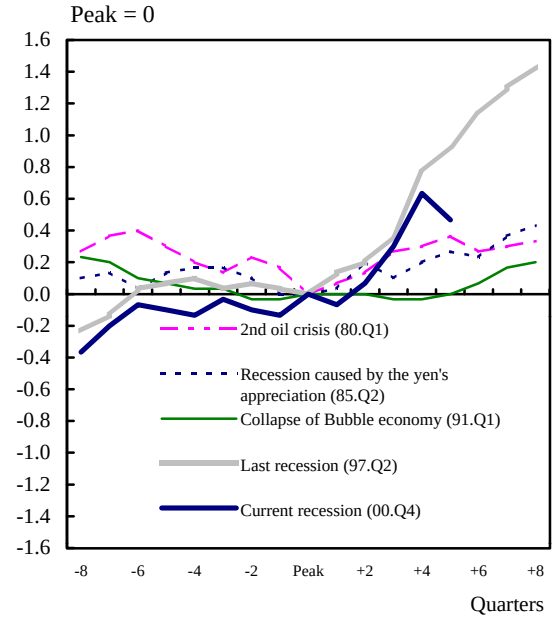
(2) Employees--*Monthly Labor Survey*



(3) Employed persons--*Labor Force Survey*



(4) Unemployment rate--*Labor Force Survey*



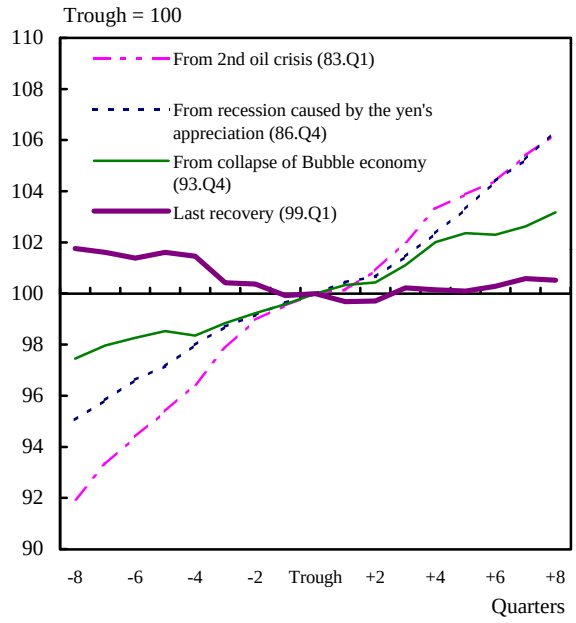
Notes: 1. Seasonally adjusted.
2. Figures in (4) are the differences from the peak (% points).

Sources : Ministry of Health, Labor and Welfare, "Monthly Labor Survey"; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey."

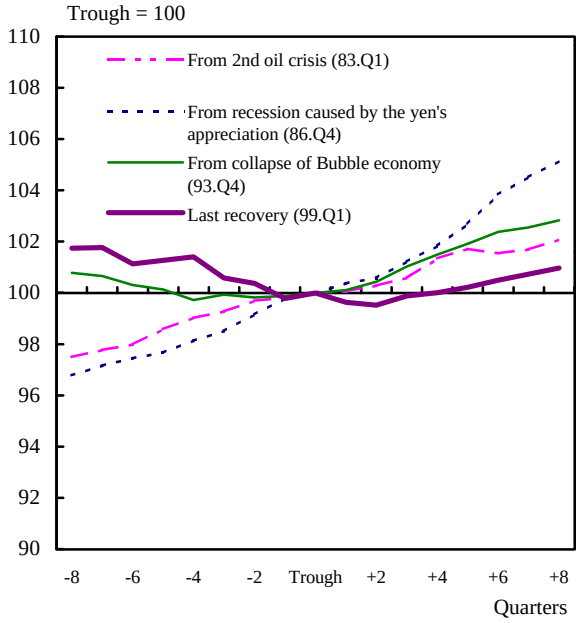
Comparisons of Wages by Business Cycle

1. During recoveries

(1) Nominal wages

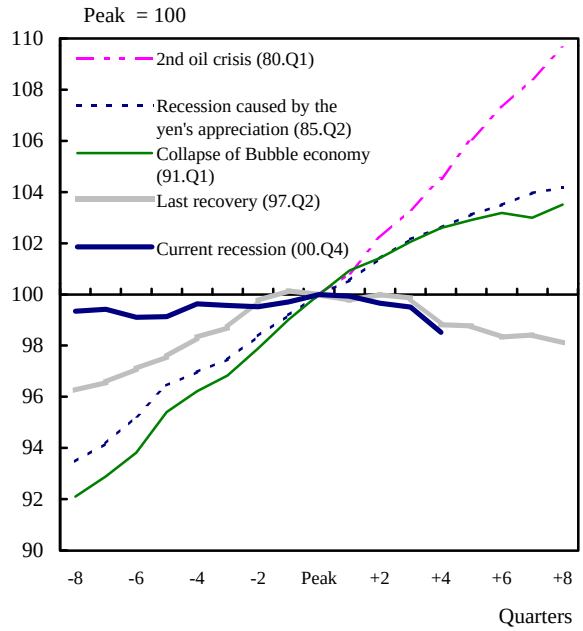


(2) Real wages

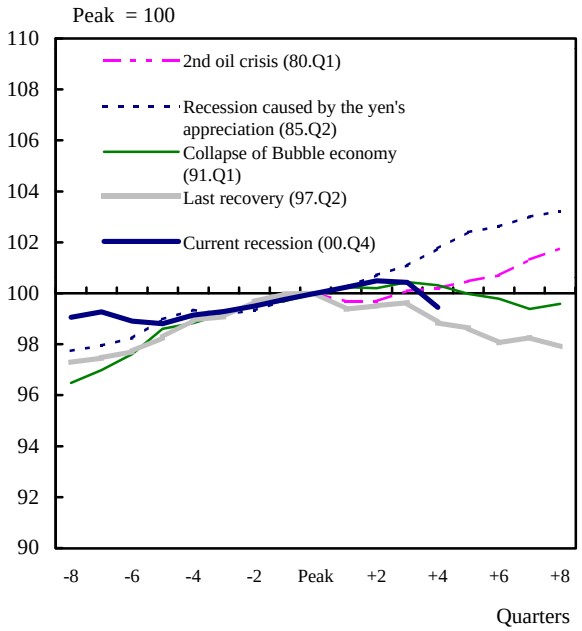


2. During recessions

(1) Nominal wages



(2) Real wages

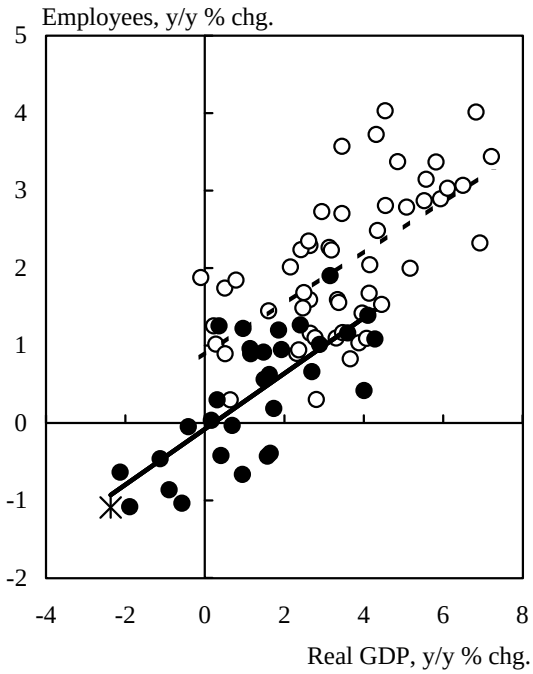


Notes :1. Data on nominal wages are "total earnings" taken from the *Monthly Labor Survey* .
2. Real wage = Nominal wages / CPI (excluding fresh foods and adjusted for the consumption tax introduced in 1989 and raised in 1997) * 100
3. Figures are seasonally adjusted and 2-quarter moving averages.
4. 1st quarter = Mar.-May, 2nd quarter = Jun.-Aug., 3rd quarter = Sep.-Nov., 4th quarter = Dec.-Feb.

Sources : Ministry of Health, Labor and Welfare, "Monthly Labor Survey"; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Consumer Price Index."

Real GDP and Employees

(1) Real GDP and employees--*Labor Force Survey*

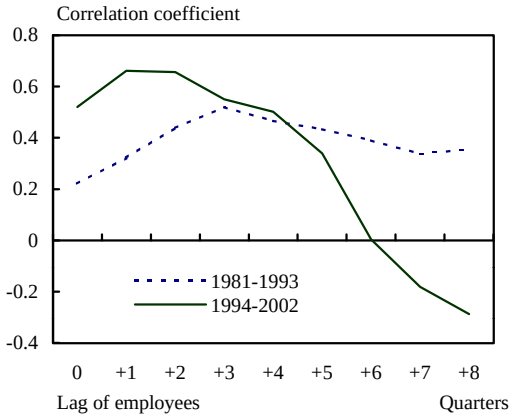


[Results of estimation]

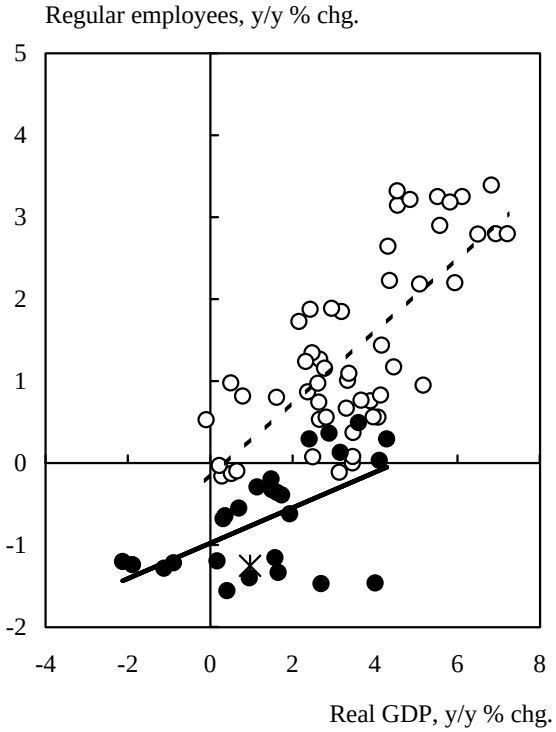
	81/Q1-93/Q4	94/Q1-02/Q1
Lag of employees	3 quarters	1 quarter
Short-term elasticity	0.33(5.8)	0.36(6.1)
Constant term	0.88(3.9)	-0.08(-0.6)
Adj.R^2	0.39	0.54

--Figures in parentheses are t-statistics.

[Cross correlation]



(2) Real GDP and regular employees--*Monthly Labor Survey*

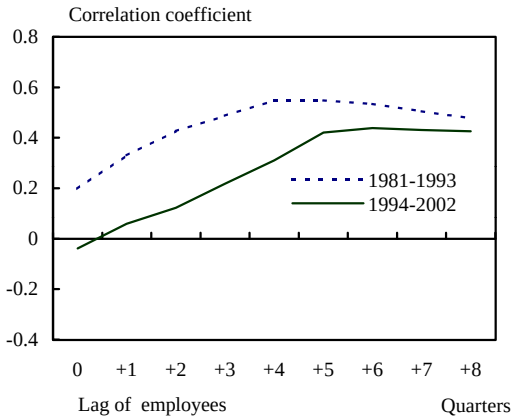


[Results of estimation]

	81/Q1-93/Q4	94/Q1-02/Q1
Lag of regular employees	5 quarters	6 quarters
Short-term elasticity	0.45(7.7)	0.22(3.4)
Constant term	-0.17(-0.8)	-0.98(-7.0)
Adj.R^2	0.53	0.29

--Figures in parentheses are t-statistics.

[Cross correlation]



Notes: 1. Variables for estimations are percentage changes from a year earlier.

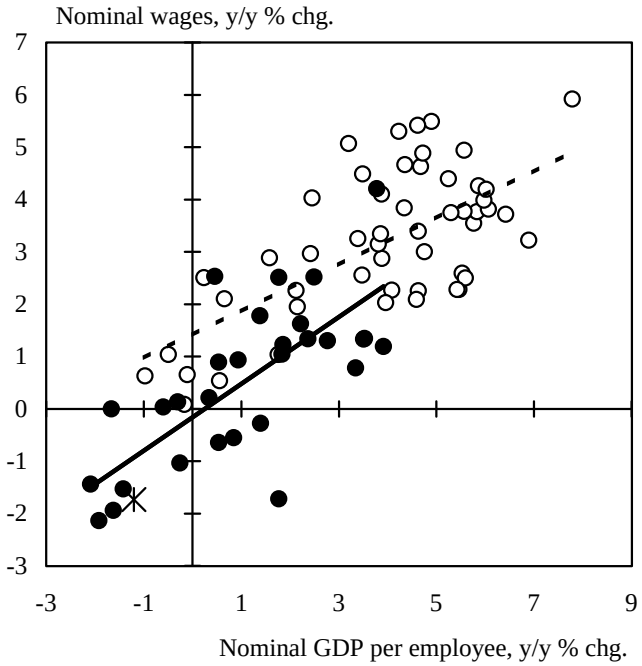
2. In the two scatter diagrams, variables of regular employees and real GDP are lagged when the cross correlation between them is at the highest value.

3. White dots are figures for 81/Q1-93/Q4. Black dots are figures for 94/Q1-02/Q1.
The latest figure (02/Q1) is shown as "*".

Sources : Cabinet Office, "National Accounts" ; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey" ; Ministry of Health, Labor and Welfare, "Monthly Labor Survey."

Nominal Wages and Nominal GDP per employee

(1) Nominal wages and nominal GDP per employee

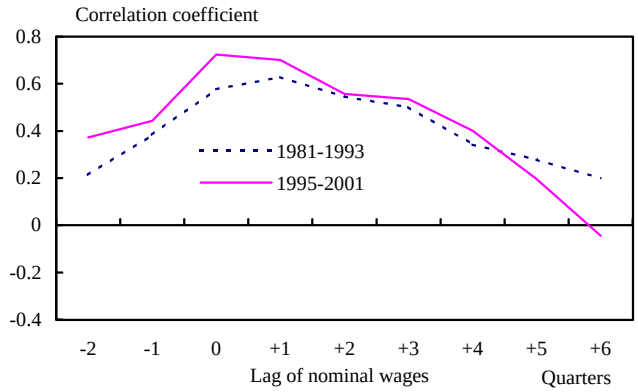


[Results of estimation]

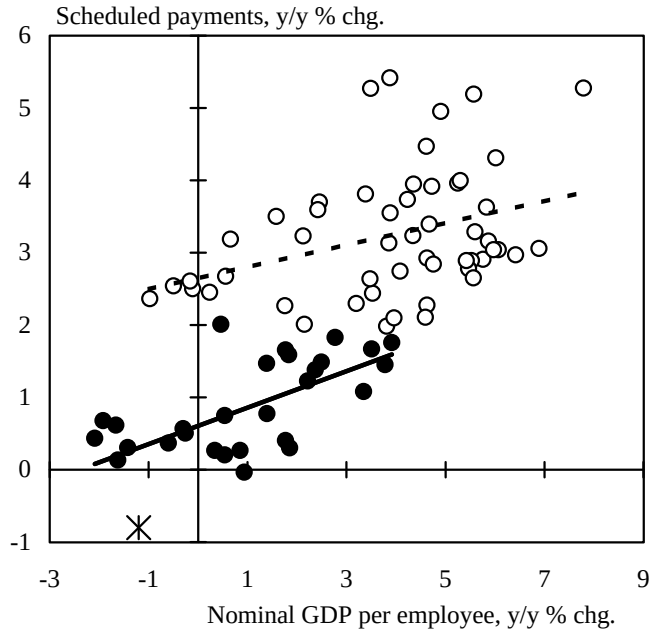
	81/Q1-93/Q4	95/Q1-02/Q1
Lag of nominal wages	1 quarter	0 quarter
Short-term elasticity	0.45 (6.2)	0.64 (5.5)
Constant term	1.41 (4.4)	-0.16 (-0.7)
Adj.R^2	0.42	0.51

--Figures in parentheses are t-statistics.

[Cross correlation]



(2) Regular wages and nominal GDP per employee

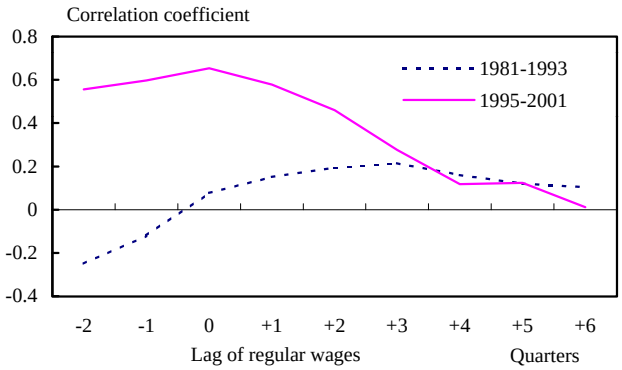


[Results of estimation]

	81/Q1-93/Q4	95/Q1-02/Q1
Lag of regular wages	3 quarters	0 quarter
Short-term elasticity	0.15 (2.7)	0.25 (4.5)
Constant term	2.65 (10.5)	0.60 (5.4)
Adj.R^2	0.11	0.41

--Figures in parentheses are t-statistics.

[Cross correlation]



Notes :1. Variables for estimations are percentage changes from a year earlier.

2. Nominal wages are "total earnings" and regular wages are "total earnings minus the sum of overtime payments and bonuses" taken from the *Monthly Labor Survey* .

3. Nominal GDP per employee = Nominal GDP / Number of regular employees (from the *Monthly Labor Survey*).

4. Data in 1994, which show irregularity because summer bonuses were paid in advance due to the reduction of income tax, are excluded from the estimations.

5. In the two scatter diagrams, variables of nominal wages (or regular wages) and nominal GDP are lagged when the cross correlation between them is at the highest value.

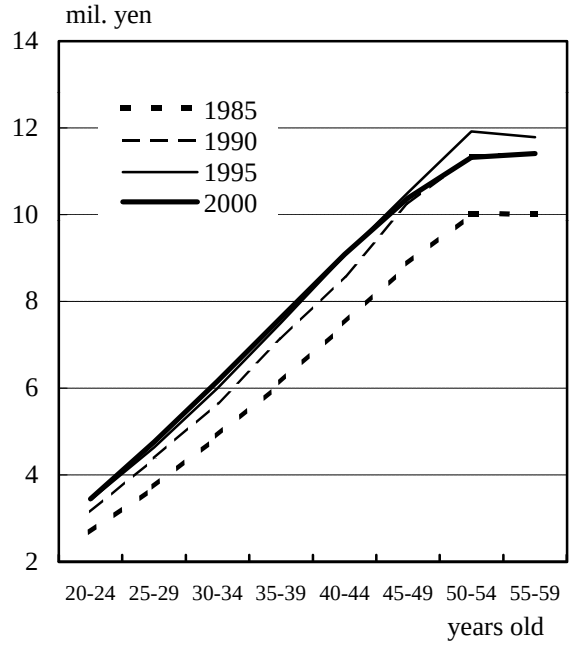
6. White dots are figures for 81/Q1-93/Q4. Black dots are figures for 95/Q1-02/Q1. The latest figure (02/Q1) is shown as "∗".

Sources : Cabinet Office, "National Accounts" ; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey" ; Ministry of Health, Labor and Welfare, "Monthly Labor Survey."

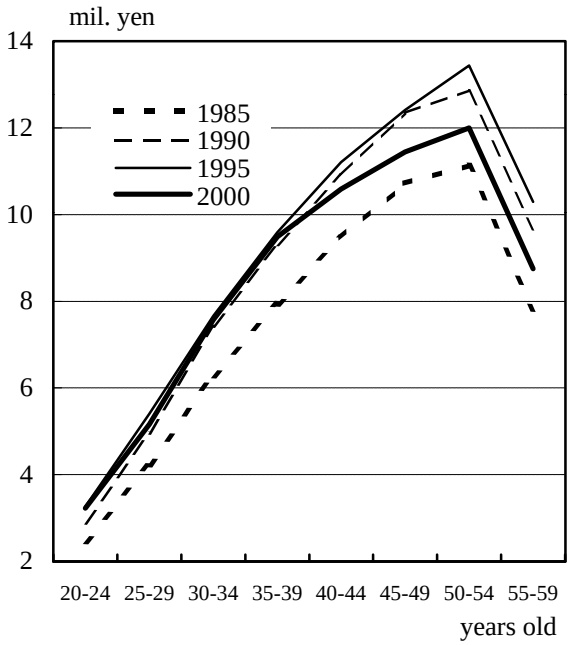
Chart 5

Seniority-Based Wage Profiles

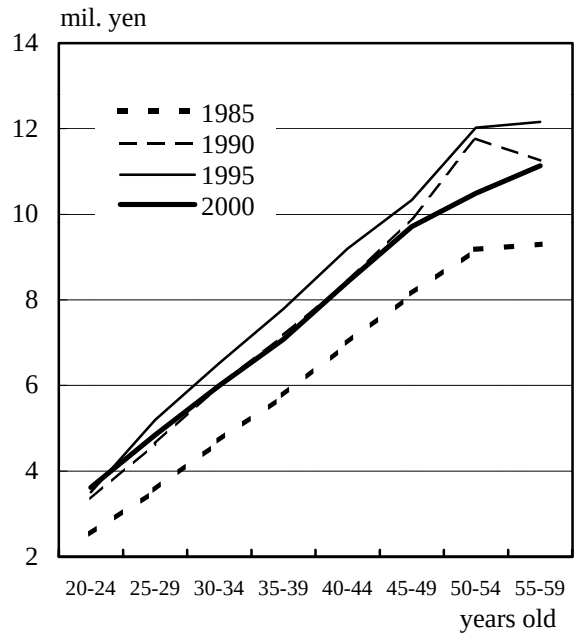
(1) Manufacturing



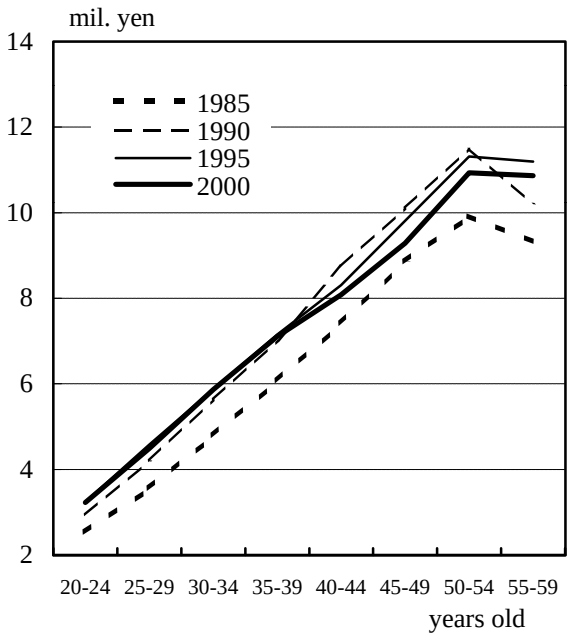
(2) Finance and Insurance



(3) Construction



(4) Wholesale and Retail Trade, Restaurants

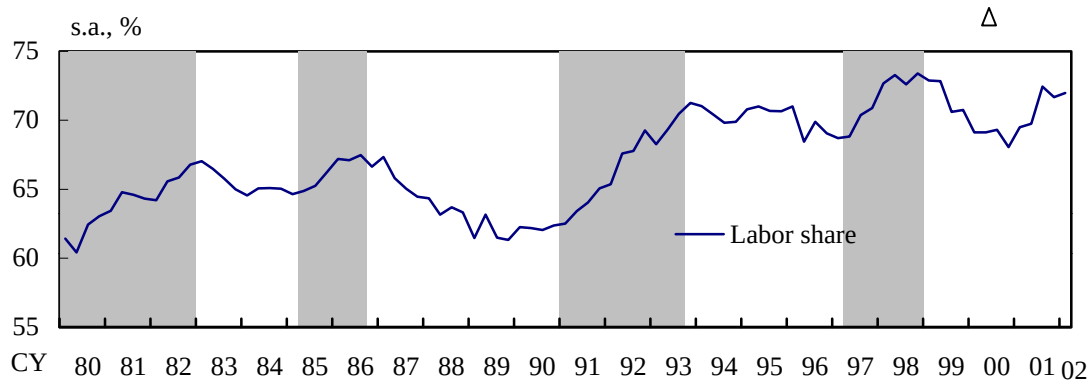


Notes: 1. The *Basic Survey on Wage Structure* surveys; monthly contractual payments in June (A); and annual special payments (e.g., bonuses) made in the previous year (B).
Here, Wage = (A) * 12 + (B), where (A) and (B) are from the same year.
2. Figures are the average wages of regular male employees who graduated from university and work at enterprises with at least 1000 employees.

Source: Ministry of Health, Labor and Welfare, "Basic Survey on Wage Structure."

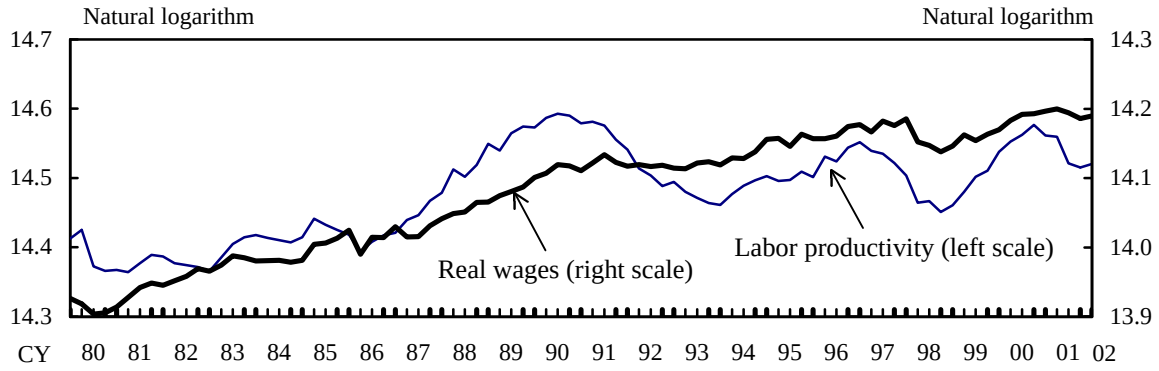
Labor Costs

(1) Labor share

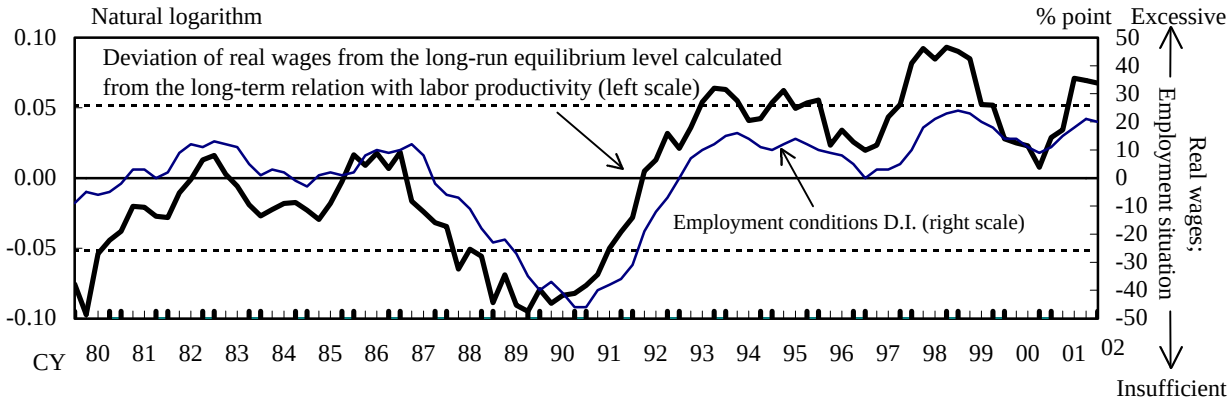


Note: Recessions are shown in shadows. Δ (2000/Q4) indicates the latest peak.

(2) Real wages and labor productivity



(3) Deviation of real wages from the long-run equilibrium level

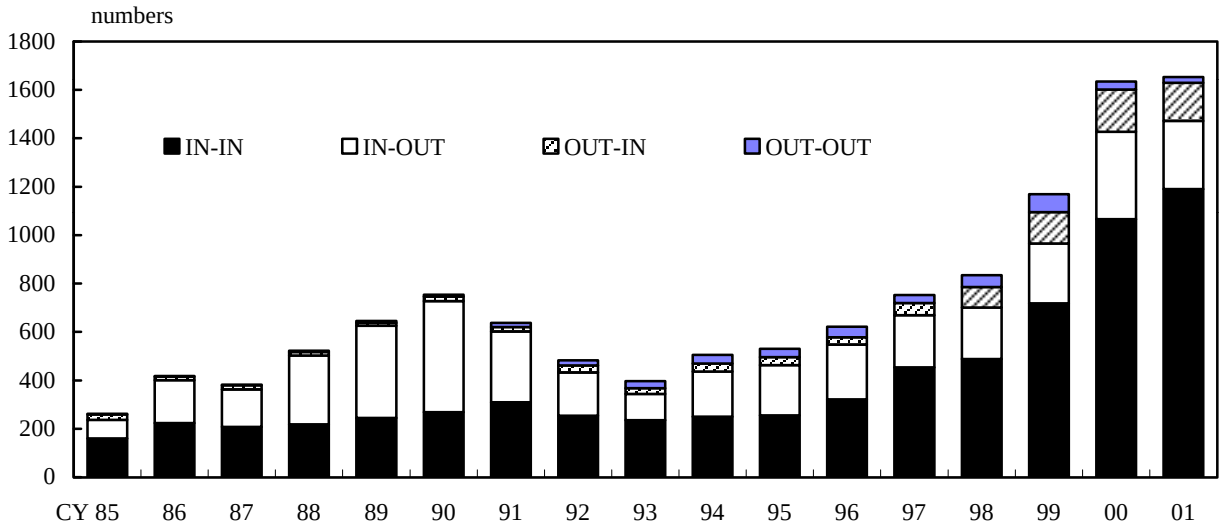


Notes: 1. Labor share = personnel expenses / (personnel expenses + operating profits + depreciation expenses) * 100
2. Real wages = (personnel expenses / number of employees) / GDP deflator
Labor productivity = [(personnel expenses + operating profits + depreciation expenses) / number of employees] / GDP deflator
3. Deviation of real wages from the long-run equilibrium level = Long-run equilibrium level of real wages - real wages
Long-run equilibrium level is estimated using the cointegration vectors which are calculated from a cointegration test (Gregory=Hansen method, considering the structural changes) on real wages and labor productivity.
[Equation]: Long-run equilibrium level of real wage = 1.11 * Level of labor productivity-2.07
4. Dotted lines indicate ± 1 standard error of the estimation. Sample period: 60/Q2-02/Q1.
5. Reference; Nishizaki and Sugou[2001]

Sources: Cabinet Office, "National Accounts"; Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly"; Bank of Japan, "*Tankan* Short-term Economic Survey of Enterprises in Japan."

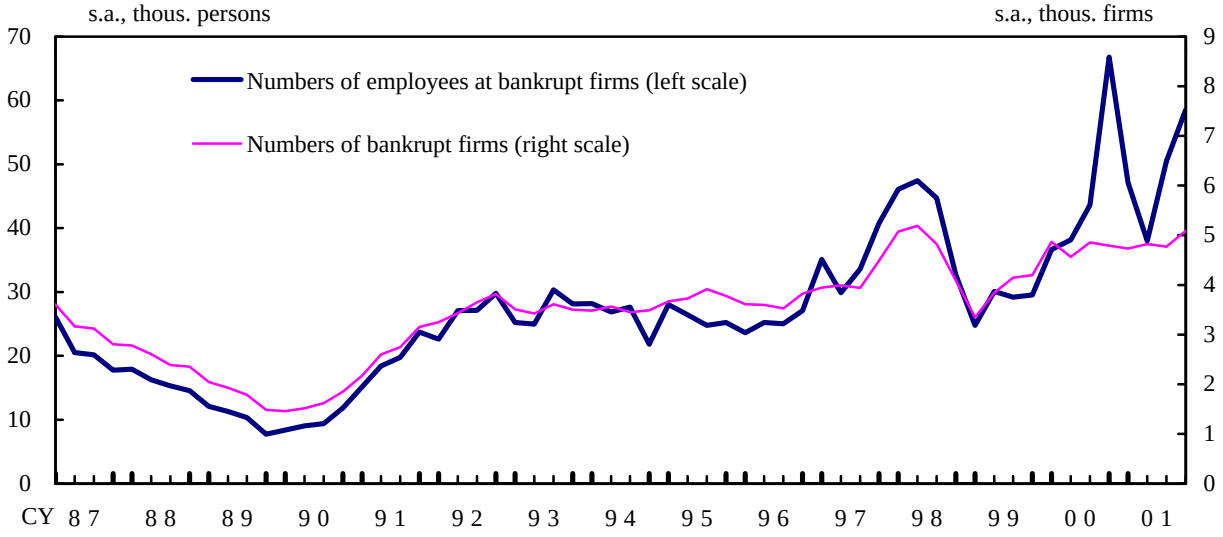
Reorganization of Enterprises, Restructuring of Businesses and Bankruptcy of Firms

(1) Mergers and Acquisitions



Note: IN-IN ; M&A of Japanese enterprise by Japanese enterprise.
IN-OUT ; M&A of foreign enterprise by Japanese enterprise.
OUT-IN ; M&A of Japanese enterprise by foreign enterprise.
OUT-OUT ; M&A involving foreign enterprise, in the management of which Japanese enterprise participates.

(2) Bankruptcy and employees at bankrupt firms



Notes: The data are based on a survey conducted by Teikoku Databank Ltd. Bankruptcies with liabilities of ten million yen or more.

Sources: RECOF, "MARR"; Teikoku Databank Ltd., "Japan's Business Failure."

Chart 8

Ratio of Non-Regular to Total Employees

level: mil. Persons, ratio: %

	1991		1996		1999		2002	
	Level	Ratio	Level	Ratio	Level	Ratio	Level	Ratio
Total	9.0	19.8	10.4	21.5	12.3	24.9	14.1	28.7
Manufacturing	n.a.	n.a.	2.0	16.4	1.9	16.9	2.1	20.1
Construction	n.a.	n.a.	0.6	13.4	0.7	14.8	0.7	15.9
Transport and Communications	n.a.	n.a.	0.5	13.9	0.6	16.5	0.6	19.5
Wholesale and Retail Trade, Restaurants	n.a.	n.a.	3.7	37.3	4.7	43.2	4.9	45.5
Services	n.a.	n.a.	2.9	22.8	3.6	26.9	4.7	31.2

Notes: 1. Non-regular employees are part-time workers, "*arubaito*," temporary workers, contracted or entrusted workers.
2. Ratio of non-regular employees = non-regular employees / total employees, excluding executives of corporations, in non-agricultural industries * 100
3. Figures from 1991 to 1999 are data as of the February of each year and those in 2002 are the averages of the first quarter.

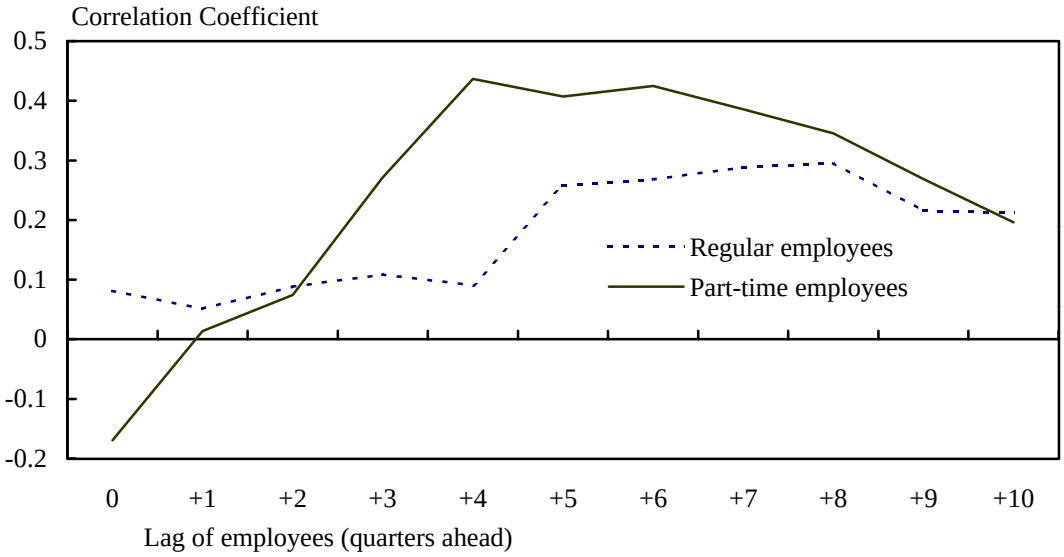
Sources: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Report on the Special Survey of the Labor Force Survey," "Labor Force Survey."

Non-Regular Employees and Real GDP

[Results of estimation]

	All employees	Regular employees	Part-time employees
Lag of employees	6 quarters	8 quarters	4 quarters
Short-term elasticity	0.21 (3.3)	0.12 (1.6)	0.80 (3.3)
Constant term	-0.96 (-6.7)	-1.05 (-7.2)	0.56 (1.1)
Adj.R^2	0.29	0.05	0.24

[Cross Correlation]

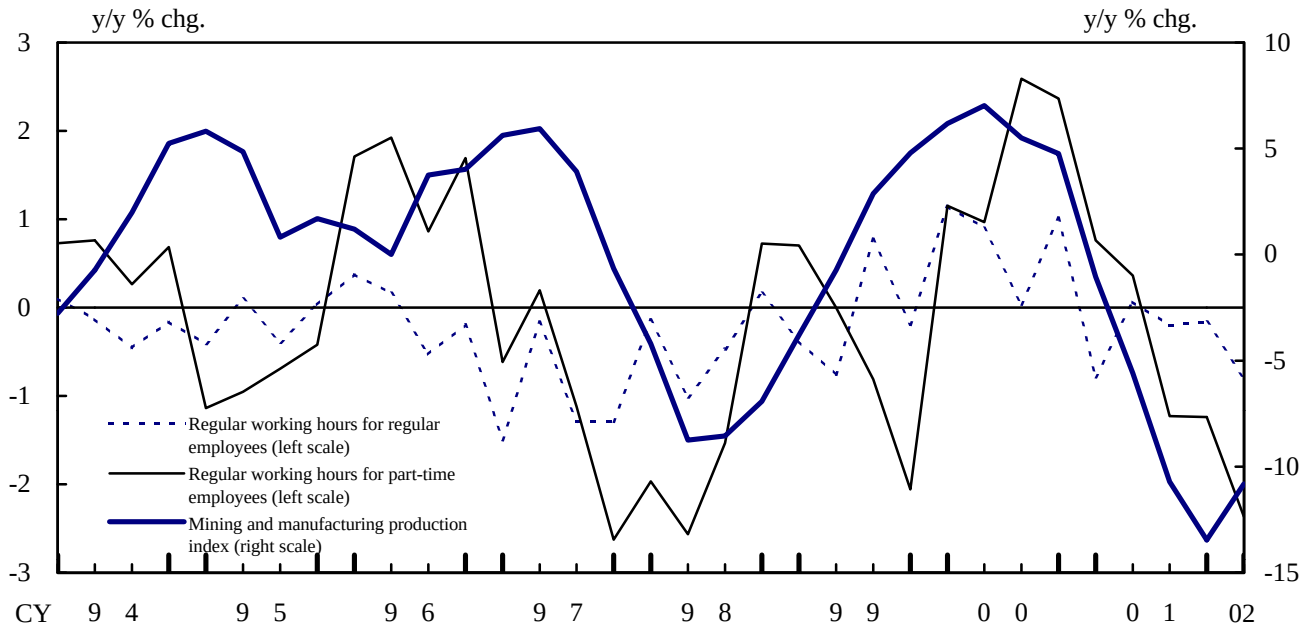


Notes: 1. Sample period: 1994/Q1-2001/Q4
2. "Lag of employees" shows how many lags the correlation coefficient with GDP is the largest during the sample period.
3. Variables for estimation are changes from a year earlier.
4. Figures in parentheses are t-statistics.

Sources: Cabinet Office, "National Accounts" ; Ministry of Health, Labor and Welfare, "Monthly Labor Survey."

Regular Working Hours and Economic Activity

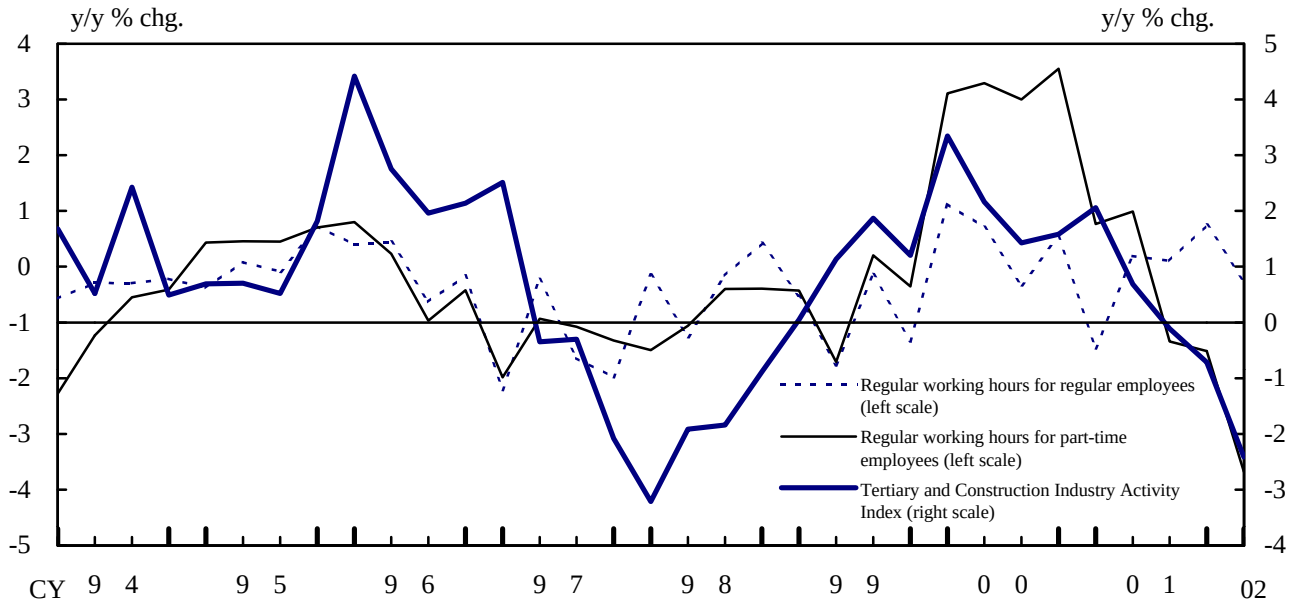
(1) Manufacturing



<Correlation Coefficient>

	94/Q1-02/Q1
Total	0.24
Regular employees	0.23
Part-time employees	0.42

(2) Non-manufacturing



<Correlation Coefficient>

	94/Q1-02/Q1
Total	0.30
Regular employees	0.20
Part-time employees	0.50

Note: Regular working hours are data for establishments with at least 5 employees.

Sources: Ministry of Health, Labor and Welfare, "Monthly Labor Survey" ; Ministry of Economy, Trade and Industry, "Indices of Industrial Production," "Indices of Tertiary Industry Activity."

Non-Regular Employees by Type and Occupation

(1) Breakdown of non-regular employees by type

ratio, %

	1987	1994	1999
Contracted workers	5.6	7.5	8.4
Seasonal, daily, and part-time workers	77.6	79.4	80.4
Workers on loan	7.5	6.1	4.7
Temporary workers	3.7	3.1	4.0
Others	5.6	4.4	2.5

(2) Ratio of non-regular to total employees by occupation

ratio, %

occupation	1999	2001
Professional and technical workers	13.8	16.2
Manager and official worker, Clerical and related workers	23.1	23.9
Sales workers	22.7	26.9
Security services workers, Services workers	47.3	48.9
Workers in transport and communications	11.8	12.9
Craftsmen and production process and construction workers	20.4	22.5
Others	46.1	50.6

(3) Breakdown of non-regular employees by occupation

ratio, %

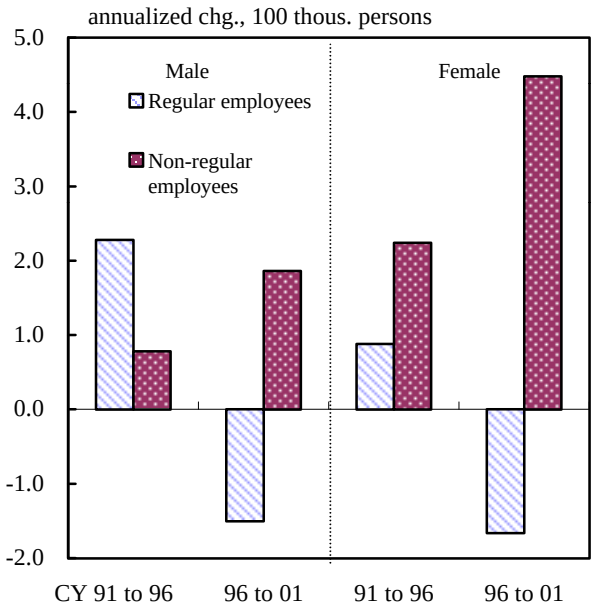
	Professional and technical workers	Manager and official worker, Clerical and related workers	Sales workers	Security services workers, Services workers	Workers in transport and communi-cations	Craftsmen and production process and construction workers	Others	Total
Regular employees	13.8	52.5	10.5	6.1	2.1	12.4	2.6	100.0
Non-Regular employees	9.3	25.7	20.3	20.4	1.8	12.2	10.3	100.0
Contracted workers	33.1	28.1	8.3	12.4	4.0	8.3	5.9	100.0
Seasonal and daily workers	3.9	28.8	38.7	14.0	1.4	7.7	5.5	100.0
Part-time workers	6.3	20.7	23.3	24.7	1.1	11.2	12.7	100.0
Workers on loan	16.7	54.8	8.0	6.9	1.1	10.6	2.0	100.0
Temporary workers	17.5	58.9	3.2	6.8	2.1	8.0	3.5	100.0
Registered	11.9	69.6	2.8	6.4	0.4	6.7	2.1	100.0
Full-time	30.2	36.0	3.7	8.1	5.8	10.6	5.6	100.0

Notes: Contracted worker : People employed to engage in technical jobs under contracts.
Seasonal and daily workers: People employed temporarily or daily for a specific period of less than one month.
Part-time worker : People who satisfy either of the followings;
(1) whose regular working hours per day are shorter or regular working days per week are fewer than those of regular staff.
(2) who are employed for more than one month or for an indefinite period.
Workers on loan : People loaned out from another company.
Registered temporary worker : People registered by temporary employment agencies and employed on demand.
Full-time temporary worker: People employed as regular employees by temporary employment agencies.

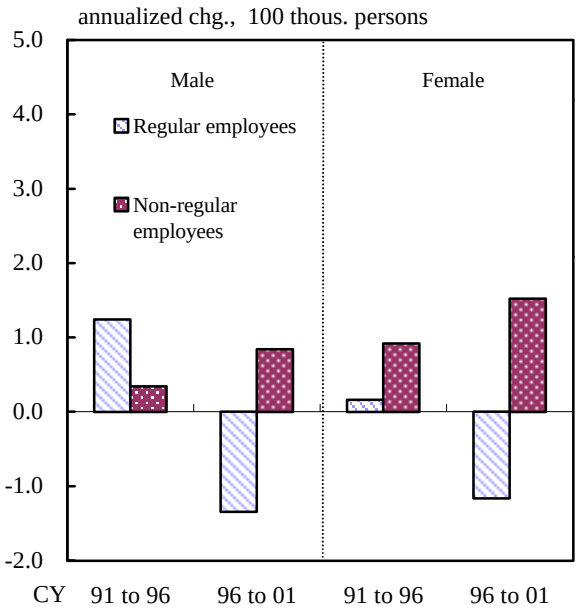
Sources: Ministry of Health, Labor and Welfare, "General Survey on Diversified types of employment" ; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Special Survey of the Labor Force Survey."

Changes in Numbers of Employees by Type

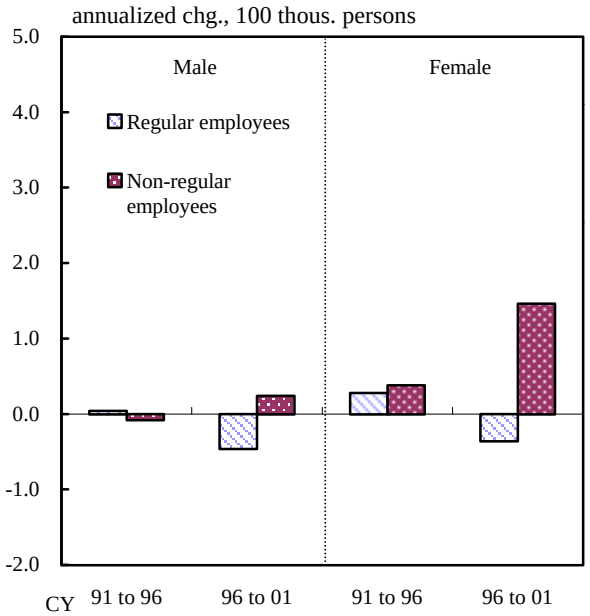
(1) Total



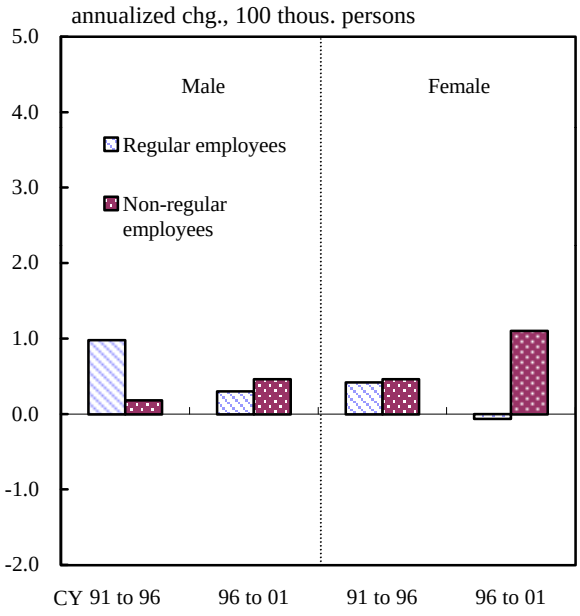
(2) 15-34 years old (excluding students)



(3) 35-54 years old



(4) 55 years old and over

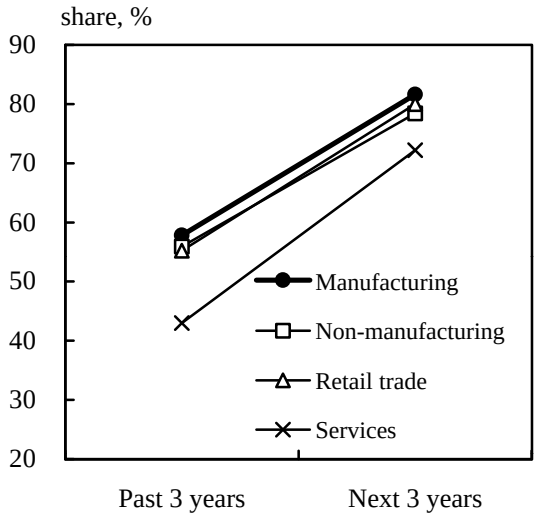


Notes:1. Non-regular employees are part-time workers, "*arubaito* ," temporary workers, contracted or entrusted workers.
2. Figures are those for the February of each year.

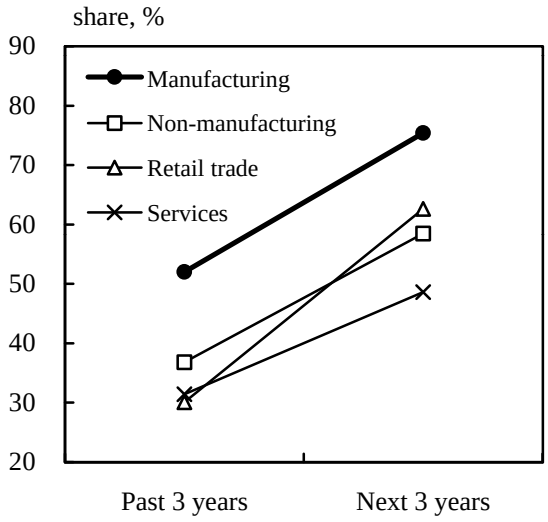
Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Report on the Special Survey of the Labor Force Survey."

Effects of IT-related Investment on Employment

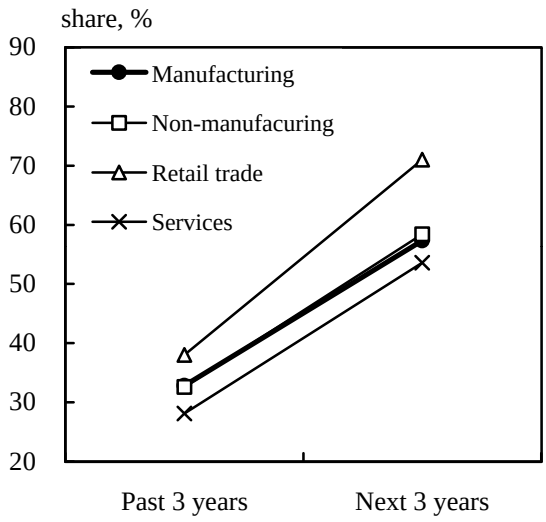
(1) Job cuts in the business management section



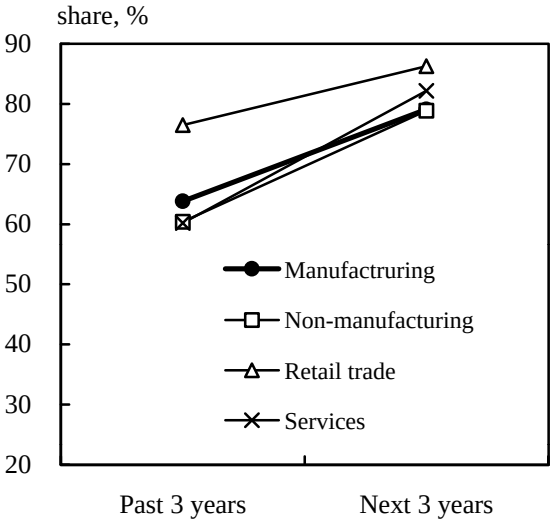
(2) Job cuts in the production and sales section



(3) Employment not assumed for the long term



(4) Use of temporary or part-time workers



[Questions]

At your company, how has the employment relationship changed in the last 3 years, due to IT-related investment?
At your company, is the employment relationship going to change over the near 3 years, as a result of IT-related investment?

[Answers]

<Last 3 years>

Has changed. / May have changed. / May have not changed. / Unchanged.

<Next 3 years>

Will change. / May change. / May not change. / Unchanged.

Figures for shares are the sum of those who answered "has changed (or will change)" and "may have changed (or may change)," as a proportion of total responses.

Source: Cabinet Office, "*Heisei 12nendo kigyou ni kansuru ankeito chousa* (Opinion survey on corporate behavior FY2000)."

Deregulation Relating to Temporary Employment

1. A chronology of deregulation

Date	Contents of deregulation
1986.7	Enactment of *Temporary Employment Law* (Only 13 types of employment allowed.)
1986.10	3 types added (16 total) Machinery designer; Broadcasting equipment operator; Broadcast program director; Development of software; Clerical equipment operator; Interpreter, Translator, and Stenographer; Secretary; Filing; Investigator; Accounting clerk; Trading document writer; Demonstrator; Tour conductor; Building sanitation worker; Operating, inspecting and repairing of buildings; Receptionist, Information clerk, and Manager of parking lot --Underlined businesses are those newly included.
1996.12	10 types added (26 total) Research and Development; Business planner; Production and edition of books, Advertising designer; Interior designer; Announcer; OA instruction; Tele-marketing; Sales engineer; Sets and properties for broadcasting programs
1999.12	Any type of employment allowed excluding the following. [Prohibited businesses] Port transport services; Construction; Security services; Manufacturing Businesses designated by the Cabinet Order or other laws as follows; Medical services; Lawyer; Attorney for general foreign legal affairs; Judicial scrivener; Land and Building Surveyor; Certified public accountant; Licensed tax accountant; Patent attorney; Certified social insurance worker; Certified solicitor Working period strictly limited to one year (but 26 designated businesses allowed to renew up to three years.)
2000.12	Lifting of the ban of “Temp-to-Perm services”
2002.01	Limit of working period extended to 3 years for workers older than 45 years old (Temporary measure until March 2005).

2. Remaining regulations

(1) Reporting and Permission system

Specified Temporary Worker Services: An agency which employs temporary workers as regular employees must report to the authorities.

General Temporary Worker Services: An agency that employs temporary workers as registered employees must obtain permission to do so.

(2) Some businesses such as manufacturing remain prohibited from employing temporary workers.

(3) Companies receiving temporary workers are prohibited from interviewing job applicants in advance.

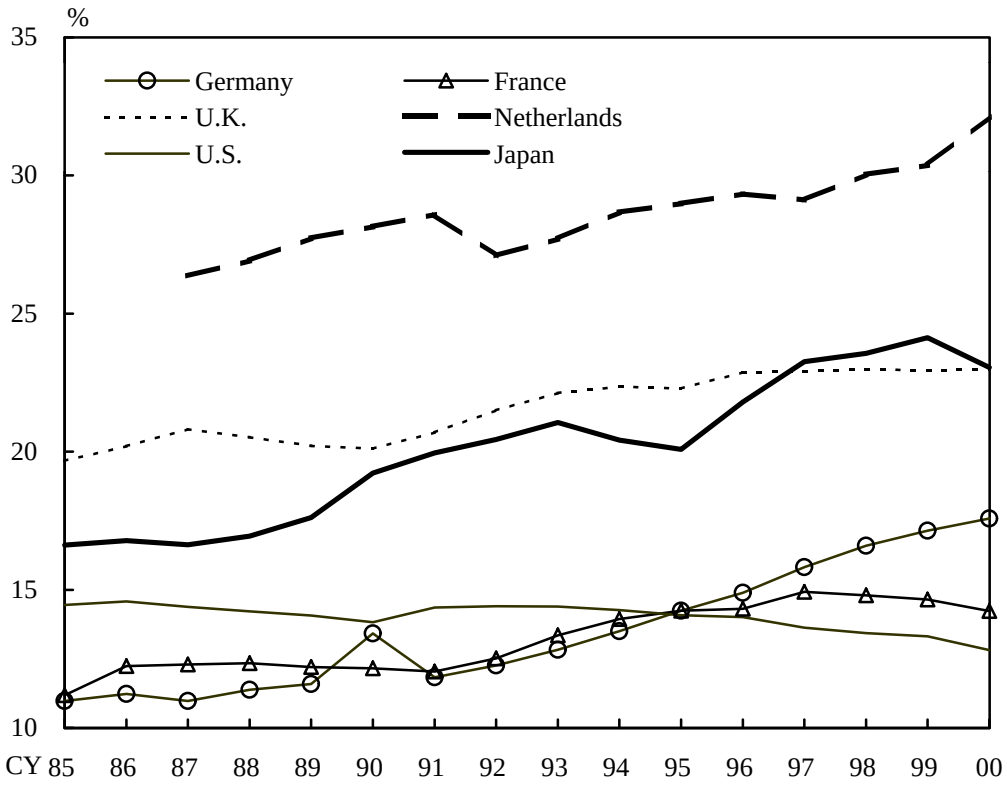
(4) ”One- year limitation” on the working period

Recipient companies are basically prohibited from having a temporary worker in the same post continuously for more than one year with the exception of 26 types of employment, designated before 1999. (If the recipient company continues to employ a temporary worker for the same post for more than one year, it is obliged to attempt to employ the worker.)

Source: Japan Staffing Services Association, “*Jinzaihakenhakusho 2001 --Jinzaihaken Ikashikata Hatarakikata--* (White paper on staffing services 2001).”

Chart 15

Ratio of Part-time to Total Employees



[Definition of part-time workers]

Japan	: Workers who work less than 35 hours a week (except for those furloughed).
U.S.	: Workers who usually work less than 35 hours a week. (excluding family workers who work less than 15 hours a week).
U.K.	: Workers who recognize themselves as part-time workers.
France	: Same as above.
Germany	: Workers whose working week is shorter than that of regular workers. (In principle, a regular working week must be less than 35 hours.)
Netherlands	: Workers whose working week is shorter than that of regular workers.

Source: OECD, "Labor Force Statistics."

Chart 16

Employees and Real GDP in Europe and U.S. (1990s)

	Lag of employees	Short-term elasticity	Adj.R^2
U.S. (1990-2001)	0 quarter	0.52	0.69
U.K. (1990-2001)	2 quarters	0.81	0.64
Germany (1992-2001)	1 quarter	0.34	0.20
Netherlands (1990-2001)	2 quarters	0.70	0.63
Japan (1994-2001)	1 quarter	0.35	0.50

[Estimation Equation]

(Number of employees) = a * (Real GDP) + b * (Constant)

Notes: 1. a = Short-term elasticity
2. Variables for estimations are percentage changes from a year earlier and data are quarterly.
3. Figures are civilian employees excluding the self-employed and family workers.
4. Lag of employees is determined by the largest correlation coefficient between employees and real GDP. The same lag is used for real GDP in the estimation equation.

Sources: Labor statistics from each country ("*Labor Force Survey*" for Japan).

Chart 17

Estimation of Hourly Regular Wages

	81/Q2-93/Q4		81/Q2-01/Q4	
One-period lagged dependent variable	0.71	(8.2)	0.63	(10.7)
Hourly nominal GDP	0.20	(2.7)	0.25	(5.5)
Dummy for shorter working hours	0.48	(2.1)	0.51	(2.4)
Constant	-0.04	(-0.1)	0.11	(0.6)
Adj.R^2	0.64		0.82	

--Figures in parentheses are t-statistics.

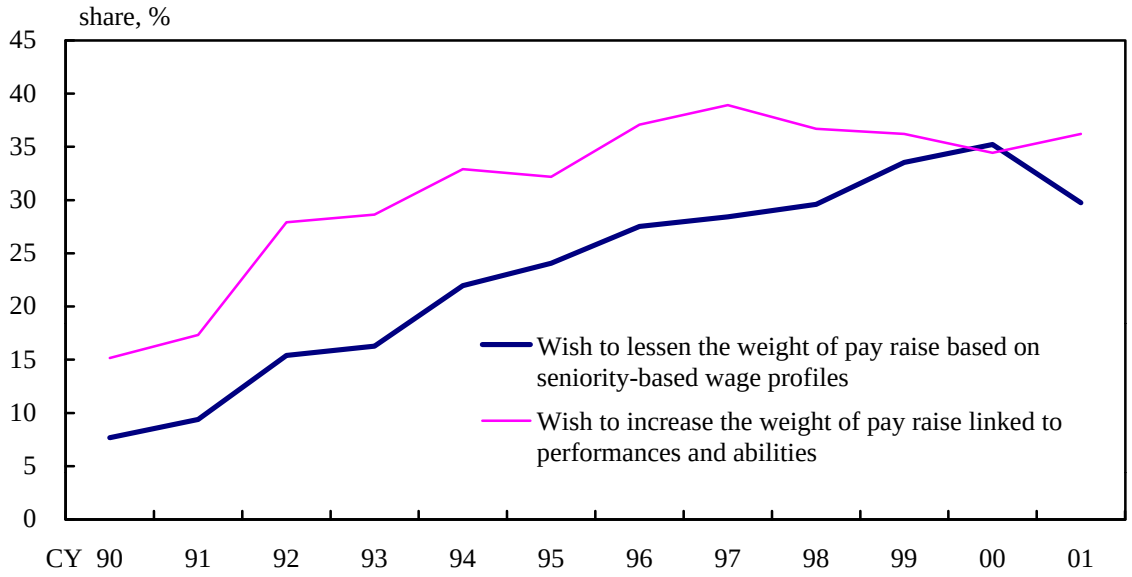
[Estimation Equation]
Hourly regular wages = a * (One-period lagged hourly regular wages) + b * (Hourly nominal GDP)
+ c * (Dummy for shorter working hours) + d * (Constant)

Notes: 1. Dependent variable is regular wages per regular working hour.
2. Hourly nominal GDP = Nominal GDP / Regular employees / Total hours worked
3. Variables for estimation are percentage changes from a year earlier.
4. Period of dummy variable for shorter working hours is from 88/Q1 to 93/Q4.

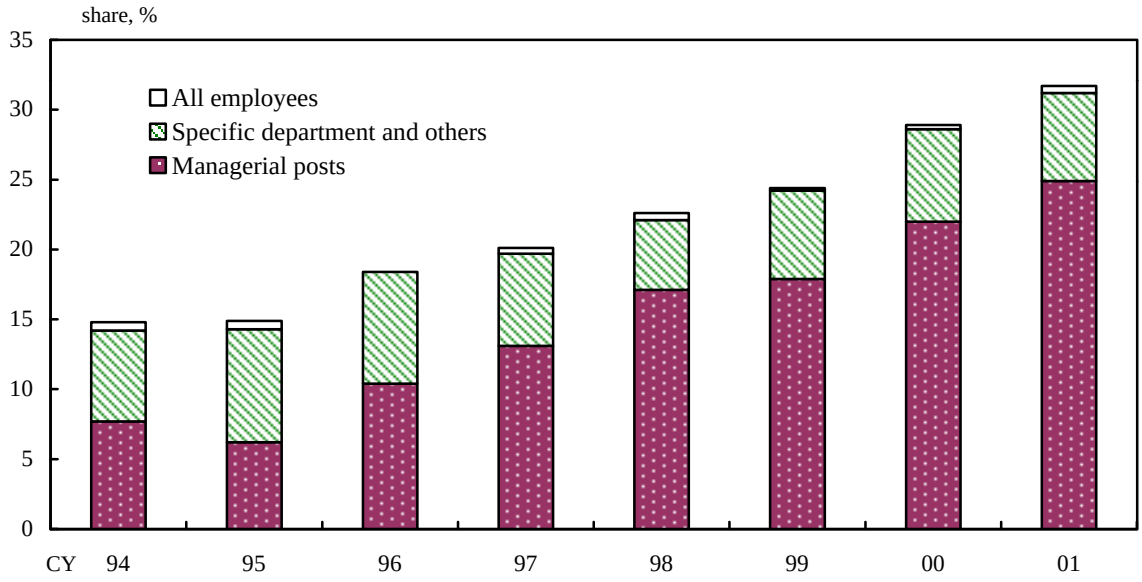
Sources : Cabinet Office, "National Accounts";
Ministry of Health, Labor and Welfare, "Monthly Labor Survey."

Reexamination of the Salary System

(1) Reexamination of the pay raise system



(2) Adoption of annual salary system

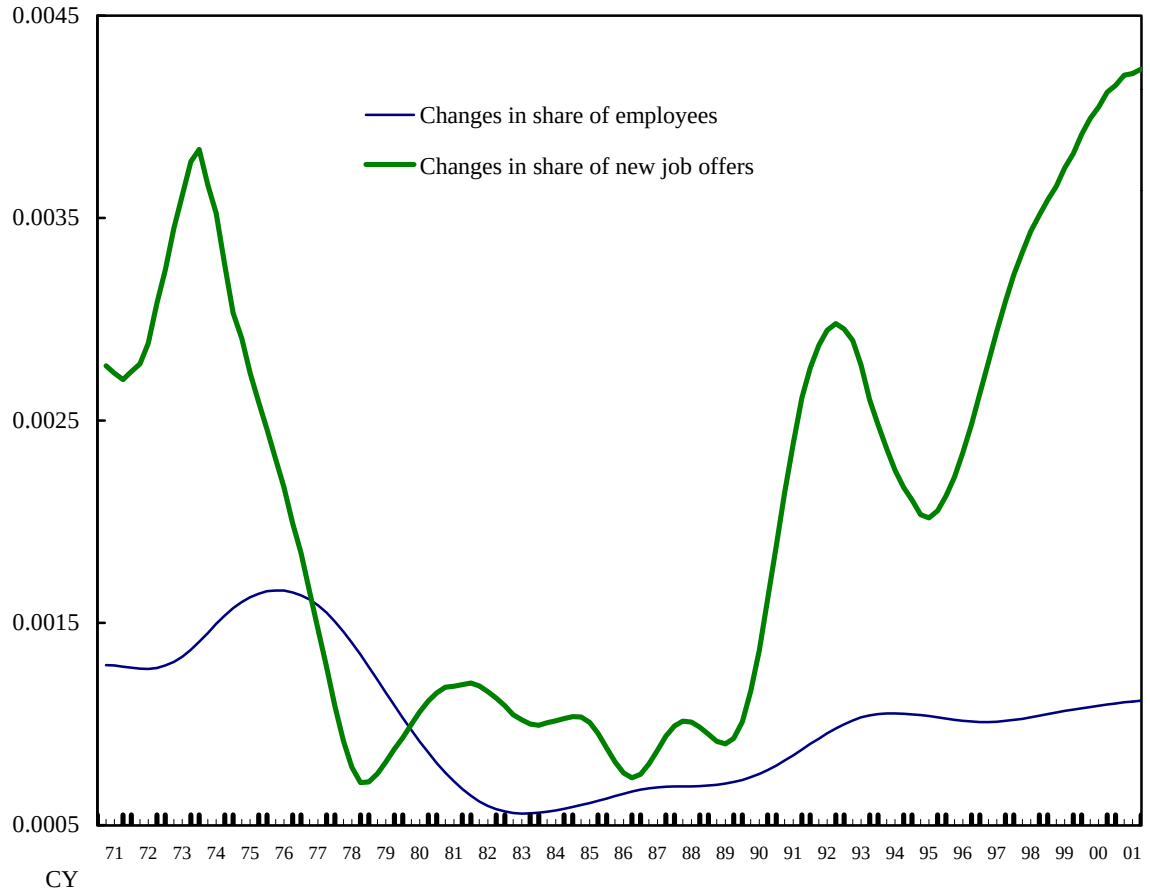


Notes: 1. Figures in (1) are the share of companies replying that their salary system had some problems due to the reason under examination (multiple answers allowed).
2. Figures in (2) are the share of companies that adopt annual salary systems by category.
3. The sample consists of enterprises whose executive and financial directors belong to the Japan Federation of Employers' Associations and /or are members of the Tokyo Employers' Association (The number of valid responses in the 2001 survey was 415).

Source : Japan Business Federation, "*Shokyu besu appu jisshi jyokyo chosa* (Survey on pay-raise and base salary increases)."

Chart 19

Changes in Shares of New Job Offers and of Employees by Industry



[Calculation method]

(1) Abstract trends calculated using the HP filter from the share of new job offers (or of employees) by industry. (Smoothing parameter is 1600.) = A
(2) Squared rate of change of A from a quarter earlier = B
(3) Sum of B weighted by the share of new job offers (or of employees) by industry = C
(4) Calculate the square root of C = D
(5) Figures for D are shown in the chart.

Notes :1. As for the number of new job offers, jobs offered to new graduates and part-time employees are excluded before FY1985. Thereafter, only jobs offered to new graduates are excluded.
2. 8 major industries are used in the estimation for the number of new job offers, and 9 major industries for the number of employees.
3. Reference: Fujita[1998]

Sources : Ministry of Health, Labor and Welfare, "Report on Employment Service," "Monthly Labor Survey."

Employees and Total Wages by Industry

(1) Employees--*Labor Force Survey*

annualized % chg.

	81-90	91-95	96-01	98-01
Total	2.0	1.7	0.3	-0.1
Manufacturing	1.4	0.0	-1.6	-2.4
Non-manufacturing	2.2	2.3	0.9	0.6
Construction	0.8	3.3	-0.8	-2.0
Finance, Insurance and Real estate	3.1	0.2	-1.7	-1.6
Transport and communications	0.6	1.5	0.3	-0.2
Wholesale and retail trade	2.4	1.7	0.9	0.6
Services	3.8	3.1	2.5	2.2

(2) Total wages--*Monthly Labor Survey*

annualized % chg.

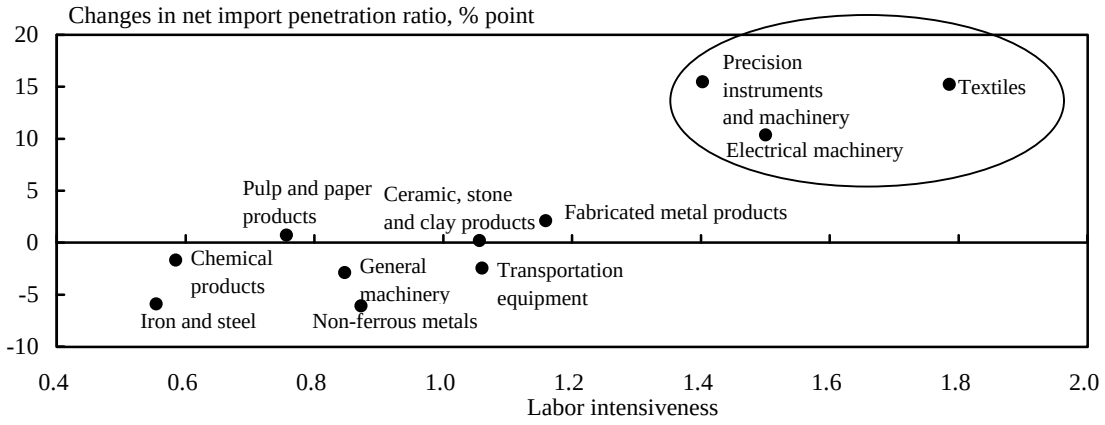
	81-90	91-95	96-01	98-01
Total	3.6	1.8	-0.1	-0.8
Manufacturing	3.9	2.0	0.6	-0.3
Non-manufacturing	3.4	1.8	-0.3	-0.9
Construction	4.7	2.3	-0.9	-1.9
Finance, Insurance and Real estate	4.0	1.8	0.1	-0.8
Transport and communications	3.8	1.5	-0.7	-0.8
Wholesale and retail trade	2.9	1.6	-0.7	-1.6
Services	3.0	1.6	0.2	-0.3

Note: 1981-1990 figures are the data for establishments with at least 30 employees, and those after 1990 are for establishments with at least 5 employees.

Sources: Ministry of Health, Labor and Welfare, "Monthly Labor Survey"; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey."

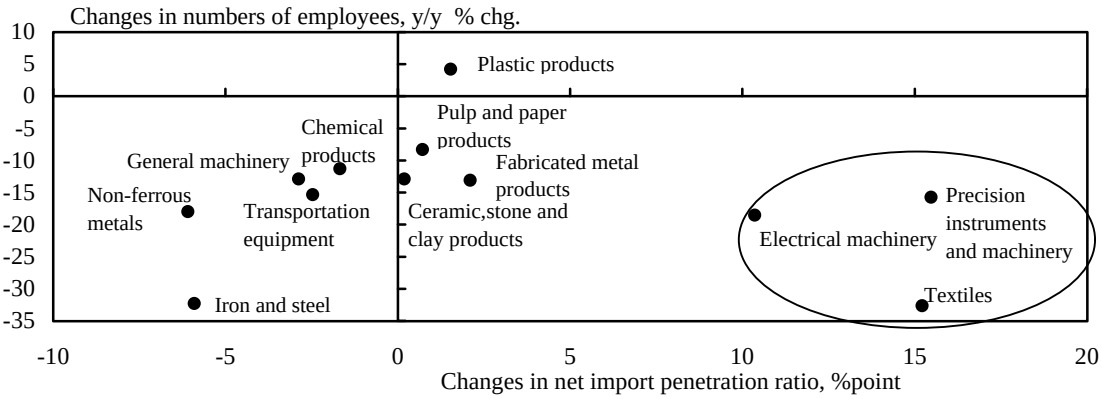
International Competitiveness and Employees

(1) Labor intensiveness and net import penetration ratio



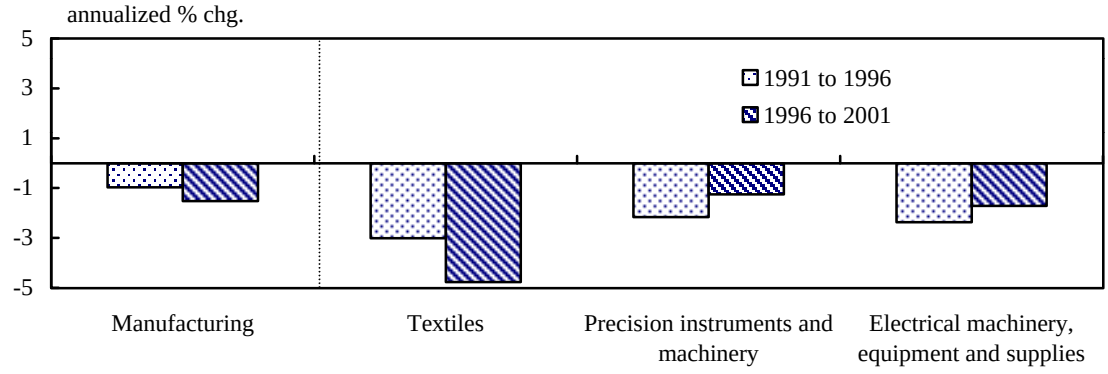
Notes: 1. Labor intensiveness = Employees (data for establishments with at least 5 employees) by industry / real GDP by industry <Data for CY1990>
2. Labor intensiveness of manufacturing industry is normalized to 1.
3. Changes in the net import penetration ratio are from 1990 to 2000.

(2) Net import penetration ratio and employees (data for establishments with at least 5 employees)



Notes : Changes in the net import penetration ratio are from 1990 to 2000.
Changes in numbers of employees are annual averages from 1991 to 2001.

(3) Changes in numbers of employees in industries where the change in net import penetration ratio is large



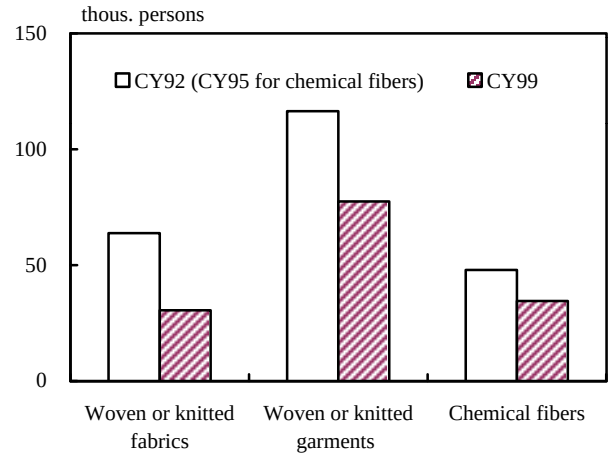
Note : Net import penetration ratio = [imports/ (domestic shipments + imports)] - [shipments abroad / (domestic shipments + shipments abroad)]

Sources : Cabinet Office, "National Accounts"; Ministry of Health, Labor and Welfare, "Monthly Labor Survey"; Ministry of Economy, Trade and Industry, "Indices of Industrial Domestic Shipments and Imports."

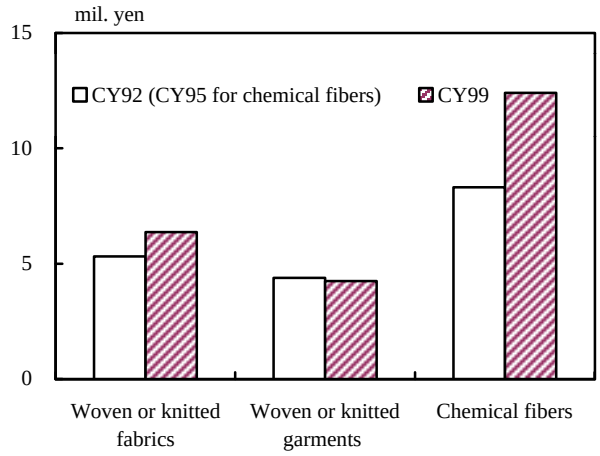
Structural Changes by Industry

1. Textile industry

(1) Workers

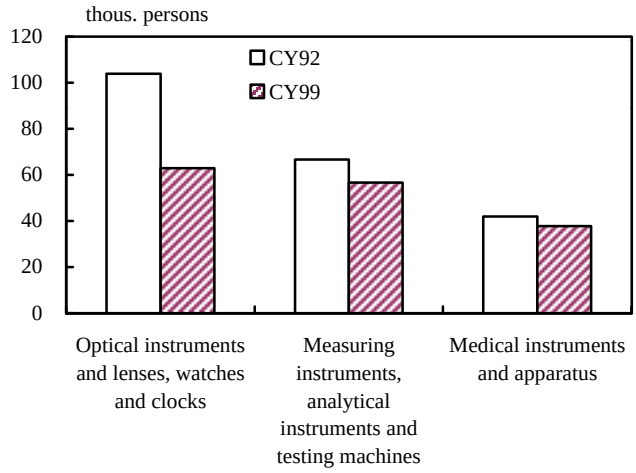


(2) Value added per worker

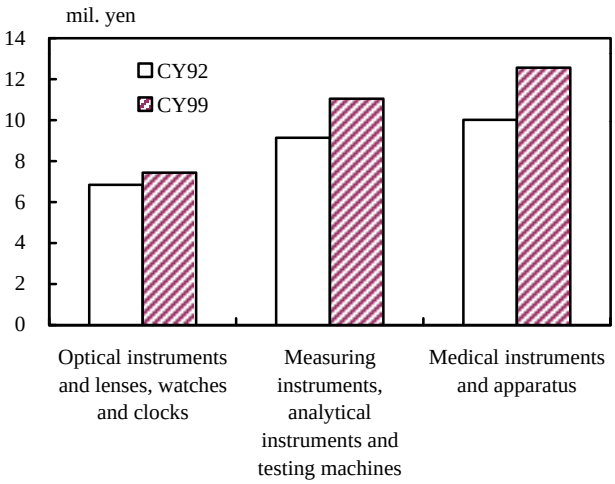


2. Precision instruments and machinery

(1) Workers

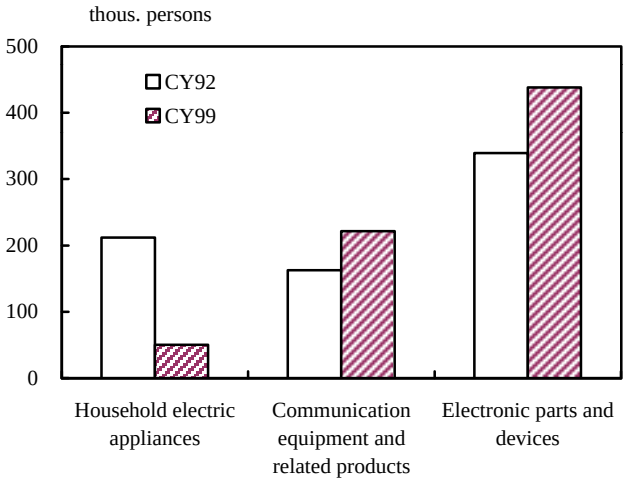


(2) Value added per worker

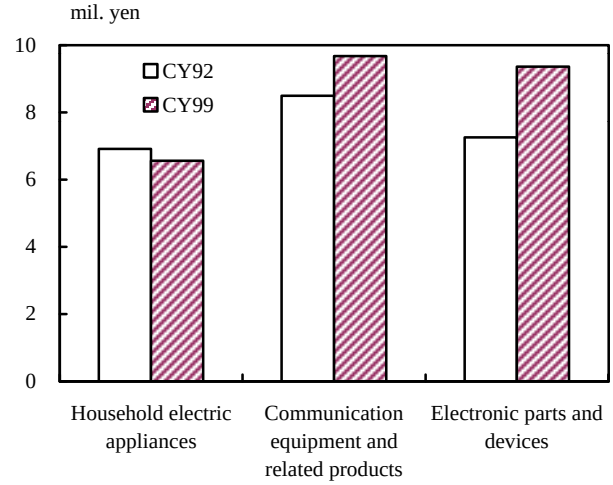


3. Electrical machinery, equipment and supplies

(1) Workers



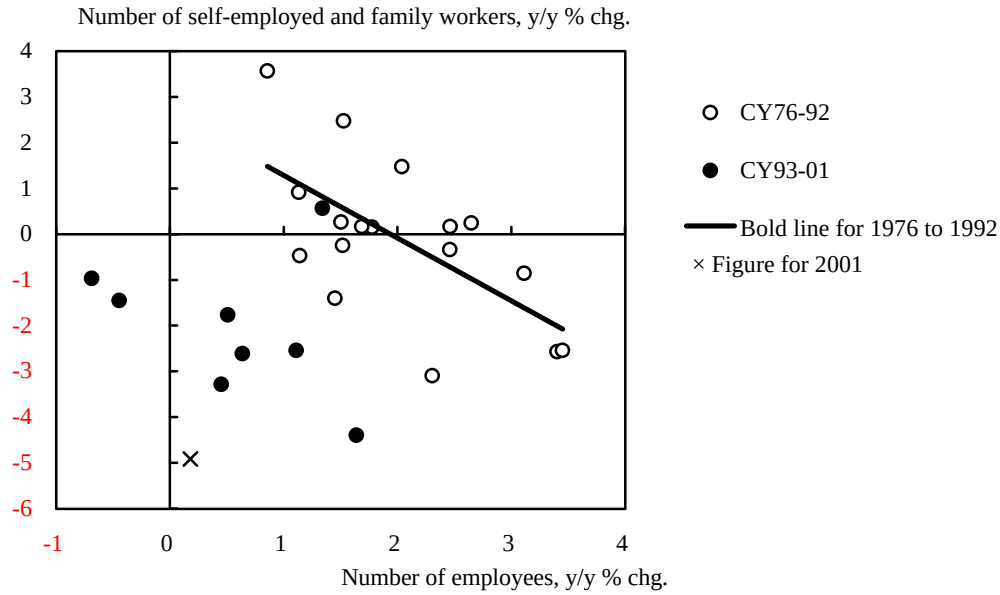
(2) Value added per worker



Sources : Ministry of Economy, Trade and Industry, "Results of the Basic Survey of Japanese Business Structure and Activities," "Census of Manufactures."

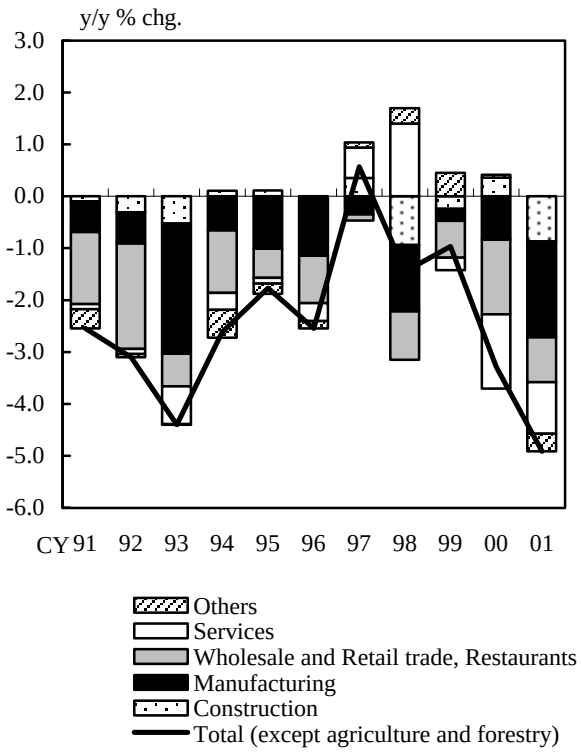
Self-employed and Family Workers

1. Relations with employees



2. Self-employed and Family workers by industry

(1) Percentage changes

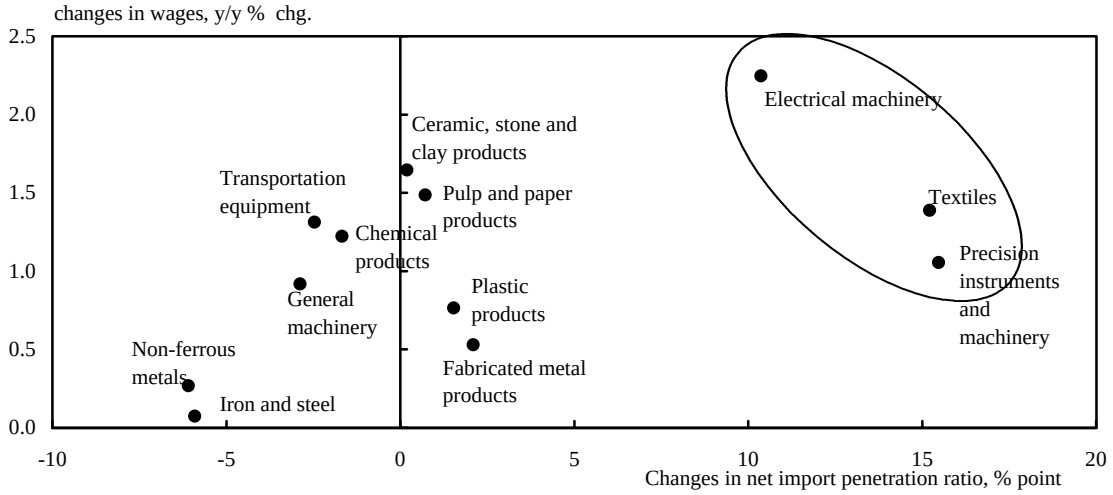


(2) Level

Note : Agricultural industry is excluded.
Source : Ministry of Public Management, Home Affairs, Posts and Telecommunications, " Labor Force Survey."

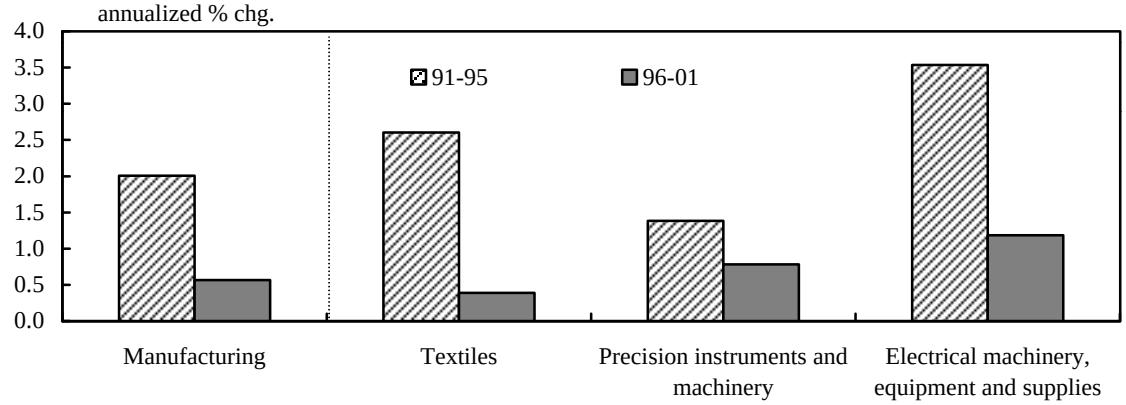
International Competitiveness and Wages

(1) Net import penetration ratio and wage growth rate

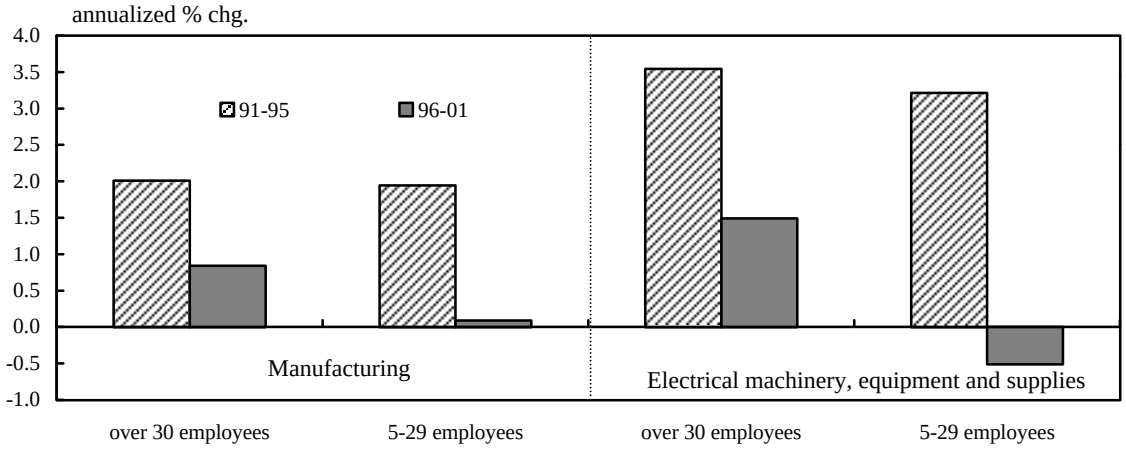


Notes: Changes in net import penetration ratio are from 1990 to 2000.
Changes in wages are annual averages from 1991 to 2001.

(2) Changes in wages in industries where the change in net import penetration ratio is large



(3) Changes in wages by size of establishment

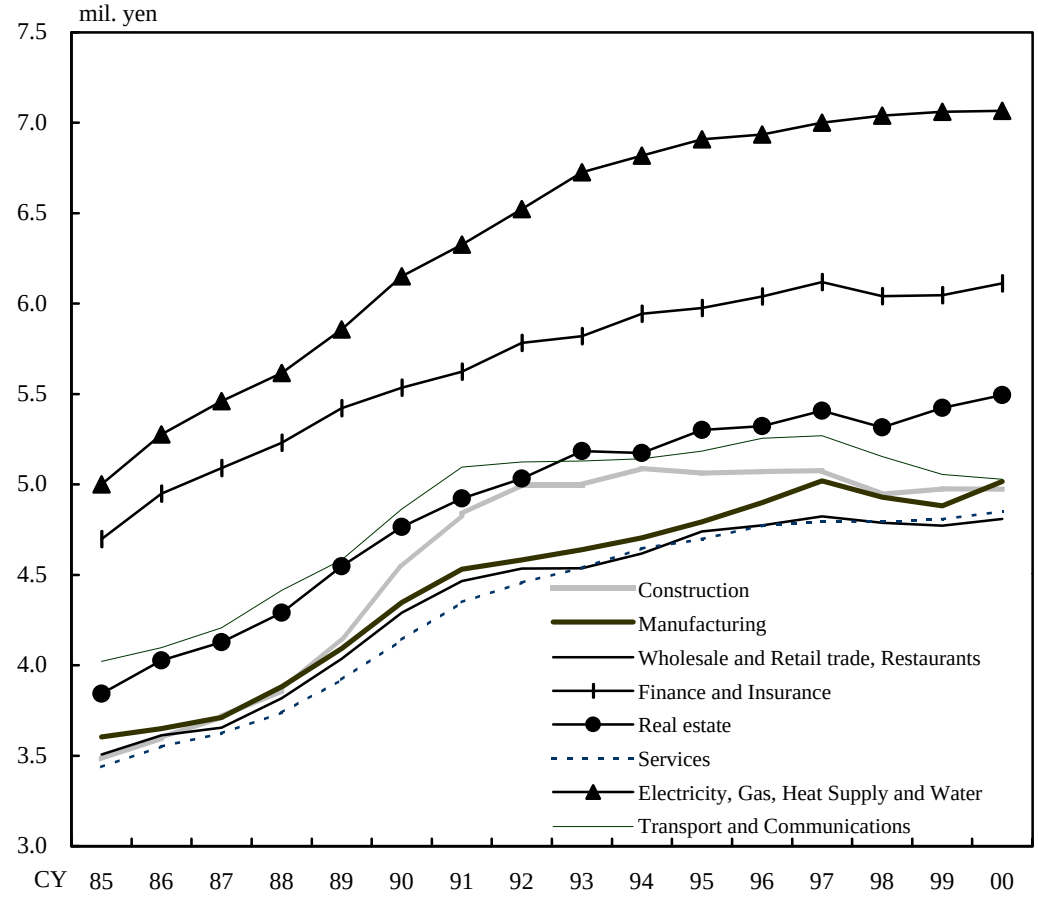


Note: Figures for wages in (1) and (2) are data for establishments with at least 5 employees.
Sources: Ministry of Health, Labor and Welfare, "Monthly Labor Survey";
Ministry of Economy, Trade and Industry, "Indices of Industrial Domestic Shipments and Imports."

Chart 25

Total Wages by Industry

Total wages of regular employees

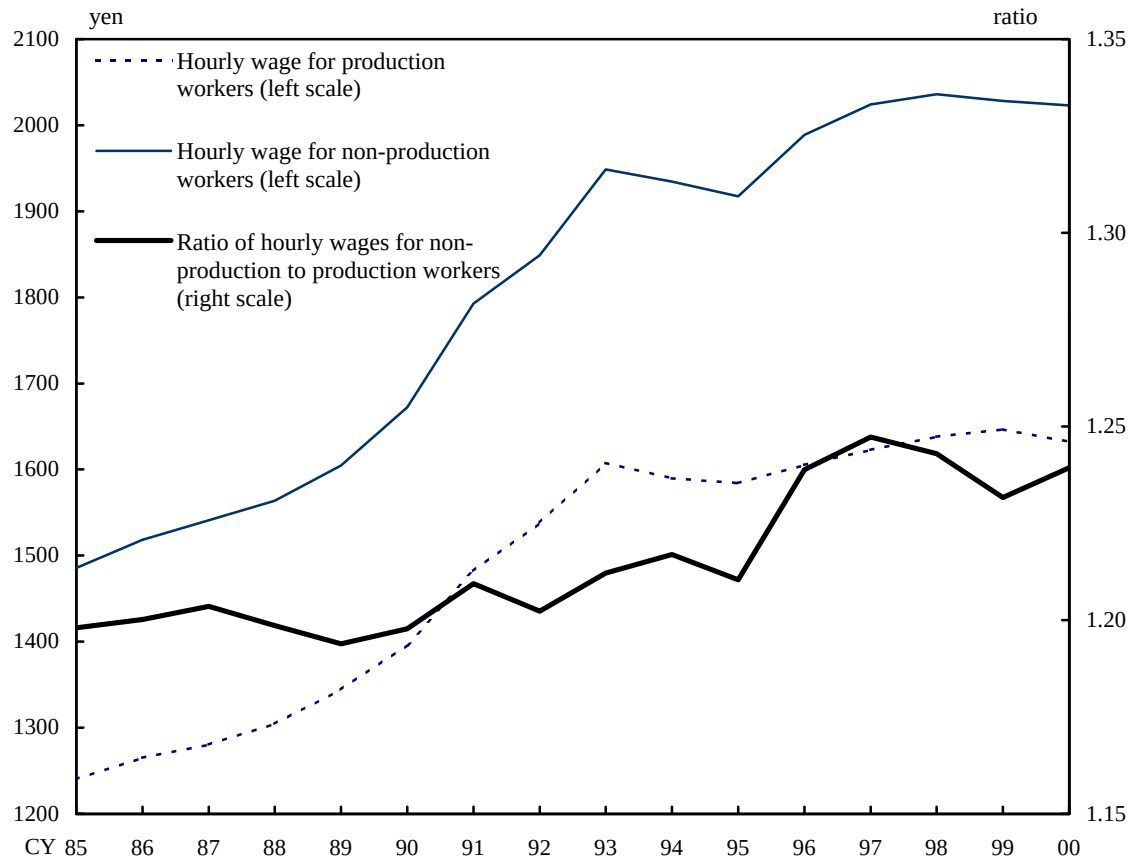


Note: See notes in Chart 5 for the definition of total wages.

Sources: Ministry of Health, Labor and Welfare, "Basic Survey on Wage Structure."

Chart 26

Wages by Employee Type



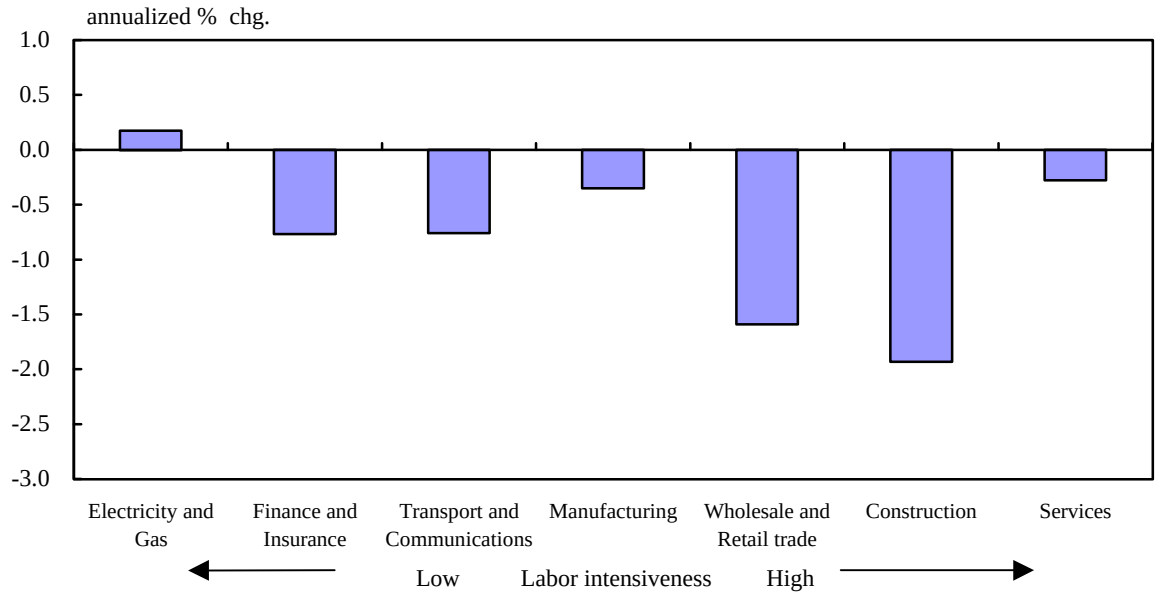
Notes: 1. Wages are regular hourly payments (= regular payments / regular working hours) of male employees in their thirties in the manufacturing industry.

2. "Production workers" are those who engage in manufacturing activities such as processing, assembling, inspection, measuring, transporting, packing, preserving, and fixing activities.
"Non-production workers" are employees such as technical workers, managers, officials and clerical workers.

Source : Ministry of Health, Labor and Welfare, "Basic Survey on Wage Structure."

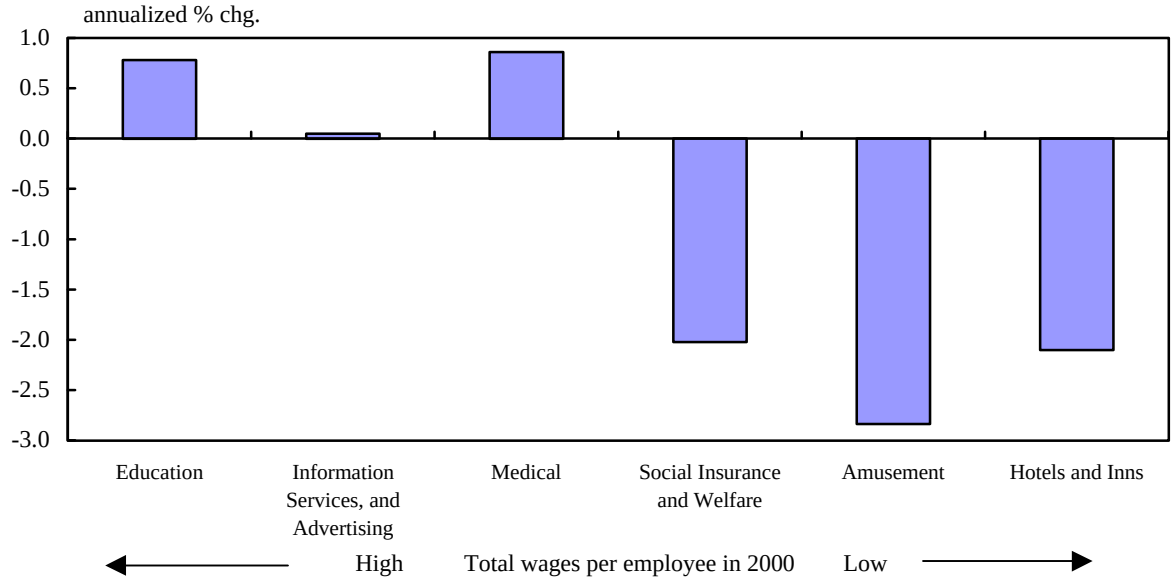
Total Wages in the Non-manufacturing Industry

(1) Wages and labor intensiveness (CY98-01 average)



Note : Labor intensiveness = Employed people (SNA basis) by industry / Real GDP by industry
<Data for CY1995>

(2) Wages in the services industry (CY98-01 average)



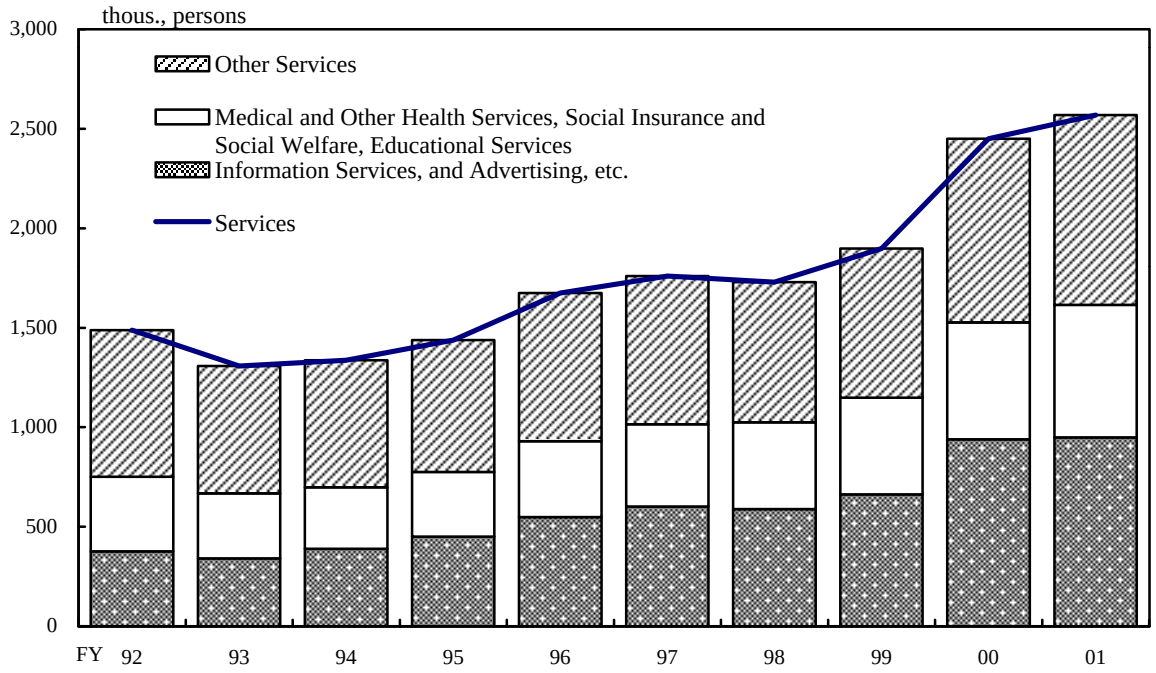
Notes: 1. Figures for total wages are data for establishments with at least 5 employees.
2. Figures for total wages per employee are data for CY2000.

Sources: Cabinet Office, "National Accounts"; Ministry of Health, Labor and Welfare, "Monthly Labor Survey."

Chart 28

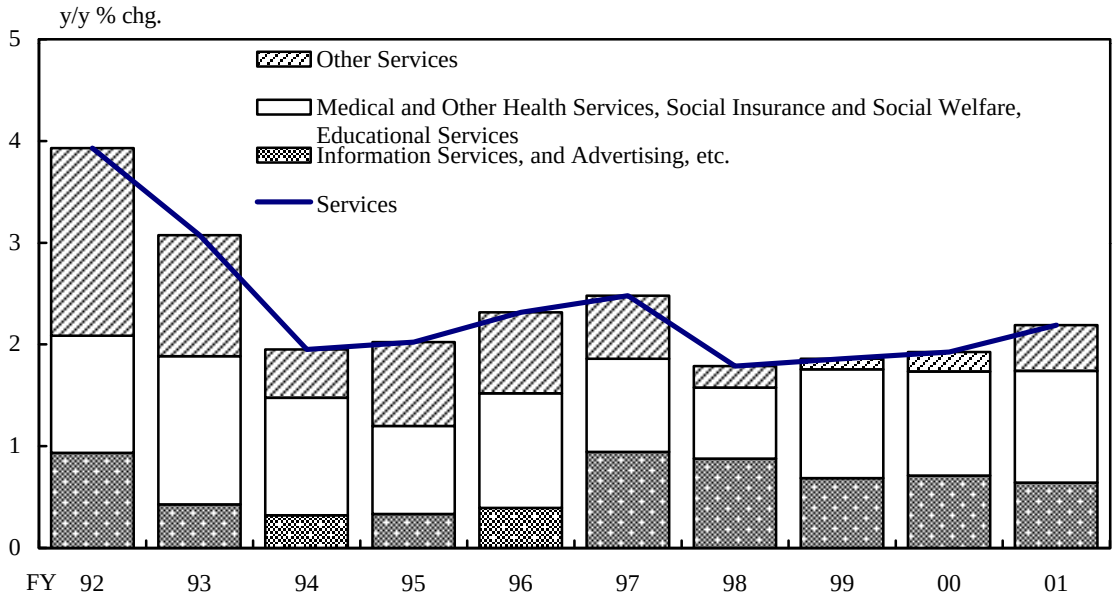
Job Offers and Employees in the Services Industry

(1) New job offers



Note : Information Services, and Advertising etc. includes Miscellaneous Business Services such as Building Maintenance Services, Guard Services and Temporary Employment Services.

(2) Number of regular employees

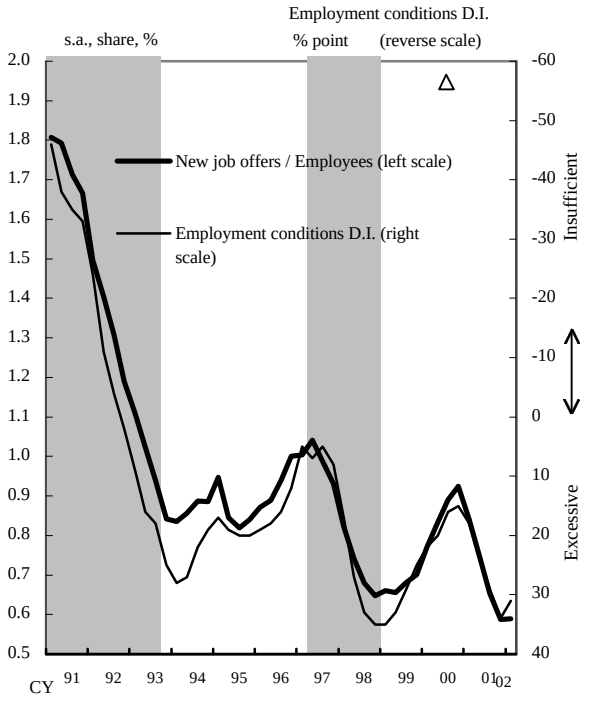


Note: Data for establishments with at least 5 employees.

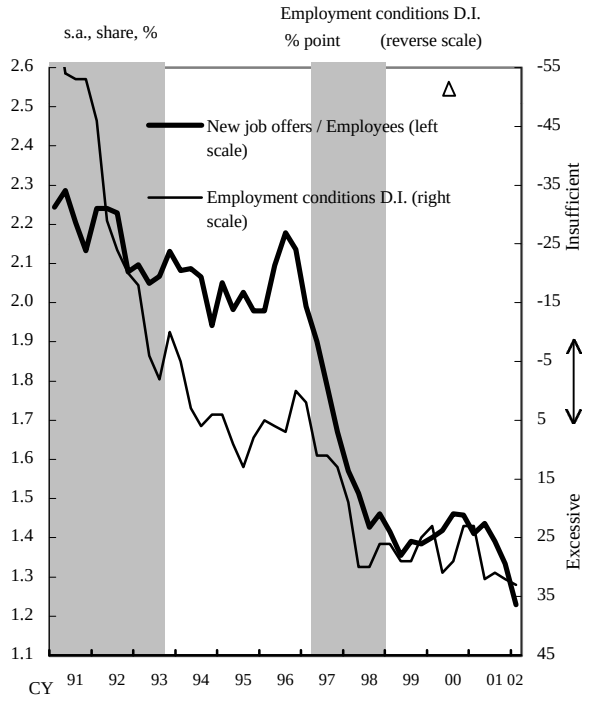
Sources: Ministry of Health, Labor and Welfare, "Report on Employment Service," "Monthly Labor Survey."

Employment Conditions D.I and New Job Offers

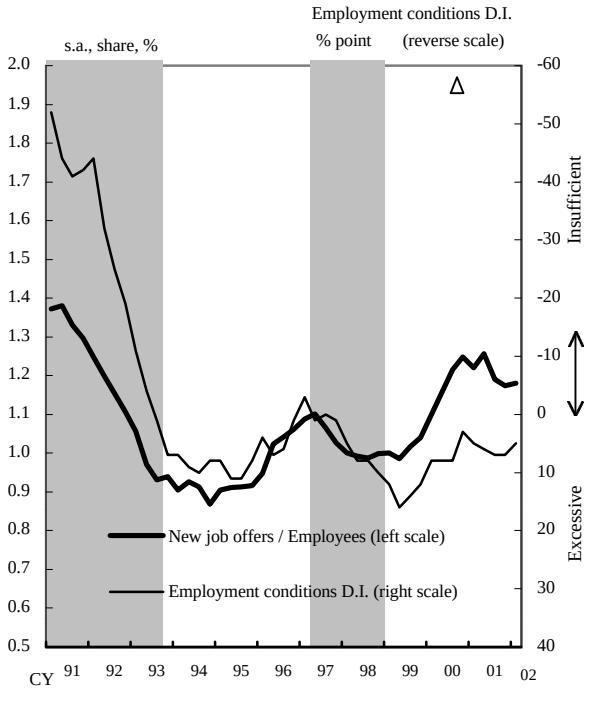
(1) Manufacturing



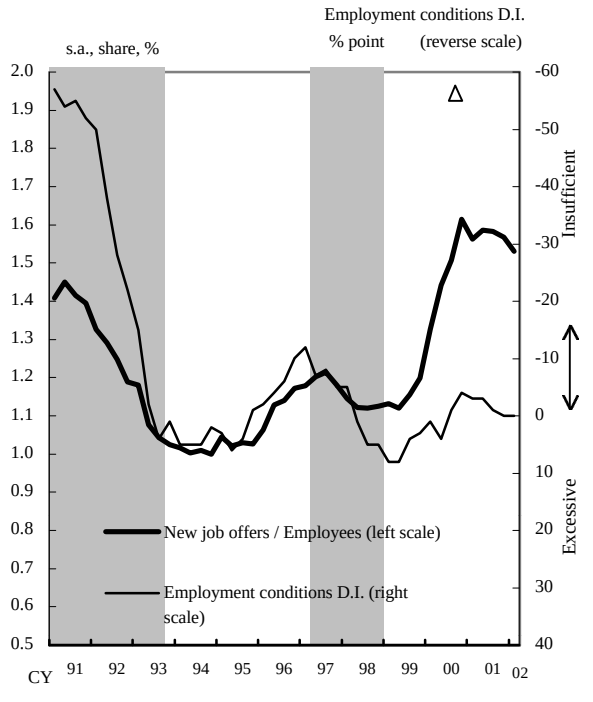
(2) Construction



(3) Wholesale and retail trade, restaurants



(4) Services

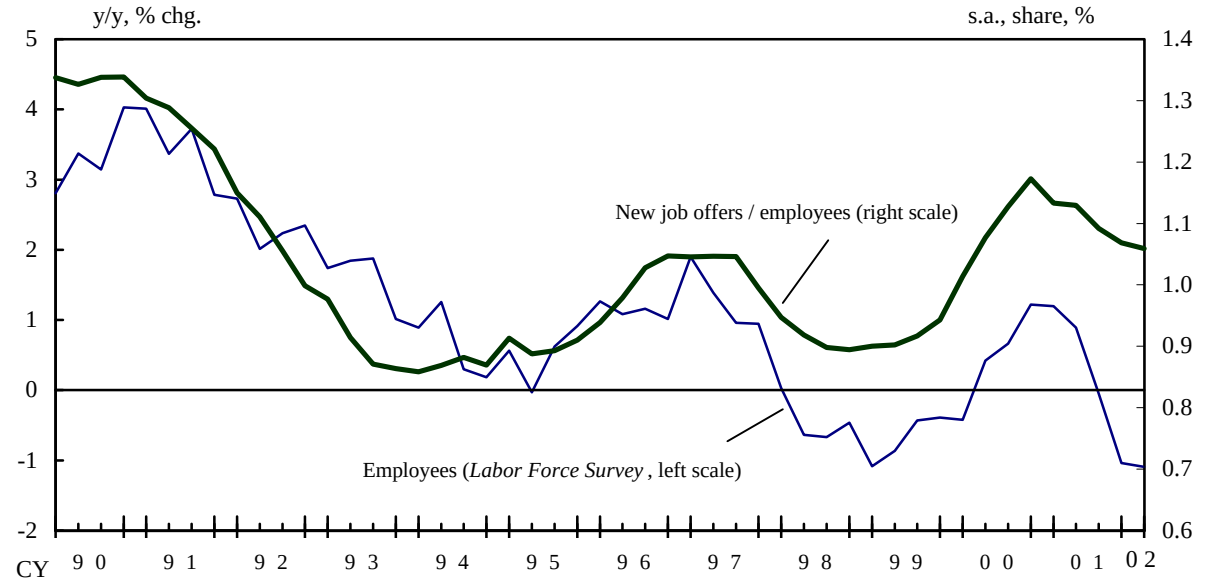


Notes: 1. Recessions are shown in shadows.△ (2000/Q4)indicates the latest peak.
2. Figures for employees are data from the *Labor Force Survey*.
3. Restaurants are categorized in the services industry in the *Tankan.*

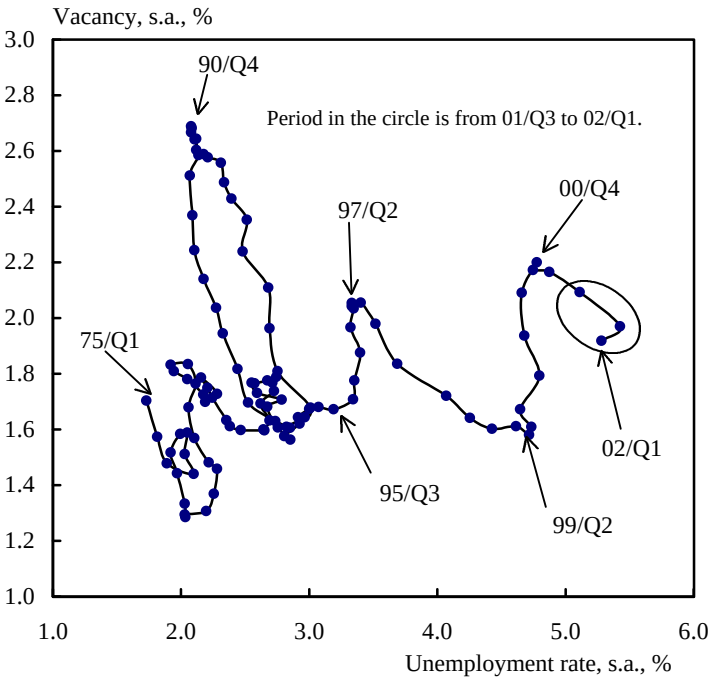
Sources : Ministry of Health, Labor and Welfare, "Report on Employment Service"; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey"; Bank of Japan, "*Tankan* Short-term Economic Survey of Enterprises in Japan."

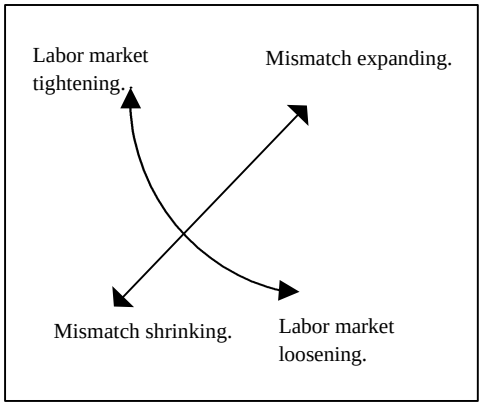
Mismatch in the Labor Market

(1) Employees and new job offers



(2) Beveridge curve



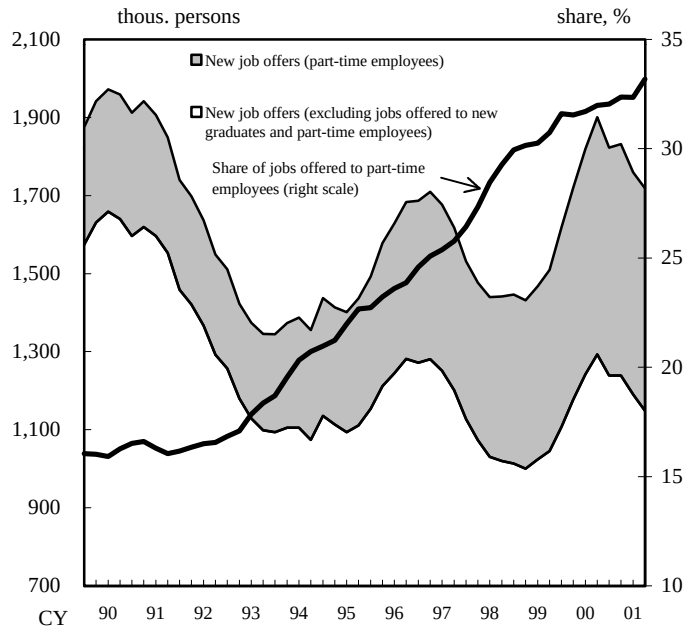


Notes: 1. Sample period is from 75/Q1 to 02/Q1.
2. Vacancy = (job offers - job offers filled) / (job offers - job offers filled + employees) ×100

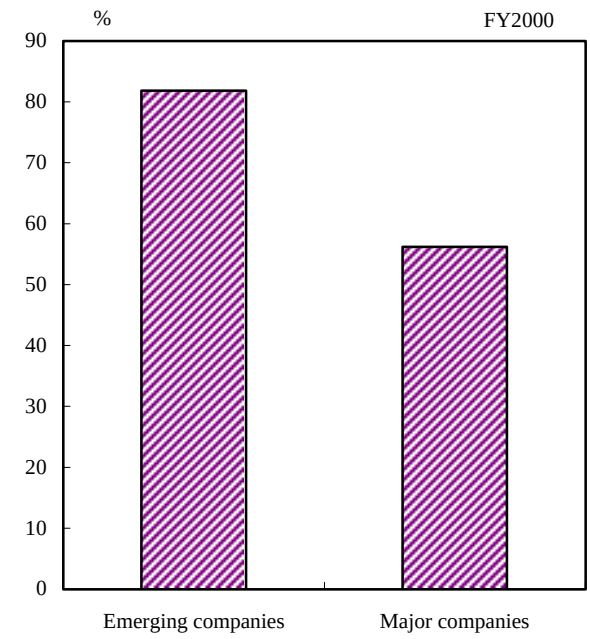
Sources : Ministry of Health, Labor and Welfare, "Report on Employment Service";
Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey."

Ratio of Part-time to Total Employees

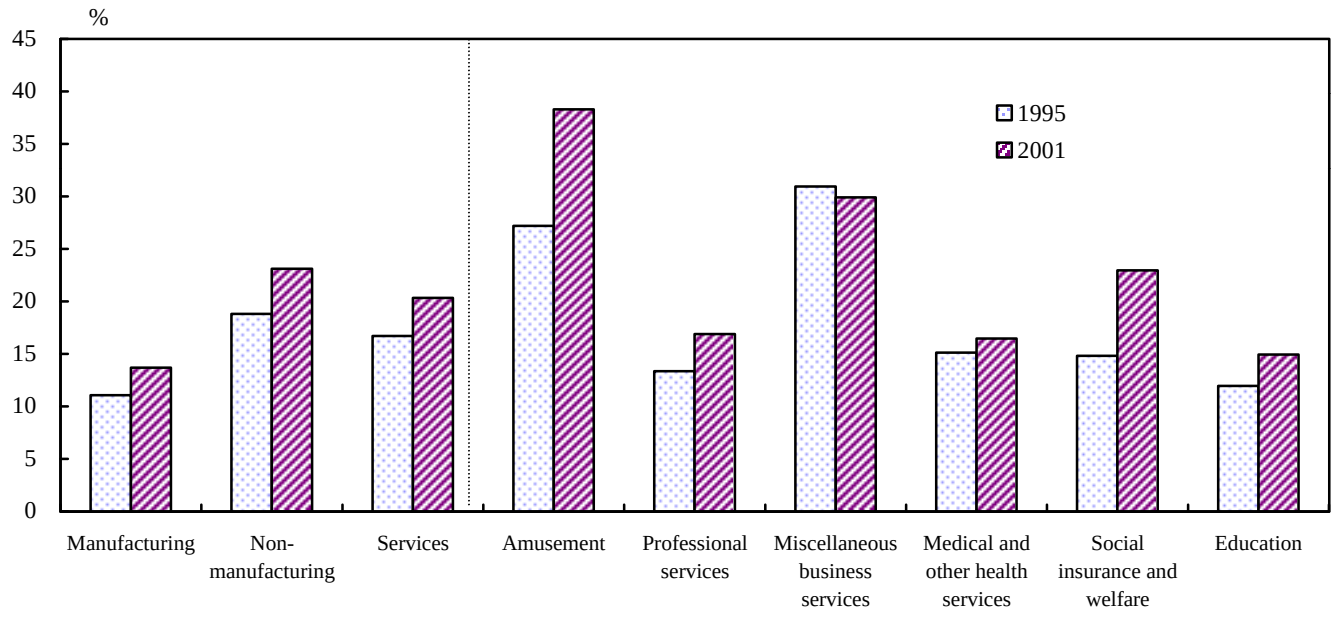
(1) Ratio of part-time job offers to all new job offers



(2) Ratio of part-time to total employees by company



(3) Ratio of part-time to total employees by industry



Notes: 1. The numbers of new job offers are seasonally adjusted.

2. The components of emerging companies and major companies are the following.
   emerging companies : SHIMAMURA, FIRST RETAILING, RYOHINKEIKAKU, TOYS"R"US, DONKIHOTE
   major companies : MITSUKOSHI, TOKYUHYAKKATEN, TAKASHIMAYA, DAIMARU, MATSUZAKAYA, MATSUYA, ISETAN, DAIEI, ITOYOKADO, AEON, SEIYU

3. In (2),
   Ratio of part-time to total employees = (number of part-time employees + number of temporary employees) / number of all employees with consolidated subsidiaries

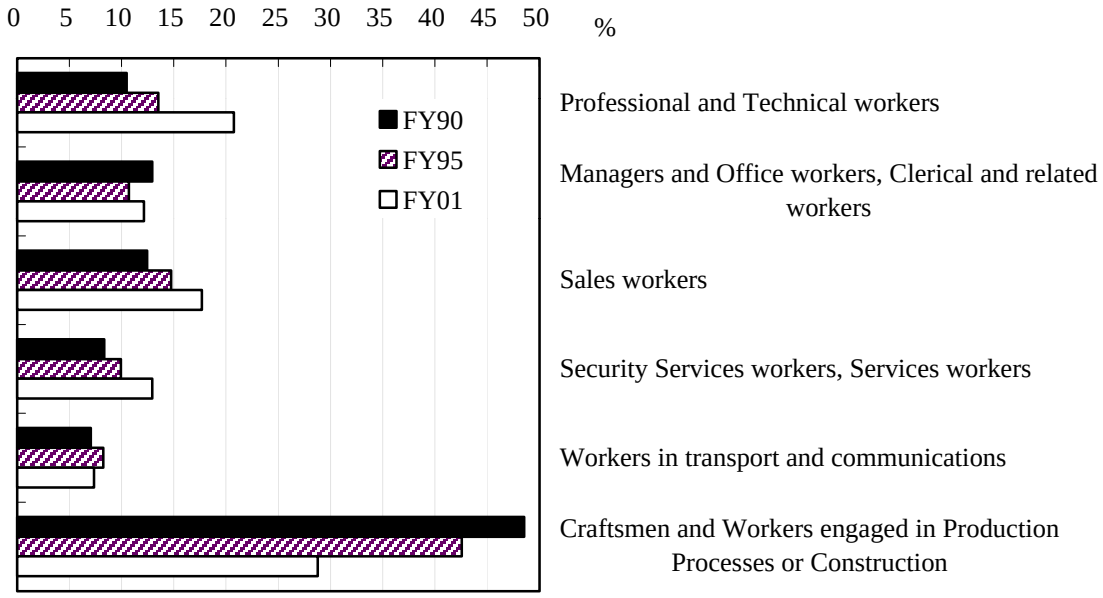
4. In (3), ratios of part-time to total employees are data for establishments with at least 5 employees.

Sources : Ministry of Health, Labor and Welfare, "Report on Employment Service," "Monthly Labor Survey";
Annual report of each company.

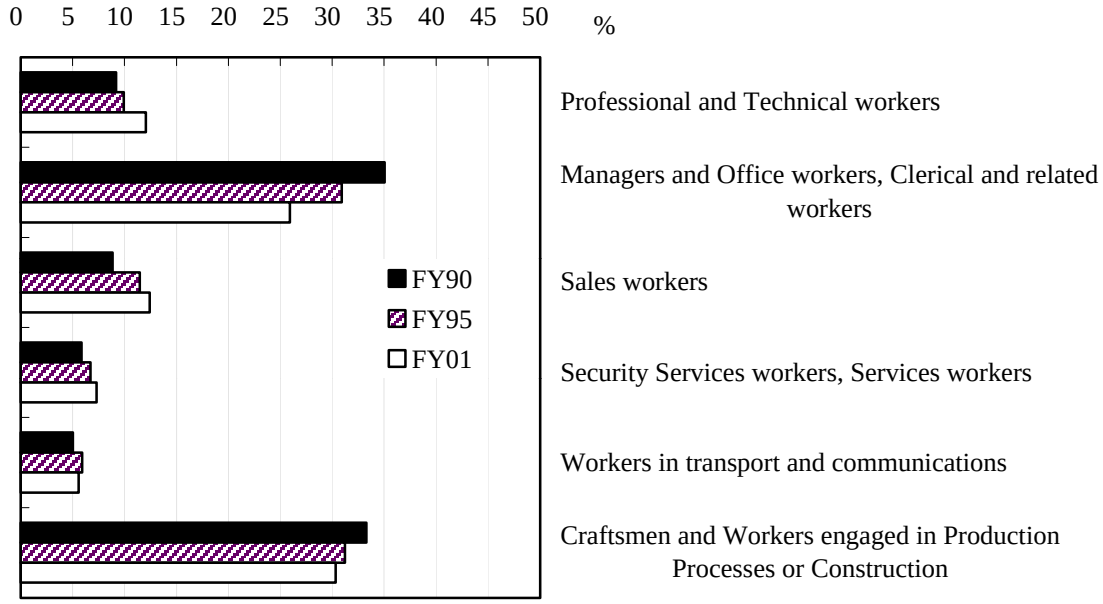
Chart 32

New Job Offers and Applicants

(1) Ratio of new job offers by occupation



(2) Ratio of new job applicants by occupation



Note: Figures are annual averages.

Source: Ministry of Health, Labor and Welfare, "Report on Employment Service."

Labor Mobility Across Industries and Occupations

(1) Across industries

		Previous industry								
		Agriculture, Forestry and Fisheries	Mining	Construction	Manufacturing	Transport and Communi-cations	Wholesale and Retail Trade, Restaurants	Finance, Insurance and Real estate	Services	Others
Current industry	Mining	0.0	5.9	0.1	0.1	0.3	0.0	0.1	0.0	0.1
	Construction	11.1	2.9	64.0	5.5	6.1	1.4	3.5	2.8	4.4
	Manufacturing	12.8	38.2	8.0	51.3	9.4	12.3	10.0	9.6	12.2
	Transport and Communications	1.7	14.7	4.6	5.0	52.3	5.0	3.5	4.8	6.6
	Wholesale and Retail Trade, Restaurants	17.2	2.9	9.6	19.2	9.9	57.3	20.6	27.3	21.7
	Finance, Insurance and Real estate	1.7	0.0	2.5	1.7	1.9	2.9	35.4	3.5	5.1
	Services	55.6	32.4	11.2	17.1	20.1	21.0	26.5	51.9	48.7
	Electricity, Gas, Heat Supply and Water	0.0	2.9	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Total (%)		100.0	100.0	100.0	100.0	100.1	100.0	100.0	100.0	100.0

Note: "Others" is composed of Electricity, Gas, Heat Supply, Water, and Government Affairs.

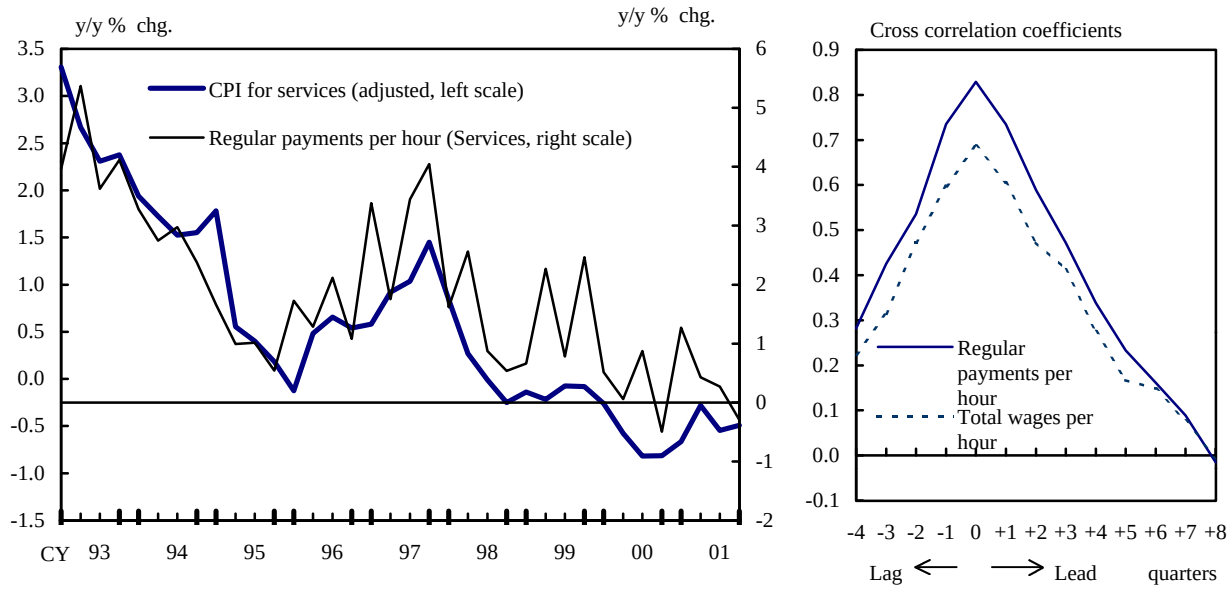
(2) Across occupations

		Previous occupation								
		Professional and technical workers	Managers and office workers	Clerical and related workers	Sales workers	Services workers	Security services workers	Workers in transport and communi-cations	Craftsmen and workers engaged in production processes or construction	Others
Current occupation	Professional and technical workers	75.4	11.1	4.5	4.7	5.5	3.6	1.4	2.0	6.6
	Managers and office workers	1.5	58.2	0.9	1.2	1.2	2.6	0.4	0.3	2.1
	Clerical and related workers	3.7	8.4	65.6	10.1	6.3	6.7	1.3	1.6	8.5
	Sales workers	6.0	9.0	13.0	56.2	15.2	3.6	4.4	5.2	7.3
	Services workers	4.1	3.7	6.3	12.0	54.2	6.7	7.4	8.1	14.3
	Security services workers	0.4	0.6	0.5	0.6	1.1	42.3	1.4	1.0	1.9
	Workers in transport and communications	1.8	2.6	1.4	3.0	3.2	6.2	70.1	3.6	5.9
	Craftsmen and workers engaged in production processes or construction	6.6	5.1	7.1	11.0	11.6	27.3	13.0	76.6	18.6
	Others	0.6	1.3	0.7	1.2	1.7	1.0	0.6	1.7	34.8
Total (%)		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

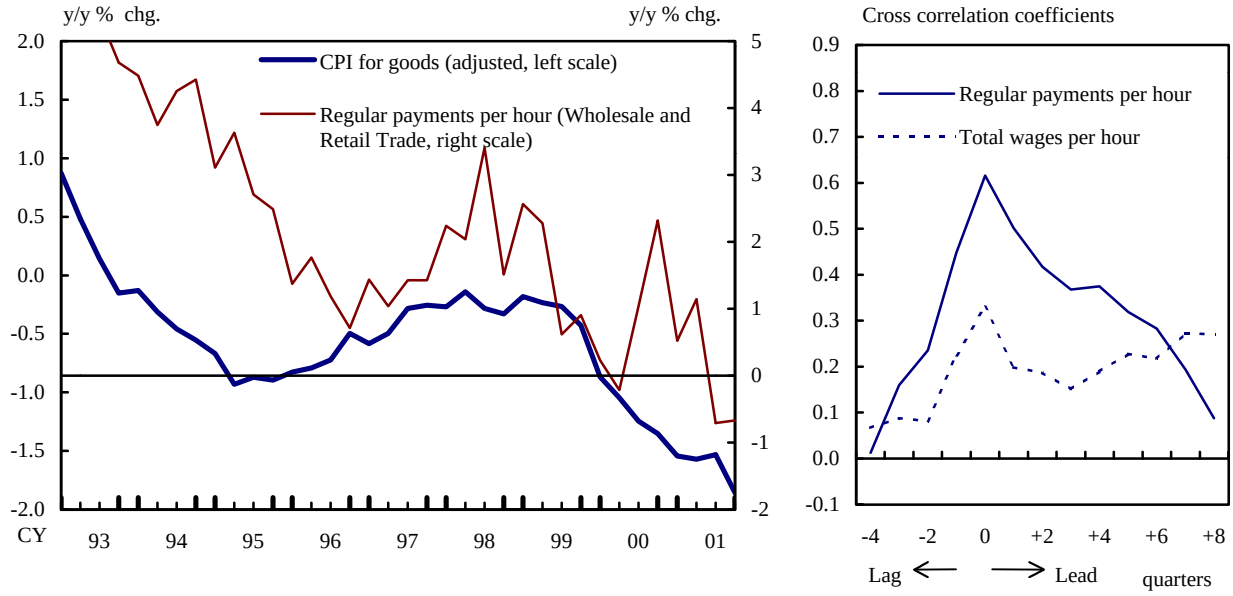
Source : Ministry of Health, Labor and Welfare, "Survey on Employment Trends (1999)."

Wages and Consumer Price Index

(1) Wages and CPI for services



(2) Wage and CPI for goods



Notes: 1. CPI for services (adjusted) = General services - Package tours overseas - Housing rent (private house and imputed rent) - School fees, private - Delivery fees in hospital
2. CPI for goods (adjusted) = Goods - Agricultural & aquatic products - Petroleum products - PC's - Cigarettes - Biscuits
3. Figures for 1995 and 2000 (which are the base years for the CPI) are calculated by using the 1990-base CPI and 1995- base CPI respectively.
4. The effects of the consumption tax hike in April 1997 are excluded, assuming that prices of all taxable goods fully reflect the rise in the tax rate.
5. Regular payments per hour = Regular earnings / Regular hours worked
6. Total wages per hour = Total earnings / Total hours worked
7. Wages for the wholesale and retail trade excludes those for restaurants.
8. Sample period for the cross correlation estimation is from 93/Q1 to 01/Q4.
9. Figures for total earnings, regular earnings, total hours worked and regular hours worked in the *Monthly Labor Survey* are data for establishments with at least 5 employees.

Sources: Ministry of Health, Labor and Welfare, "Monthly Labor Survey"; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Consumer Price Index."

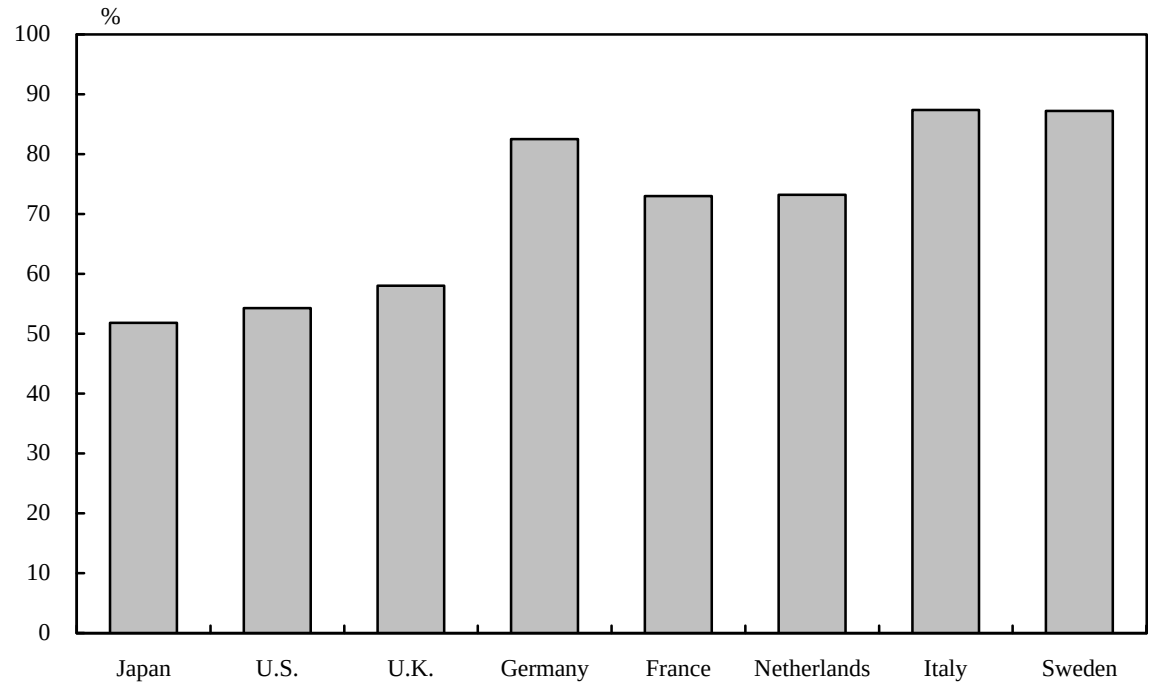
Differences in Social Security Between Regular Employees and Non-regular Employees

	Unemployment insurance	Employees' pension, Health insurance
Regular employees	Compulsorily applied to establishments with at least one employee	Compulsorily applied to establishments with at least 5 employees
Part-time employees "*Arubaito*"	When the following two conditions are satisfied, an employee qualifies as a "person insured for a short time." (1) Regular working time per week is 20-30 hours. (2) An employee is expected to be on the job for more than one year.	When the following two conditions are satisfied, an employee qualifies as a regular employee (except for an employee not expected to work for more than 2 months). (1) Regular working hours a day or a week are more than three quarters of those of a regular employee who works at the same office and engages in the same job. (2) Regular working days a month are more than three quarters of those of a regular employee.
Temporary workers	"Regular Temporary worker" The same as a regular employee. "Registered temporary worker" When the following two conditions are satisfied, an employee qualifies as a regular employee. (1) An employee is employed by an agency repeatedly and continuously. For example: --An employee is expected to be employed continuously for more than one year by a temporary employment agency. --An employee is expected to repeat short-term employment contracts for more than one year even if the period of each employment contract with the agency is less than one year. (2) Regular working time a week is more than 20 hours.	The same as Part-time employees and "*Arubaito.*"
Seasonal workers Temporary or daily workers	"Person insured specially for short-term employment" An employee whose normal condition of employment is seasonal or short-term (i.e. expected to be employed for less than one year by the same employer). "Person insured specially for daily employment" An employee employed daily or for a period of fewer than 30 days, who lives in a specific area where a public employment security office exists.	"Person insured specially for short-term employment " (Only for Health insurance) (1) Employed daily and for a period of less than 1 month (2) Temporarily employed for a period no longer than 2 months (3) Seasonally employed for a period no longer than 4 months (4) Temporarily employed for a period no longer than 6 months
Others (Unqualified)	The following employees are classed as unqualified. (1) A person employed at a agricultural, forestry or fishery establishment (2) A person newly employed after becoming 65 years old (3) An employee who works less than 20 hours a week (4) A person employed in a seasonal business for a period less than 4 months	The national pension program and national health insurance program cover "other" employees.

Chart 36

Wage Differences Between Full-time and Part-time Workers

Ratio of part-time workers' hourly wage to that of full-time workers

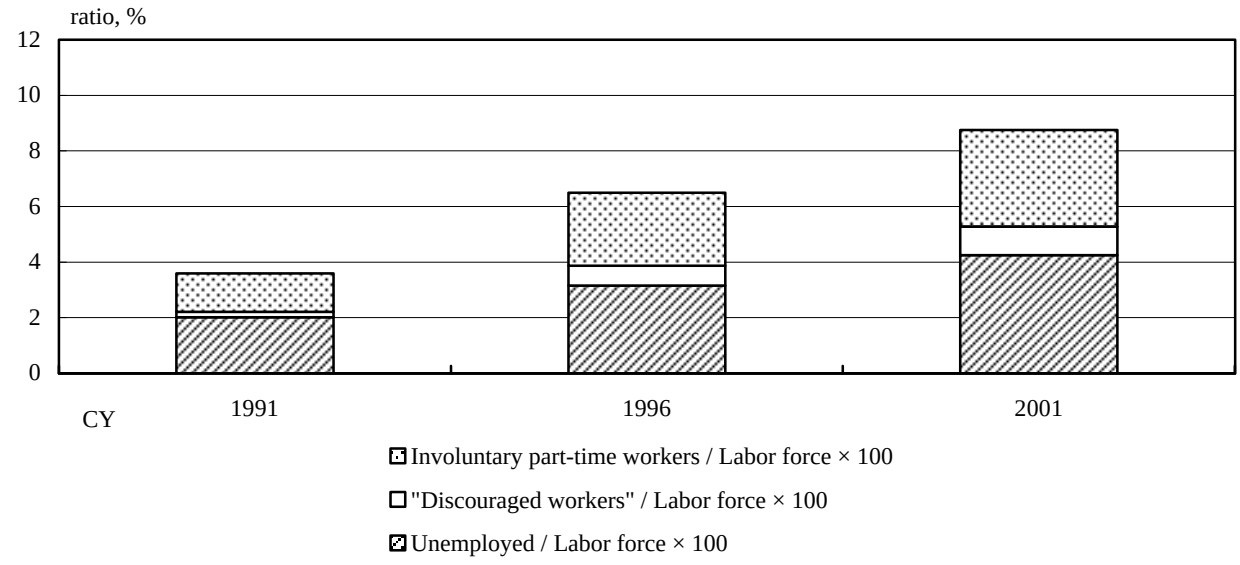


Notes: 1. Figures are for 1995. Figures for France are for 1994 and those for the U.S. are for 1996.
2. Data for European countries and the U.S. are medians and those for Japan are averages.

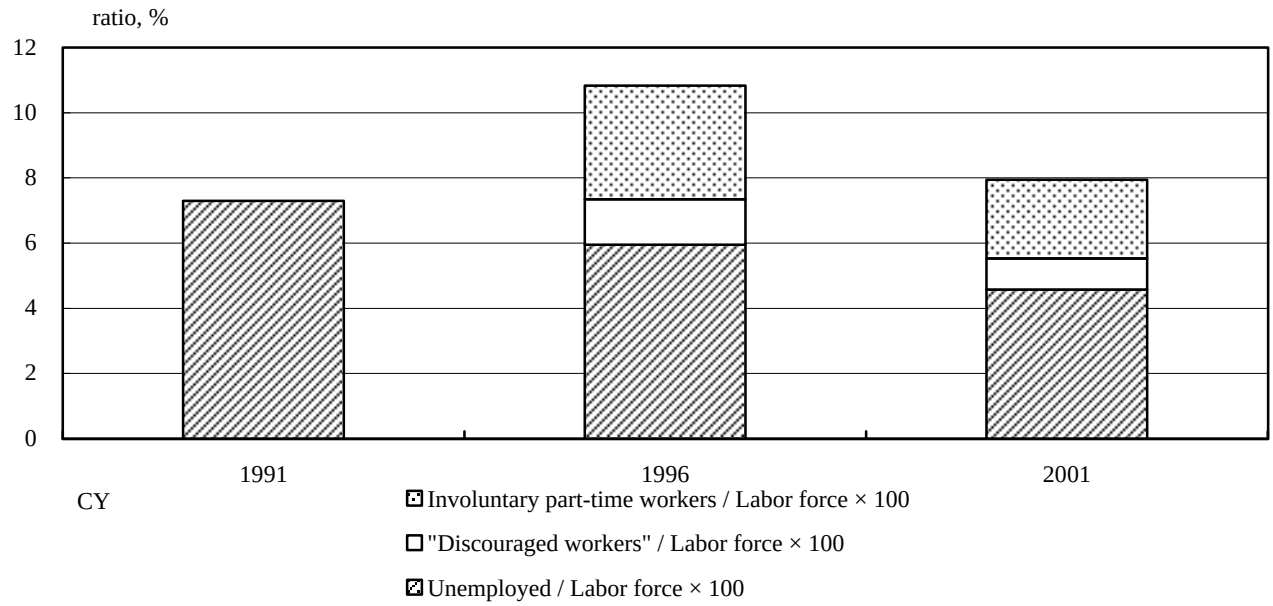
Sources: OECD, "Employment Outlook 1999";
Ministry of Health, Labor and Welfare, "Basic Survey on Wage Structure."

Different Definitions of the Unemployment Rate

(1) Japan



(2) U.S.

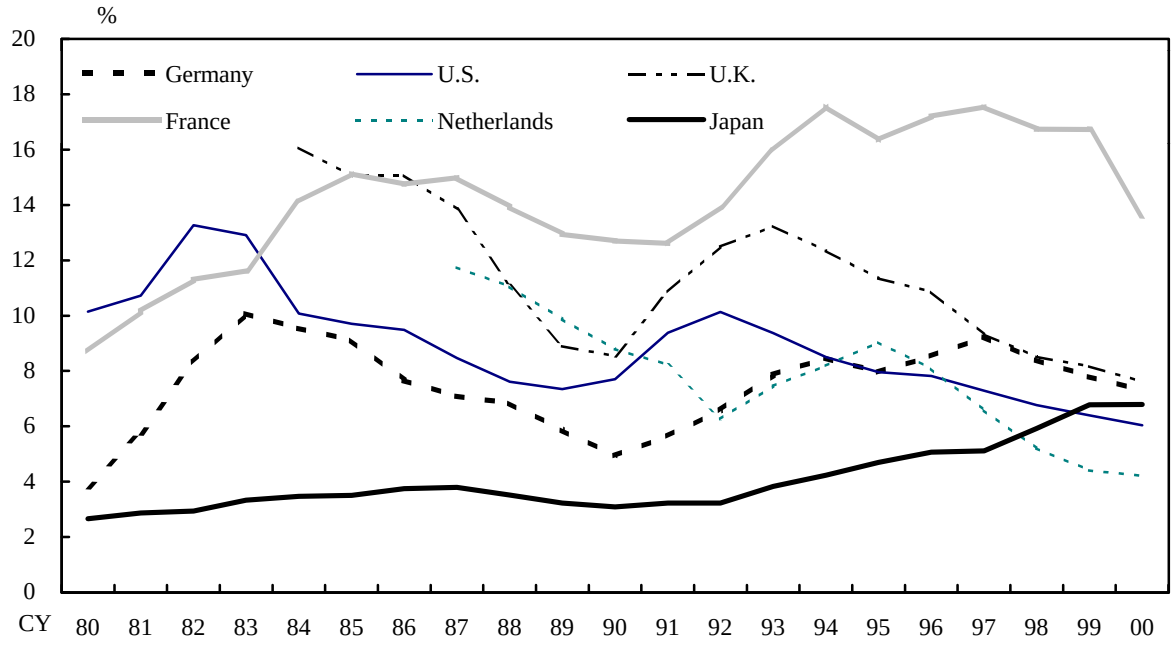


Notes: 1. Data for the unemployed and the labor force in Japan are adjusted based on the U.S. definition.
2. Figures are those of February.
3. Data for "Discouraged workers" and involuntary part-time workers in the United States in 1991 are unavailable.
4. "Discouraged workers" are those not in the labor force but who had searched for jobs in the previous one month and who are able to work immediately.
5. Involuntary part-time workers are those who normally work less than 35 hours a week but wish to work more or those who worked less than 35 hours due to slack business conditions.

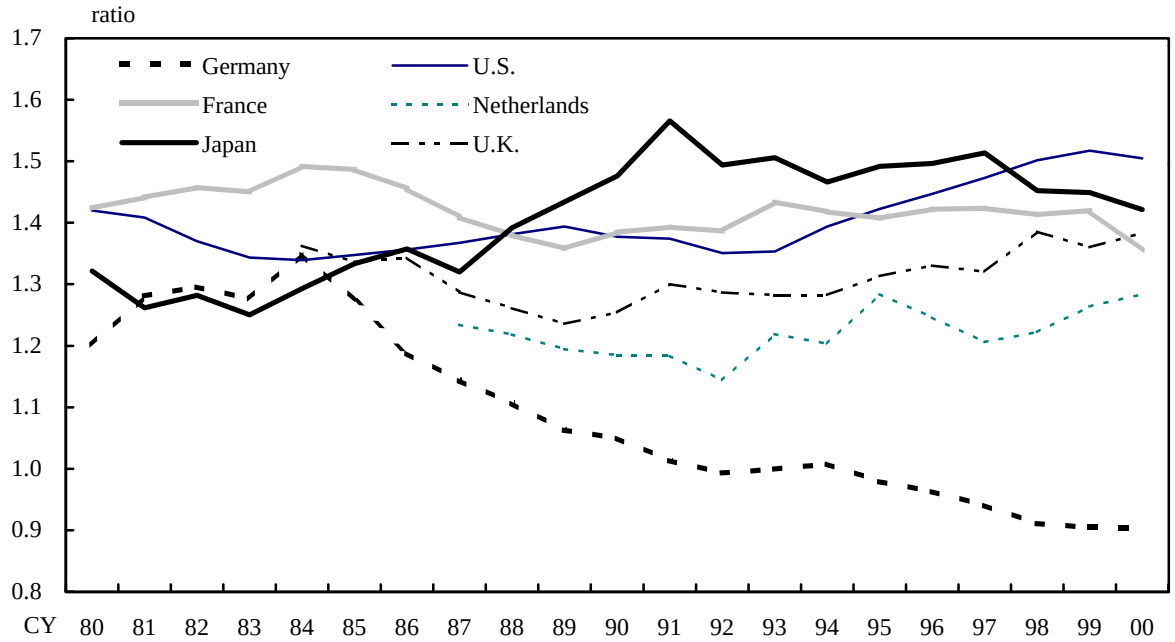
Sources: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey," Report on the Special Survey of the Labor Force Survey"; U.S. Bureau of Labor Statistics, Current Population Survey.

Youth Unemployment

(1) Unemployment rate (15-34 years old)



(2) Unemployment rate (15-34 years old) / Overall unemployment rate

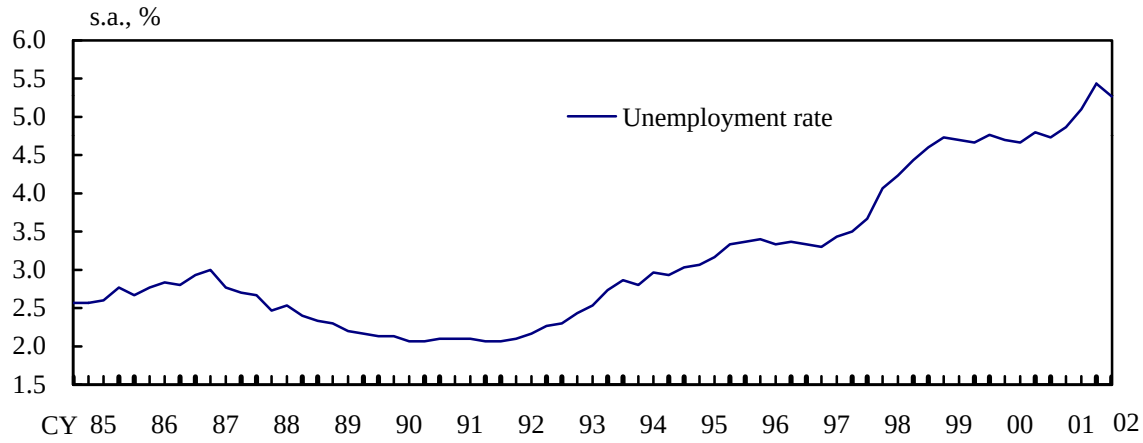


Source: OECD, "Labor Force Statistics."

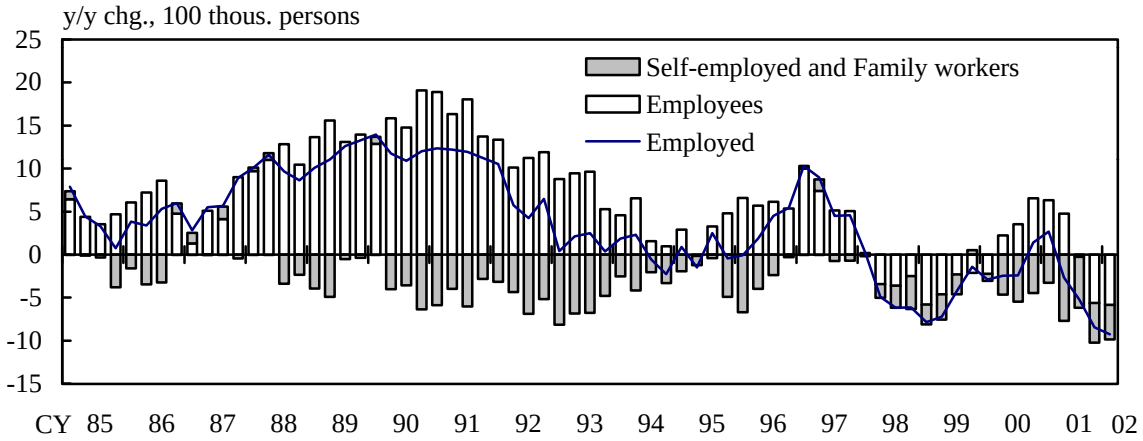
BOX 1 Chart 1

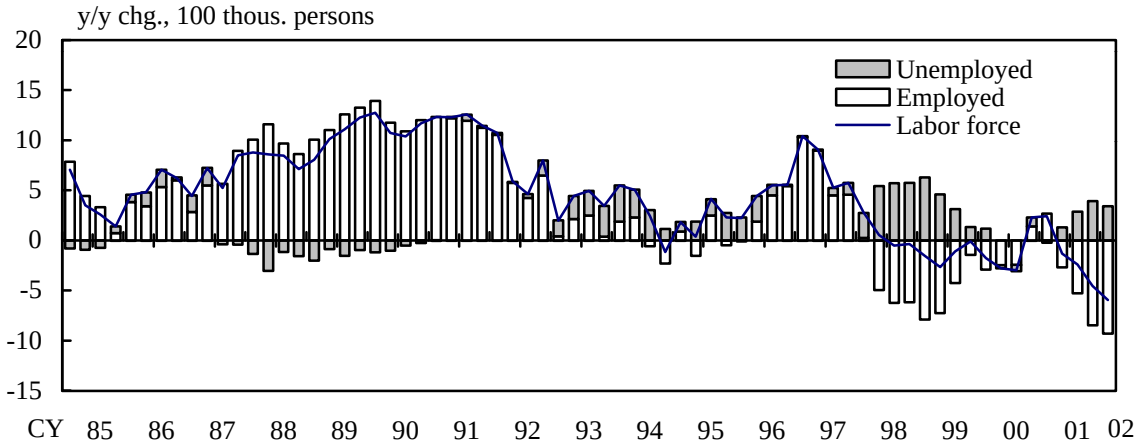
Unemployment Rate

(1) Unemployment rate



(2) The employed, unemployed and labor force



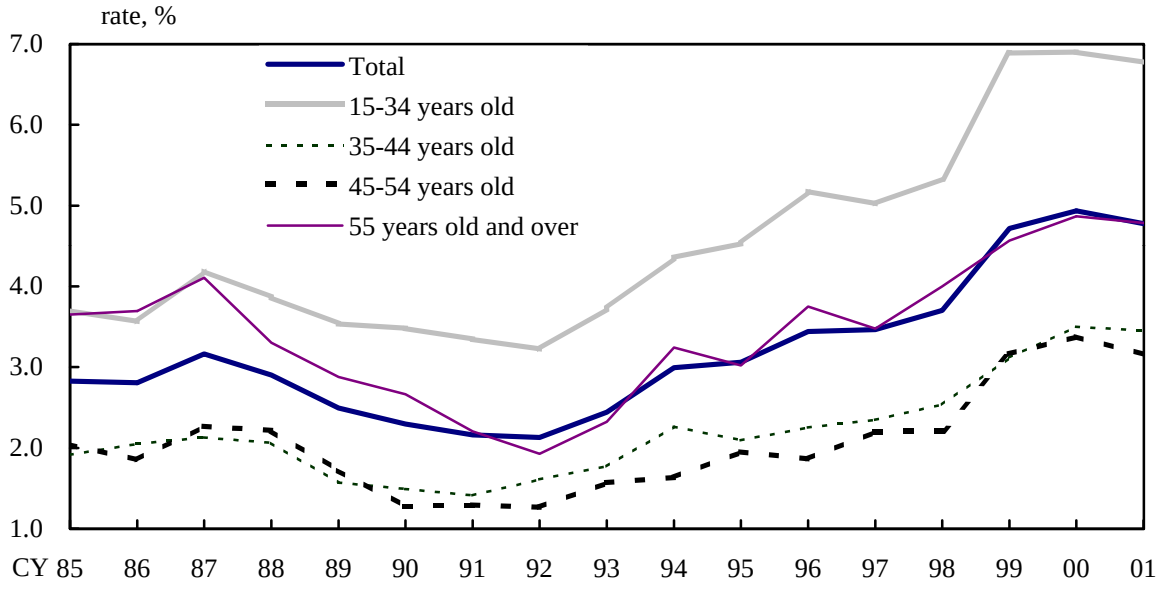


Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey."

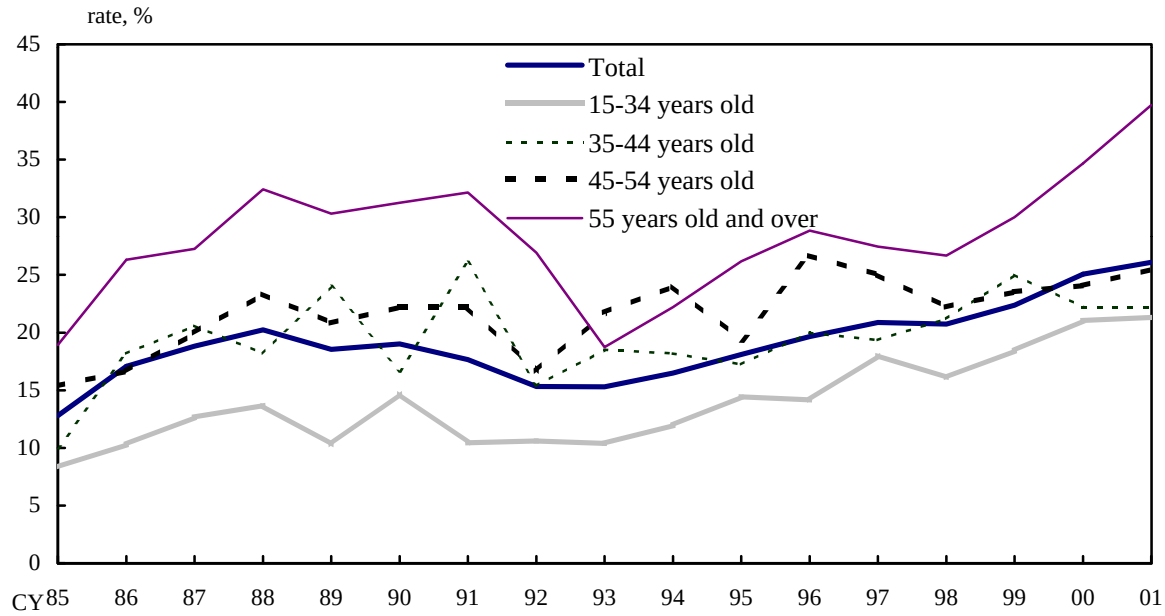
BOX1 Chart 2

Unemployment Rate and the Share of Long-term Unemployment

(1) Unemployment rate by age



(2) Share of long-term unemployment by age



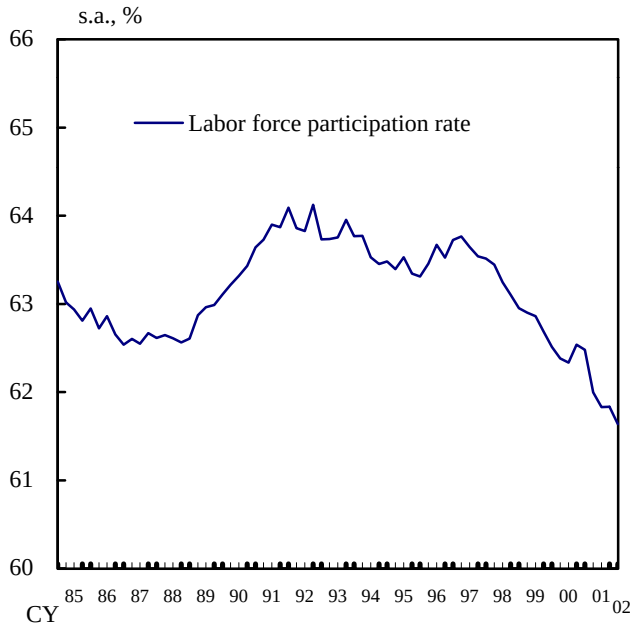
Notes: 1. Share of long-term unemployment = Those unemployed for more than one year / Total people unemployed × 100

2. Figures are for the February of each year.

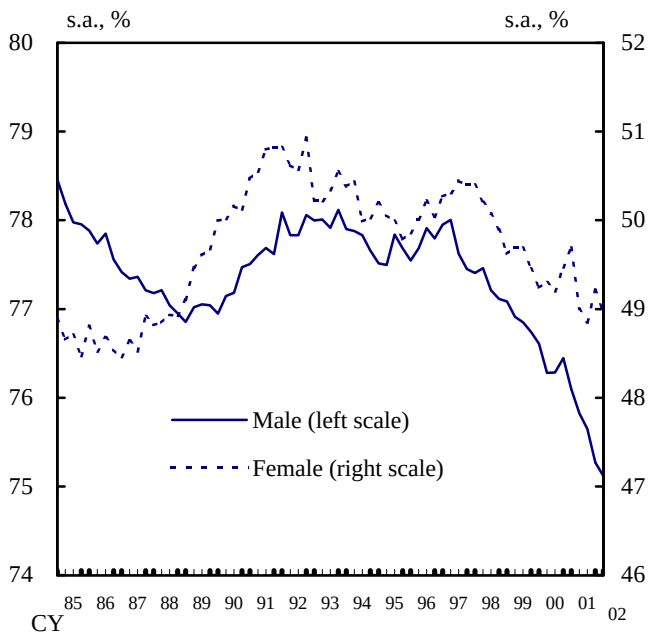
Sources: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Report on the Special Survey of the Labor Force Survey."

Labor Force Participation Rate

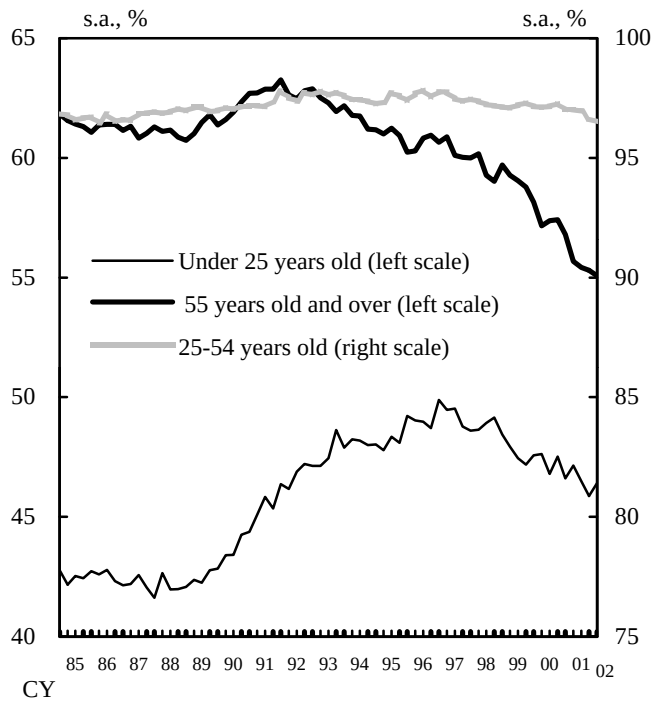
(1) Total



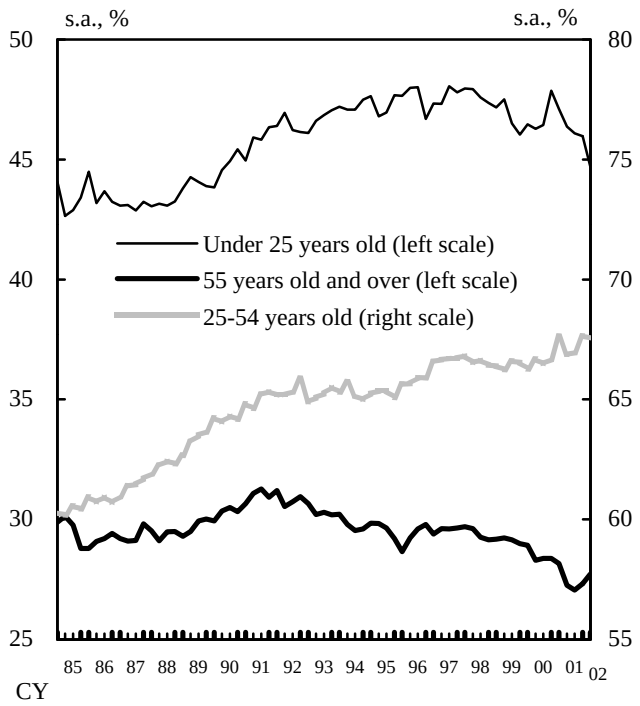
(2) By sex



(3) Male by age



(4) Female by age



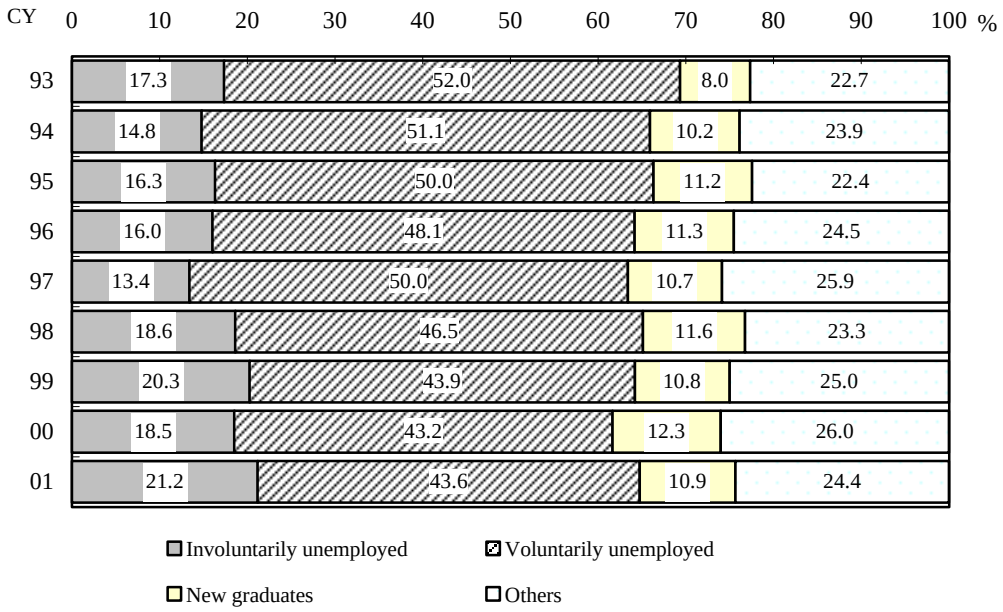
Note: Labor force participation rate = Labor force / Population (15 years old and over) × 100

Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey."

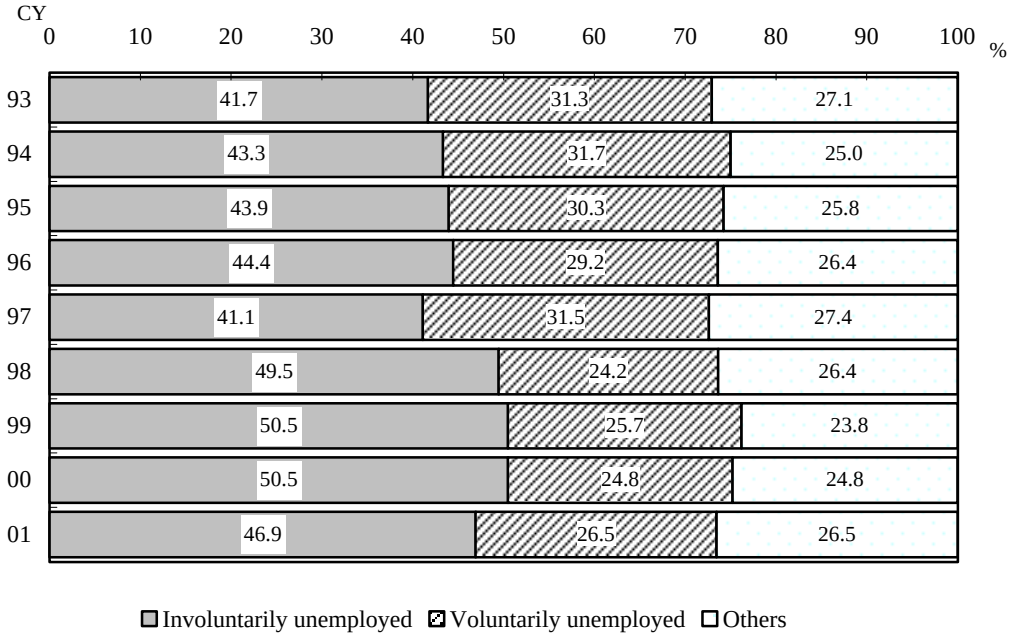
BOX2 Chart 1

Reasons for Unemployment

(1) Young generation (15-34 years old)



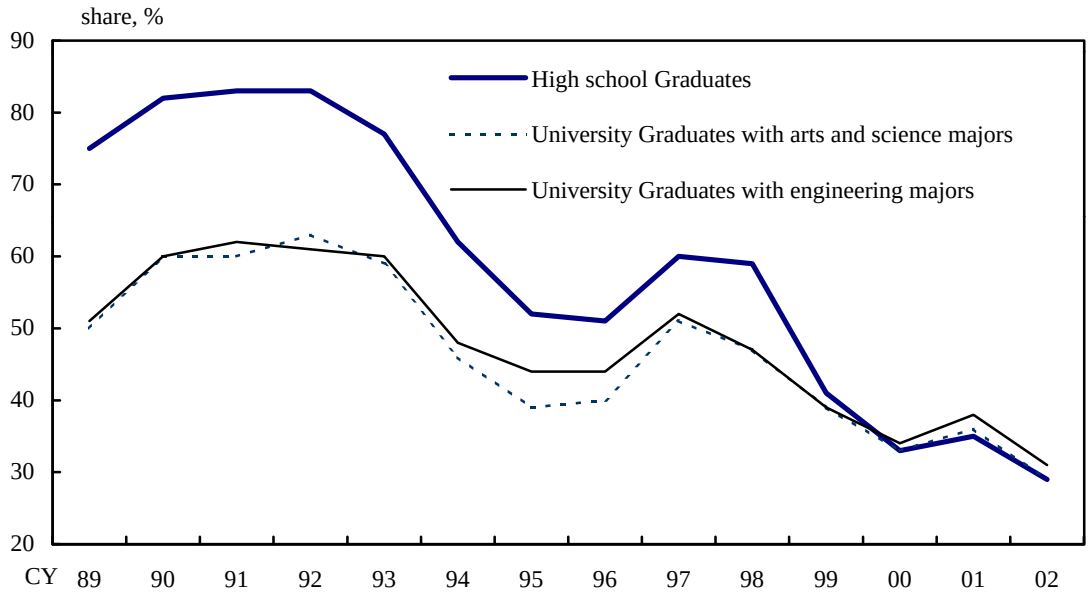
(2) Middle-aged and older generation (45-64 years old)



Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Labor Force Survey."

Recruitment of New Graduates

(1) Plans for hiring new graduates



Note : Figures are shares of establishments planning to employ new graduates.

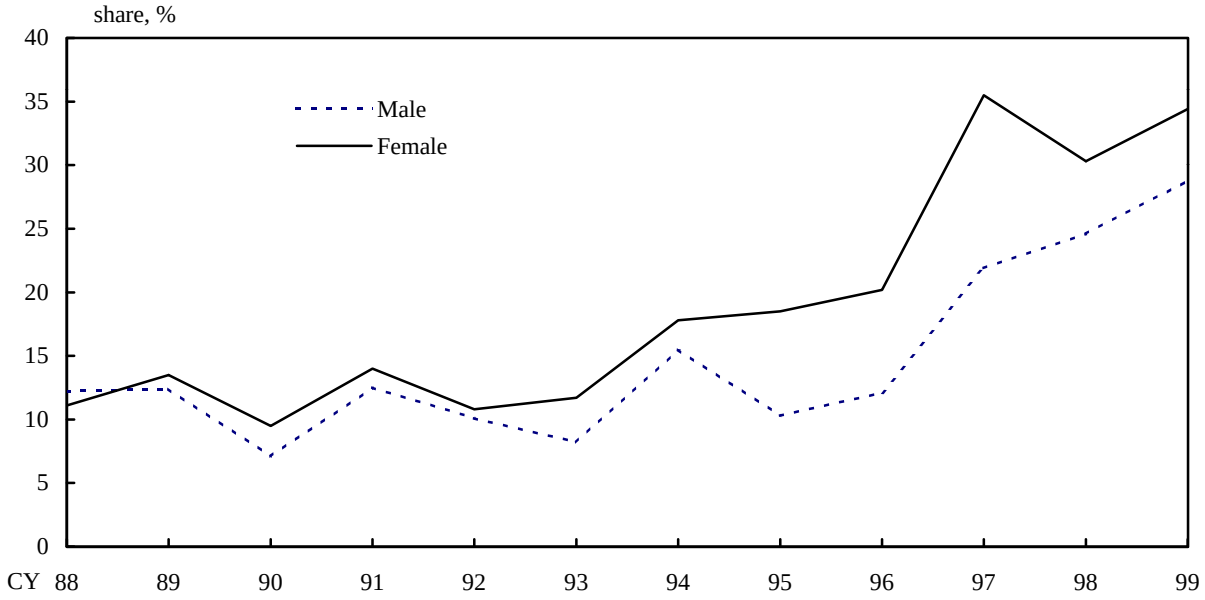
(2) Methods of carrying out labor adjustments

Note: Figures are shares of enterprises that had carried out labor adjustments in the past 2 years.
Multiple answers allowed.

Source: Ministry of Health, Labor and Welfare, "Survey on Economy Trends," "Industrial Labor Situation Survey."

Young Part-time Workers

(1) Part-time workers as a proportion of new graduate employees



Note: Figures are the proportions of employees under 20 years old who were employed as part-time workers after their graduation from school (excluding the construction industry).

(2) Reasons for short working hours (by age)

share, %

	Working hours originally less than 35 hours		Reasons due to businesses or employers	Reasons due to own or family conditions	Others
	Wish to work 35 hours or more	Wish to work less than 35 hours			
Total	7.4	40.9	17.6	15.6	18.4
15-24 years old (excluding students)	14.1	25.6	24.4	17.9	17.9
25-34 years old	8.5	34.4	15.2	27.2	14.7
35-54 years old	8.2	45.7	17.2	14.8	14.1
55 years old and over	5.5	34.4	20.5	13.8	25.8

Notes : 1. Figures are the shares of employees by reason who worked less than 35 hours a week during the surveying period.
2. The answer "Reasons due to businesses or employers" consists of "Due to bad conditions" and "Others."
The answer "Reason due to own or family conditions" consists of "Maternity leave or nursing children," "Nursing elderly or sick family members" and "Others (e.g. illness and vacation)."
The answer "Others" includes "Due to bad weather."
3. For 2001, figures are data for February.

Sources: Ministry of Health, Labor and Welfare, "Survey on Economy Trends"; Ministry of Public Management, Home Affairs, Posts and Telecommunications, "Report on the special survey of the Labor Force Survey."

Employment Policies

	Description	Qualifications
Employment Adjustment Subsidy	Subsidize wages and training fees to a company suspending its business, having employees take training or sending them to other companies due to a decline in business activity.	Average production in the last 6 months fell 10% from a year earlier and the average number of employees remained unchanged. (For small to medium-size companies, the period is the last 3 months.)
Special Emergency Grants for Job Creation	A subsidy of 300,000 yen paid when a company employs a middle-aged involuntary unemployed person through a public or private placement office in an area where employment conditions are worsening.	(1) When the monthly nationwide unemployment rate rises beyond 5% or the average unemployment rate for 2 consecutive quarters in the region rises beyond 5.4%, and; (2) When a company employs an involuntarily unemployed person of 45 to 60 years of age as a regular employee through a public or private placement office. (Excluding the case when a company fired an employee in the last 6 months.)
Special Subsidy for the Creation of Employment in New and Growing Areas	Subsidization of companies in 15 new and growing industries expected to create new employment opportunities which employ or train middle-aged involuntarily unemployed persons in advance.	(1) When a company employs a person ahead of its employment schedule, and; (2) When a company employs an involuntarily unemployed person of 30 to 60 years old as a regular employee through a public or private placement office. (Excluding the case when a company fired an employee in the last 6 months.)
Study and Training Benefits	Reimbursement of lesson fees designated by the Ministry of Health, Labor and Welfare for self-development. The amount of subsidy is 80% of the lesson fees (maximum of up to 300,000 yen.)	The recipient is required to have held the governments' insurance for at least a total of 5 years in order to qualify for benefits (or needs to be within 1 year after losing his /her job).

Note: 15 industries designated by the Ministry of Health, Labor and Welfare for "Special Subsidy for the Creation of Employment in New and Growing Areas" are as follows:
Medicine and Welfare, Culture and Daily Life, Information and Communications Technology, New Manufacturing Techniques, Distribution, Environment, Business Support, Ocean, Biotechnology, Improvement of Urban Environment, Aviation and Space Industry (private sector), New Energy Source and Energy Saving, Human Capital, Globalization, and Housing.

Source: Ministry of Health, Labor and Welfare.