The State of the Japanese Economy: From the Perspective of Employment and Income[*]

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Abstract

Against the background of economic recovery, the employment situation has recently been on a recovery trend as well.   Developments in household income, however, have been weak in comparison to movements in nominal GDP and corporate profits, and there has been a dramatic fall in the labor share.   Behind firms' persistent labor cost restraint are several factors: (1) adjustment pressures on the industrial structure so as to cope with developments such as globalization and the reduction in public works projects; (2) movements to strengthen firms' profitability; (3) structural changes in the labor market, as witnessed, for example, in the expansion in the number of non-regular employees.

Within this context, firms' labor cost restraint may be understood, fundamentally, as an aspect of corporate behavior aimed at raising the efficiency of their resource allocation, which is consistent with business fixed investment, the creation of new goods and services, and other positive business strategies.   However, in addition to the three factors mentioned above, there is a fourth factor which has been restraining transmission of income from firms to households: because (4) after such a long period of low growth, the expected growth rate of firms in the mid-term is still not sufficiently high.

Meanwhile, the fact that wages are being held back compared to the rise in productivity—namely the fact that unit labor costs are falling—may also be held responsible for consumer prices' lack of responsiveness to the continuing economic recovery.

Although firms' labor cost restraint may be expected to persist for the time being, if the economic recovery continues, the extent of excess labor as perceived by firms will further ease and the expected growth rate of firms will rise.   This is considered to result in a mild increase in household income.   Nevertheless, there is large uncertainty regarding both the pace of increase, and the extent of the upward pressure that this will exert on consumer prices.

Given the rapid and inevitable ageing of its population and a declining birthrate, the priority for the Japanese economy is to maintain, and indeed raise, its economic vitality over the medium to long-term. In this regard, the functions that are demanded of the labor market in a broad sense, including for example the development of the skill-set of the younger generation, are expected to become more important.

1. Sluggish response of household income to the economic recovery

Reflecting the continuing economic recovery, there have recently been signs of improvement in the employment situation. Looking at the year-on-year growth rates in two representative employment indices, the number of employees in the Ministry of Internal Affairs and Communications' *Labor Force Survey* and the number of regular employees in the Ministry of Health, Labor, and Welfares' , *Monthly Labor Survey*, we see that in the former, an increasing trend has become gradually more firmly established since 2003, although there has been some fluctuation; while the latter also registered its first increase in about six years during the second half of 2004 (Chart 1). [1] The year-on-year rate of decline in nominal wages per employee is also shrinking, when compared to its level around 2002 (Chart 2). Turning to the breakdown, we see that in addition to the increase in overtime payments accompanying the recovery in production activity, the rate of decline in special cash earnings (bonuses) had been diminishing,[2] against

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[1] The Labor Force Survey is a sample survey that captures the broad fundamentals of the household side, or more specifically of the labor supply. Half of the sample is replaced every month, and this means that, while figures tend to fluctuate from month to month, over the longer term the sample retains strong representative properties and the observed trends are less likely to be biased. The Monthly Labor Statistics, on the other hand, survey the firms that make up the demand-side for labor. The sample is determined based on statistics taken from firms and businesses once every two to three years, and afterwards the survey is conducted on this mostly fixed sample. For this reason, while figures are less likely to fluctuate from month to month, emerging trends may appear somewhat weak, due to the difficulties in capturing newly-established firms.

Another distinction is found in the two surveys' treatment of employees on short-term contracts. While the Labor Force Survey includes all employees however short their contracts, in the Monthly Labor Statistics employees on contracts of less than a month are only counted as "regular employees" if they have worked more than 18 days at the same firm for at least two consecutive months. For this reason, during phases when the number of employees on short-term contracts is increasing, the number of regular employees given in the Monthly Labor Statistics may tend to fall somewhat below the number of employees given in the Labor Force Survey.

[2] The figures for bonus payments from June to August 2004 (basically equivalent to "summer bonuses") still showed a small year-on-year decrease. However, this is largely due to the influence of two special factors: the decline in bonuses to civil servants (note that the salaries of employees in some service sectors, such as health and welfare, are based on those of civil servants); and the fact that the previous year's statistic was somewhat inflated by that year's figures for wholesalers.

the background of rising corporate profits and the diminishing pressures of the current restructuring.   Reflecting these developments in employment and wages, household income, which is calculated as the product of the two, has stopped falling (Chart 3).

The same facts, however, may be considered in another light.   The economic growth rate has recovered to a certain degree and significant increases in corporate profits have continued for more than two years, yet in spite of this, household income has done no more than stop falling. This point is actually one of the characteristics of the current recovery, and can be seen most clearly in the movement of labor share (=compensation of employees / nominal GDP) plotted in Chart 4.[3]   What we see is that labor share during the current period of economic recovery is falling rapidly unlike that during the previous two recovery phases since the 1990s, and that it is now approaching the low level last seen at the end of the 1980s, the so-called bubble period.   Labor share can be decomposed as follows:

compensation of employees / nominal GDP = (number of employees × hours worked per employee / real GDP) × (nominal wages per hour / GDP deflator)

i.e.   labor share = (reciprocal of labor productivity per hour) × (real wages per hour)

Looking at individual movements in each of the components on the right-hand side, growth in labor productivity has averaged +1.8% year on year since entering the current recovery phase (Chart 5).[4]   When

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[3] Strictly speaking, a conceptually more correct expression for labor share would include, in the numerator, not only employee compensation but also the equivalent figure for the self-employed etc.   Likewise, the denominator would be more accurately expressed as national income rather than nominal GDP.   However, if we use this more correct expression, we run up against limitations in the availability of the most recent data.   Also, although there are differences in the levels of the two different measures, it makes little difference which we look at in terms of the broad trend.

[4] From the second interim estimate of GDP for June to September 2004 (to be released on Dec 8th, 2004) onward, the GDP statistics will be affected by the switchover to a new method of calculation, known as the "chain index method", and this will involve retrospective revisions to the statistics as far back as 1994.   At the time of writing, the post-switchover series has not yet been released, although a provisional series has already been released by the Cabinet (on 18th Nov, 2004) making use of the chain index method and based on data up to the first interim estimate of GDP for June to Sept 2004.

compared with the average of +1.3% for the period of just over 10 years from the beginning of the 1990s until the start of the recent recovery, this is rather high. Turning to the growth in real wages (Chart 6), we see that this has dropped substantially, averaging roughly zero during the current recovery phase, compared with the average of 1.8% over the previous 10 years or so. The large decline in labor share during the current recovery has been influenced both by a rise in the growth of labor productivity and by a fall in the growth of real wages, and in as far as can be gauged from simply eye-balling the statistics, it seems that it is the influence of the fall in real wages which has been the stronger.

The reason for the above qualification "as far as can be gauged from simply eye-balling the statistics" is that, as will be clarified in what follows, the series of phenomena observed in recent years, namely the sluggishness of household income, the decline in labor share, and furthermore the flip side of these, the decline in unit labor costs, were largely affected by the shift to using non-regular employees evidenced in the rise in the ratio of part-time and other temporary workers in the labor force.[5] When firms are increasingly switching from using full-time employees to part-time and other temporary employees, a simple factoral decomposition such as the above is most likely to underestimate the rise in labor productivity and to overestimate the decline in real wages (for a more detailed explanation of why this is so, refer to the Box).

However, obtaining accurate estimates of the contributions of the above two factors is no easy task. Moreover, from the standpoint of the implications for the macro economy and prices, even without precise estimates of the contributions of individual factors, the fact that labor costs, which are the product of the two factors, are being reduced relative to corporate profits is of considerable importance. In this paper, therefore, although acknowledging that strictly distinguishing between the contributions of labor productivity and wages presents an interesting

issue, its difficulty precludes us from dealing with it in any further depth. As a result, all of the analysis below—based on figures shown in the statistics— should be considered with the caveat that, conceptually, it is highly likely that the "rise in labor productivity" is underestimated and the "decline in wages" overestimated.

Having made this proviso, we now consider what lies behind firms' persistent labor cost restraint, and in light of this, both the outlook for employment and wages, and the implications for the economy and prices.

2. Background to firms' persistent labor cost restraint

What the sharp fall in labor share means is that, in comparison to previous phases of economic recovery and rising corporate profits, firms have been maintaining a stronger and longer stance with regard to labor cost restraint. As in the equation alluded to in the previous section, labor share = real wages / labor productivity. Thus, firms may be thought to have deemed real wages too high relative to labor productivity during the 1990s and, recently, to have been taking steps to rapidly correct this situation.

Yet why have real wages, which had remained at a high level for so long, now suddenly started to be adjusted downwards during the current recovery phase? A number of factors, all of them involving structural changes, may be put forward to answer this question: (1) pressure on the industrial structure to change in order to cope with developments such as globalization and the reduction in public works projects; (2) the change in firms' management attitudes, with greater emphasis being placed on profitability; and (3) structural changes in the labor market, particularly the expansion in the number of non-regular employees.

There is another factor which cannot be ignored. This is (4) the fact that, in spite of the continuing economic recovery, firms' expected growth rate in the medium-term has still not risen sufficiently, and supply and demand conditions have not yet tightened in the labor market. In light of this last factor, even if the current decline in labor share does have

structural characteristics, it is expected that the rise in both employment and wages will become more notable as the sustainability of economic recovery strengthens.

We will now look at each of these four factors behind the sluggishness of household income.

(1) Changes in the industrial structure

Looking at movements in the numbers of employees by sector, we observe several features which may be thought to relate to changes in the industrial structure (Chart 7).   Here, we discuss three of these, and their background and implications.

The first feature relates to the number of employees in the construction sector, which, after increasing until around 1997, has since then been following a consistently declining trend.   Movements in this variable accord with those in expenditure on public works, which peaked in the mid 1990s but has since been curtailed (Chart 8).   Such long-term downward pressure on employment may be thought to have acted to keep conditions in the labor market constantly loose.

The second feature involves the manufacturing sector, where employment has been on a declining trend since around the beginning of the 1990s (Chart 7).   The cause of this can be found in the advance of globalization, with the accompanying increase in imports from Asian countries and other such developments.   In fact, a relationship may be observed within the manufacturing sector, such that the larger the increase in the share of foreign imports in an industry's domestic demand, i.e. the import penetration ratio for that industry, the larger the decline in employment (Chart 9).

Thinking about this last point in more detail, as globalization has pushed forward the international division of labor, it is also considered to have had the effect of driving firms to increase the proportion of high value-added knowledge-intensive production done domestically, while

retreating from or shifting abroad those production processes that are not so dependent on sophisticated technologies. Such adjustment pressures have altered firms' needs, shifting their preferences away from workers who have mastered old technologies but who are less adept at generating new technologies, in favor of workers with knowledge of cutting-edge techniques who are capable of helping strengthen profitability. The wages of the latter, the "skilled workers", have thus enjoyed a relative rise. Although a somewhat extreme simplification due to the limitations in the available data, if we consider university graduates to be "skilled workers" and look at changes in their share of total labor costs, the following can be confirmed: the higher a sector's ratio of investment in R&D, or the larger its import ratio from East Asia, the greater the increase in the proportion of its wages going to university graduates (Chart 10).[6] Looking at this the other way around, it seems likely that the technological innovation and industrial globalization have acted, as far as unskilled workers are concerned, to reduce employment and to exert downward pressure on wages. Part of this wage adjustment has been achieved in practice by increasing the use of non-regular employees — for example, by outsourcing the production processes performed by unskilled workers to business-contracting companies.

The last point mentioned above leads us naturally into the third feature of recent movements in employment. This is the trend increase in the number of employees in the service sector – a trend which has been accelerating over the last few years (Chart 7 above). These increases in service sector employment are, in the first place, part of a long-term trend in the transformation of the economy. Yet within this general context, recent developments in particular have produced a characteristic that is worth noting. The expansion of outsourcing,

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[6] For the details of this analysis, see Hitoshi Sasaki and Kenichi Sakura, "Changes in the Demand for Skilled Labor within Japan's Manufacturing − Effects of Skill-Biased Technological Change and Globalization," Bank of Japan Working Paper Series (soon to be released). This paper carries out a quantitative analysis using panel data, distinguishing the impact of the rising trend of the share of university graduates, and shows within a more rigorous framework the significance of the impact of technological innovation and globalization on wage differentials between skilled and unskilled workers.

making use of companies such as temping agencies and business-contractors, has raised the rate at which employees within other sectors are being replaced by those from the service sector. This has the following implication: since firms can be considered to have increased their outsourcing because they judge that this will achieve the same outcome at lower cost, the recent expansion of employment in the service sector may be viewed as part of the downward pressure on wages observed earlier.[7]

(2) Strengthening firm profitability

Pressure on the industrial structure to change has been clearly in place since about the middle of the 1990s. However, in the last few years particularly, firms have stepped up their response to changes in the business environment, openly increasing the emphasis placed on profitability. Looking at a representative index for assessing profitability, Return on Assets (ROA), we see that there have been rapid improvements in recent years in both manufacturing and non-manufacturing sectors, and that ROA in 2004 is currently pushing heights last seen during the bubble years (Chart 11).

Decomposing the rise in ROA into changes in the ratio of current profits to sales (=pretax profits / total sales) and the turnover of total assets (=total sales / total assets) yields the following insights (Chart 12). During the bubble in the latter half of the 1980s, there was a rise in the ratio of pretax profits to sales. This, however, was accompanied, especially among non-manufacturers, by a decline in the turnover of total assets due to the vast amount of inefficient investment, with the result that the rise in ROA remained only limited. Recently, by contrast, the decline in the turnover of total assets has been coming to a halt, and in the manufacturing sector has even started to trend upwards, albeit gently. The result is that the rise in the pretax profit-to-sales ratio,

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[7] As mentioned previously, as firms increase outsourcing and their use of non-regular employees the resulting decline in wages observed in the statistics requires a caveat: namely, in theory, it may include a part which should be considered an increase in labor productivity rather than a decline in wages.

which is a flow measure of profitability, has begun to be directly translated into a rise (or reflected in a slight expansion of an existing rise) in ROA, which is a stock measure of profitability. This suggests that firm managers have recently started to assess sales and profits in terms of their efficiency relative to capital invested, or putting it another way, that management decisions have started to be made in the awareness that they will have to be transparent to the financial and capital markets.

In what follows, we will discuss the background to this increased emphasis by firms on profitability, as well as considering the changes it has caused in the structure of employment and wages.

(a) Background to firms' increased emphasis on profitability

The first point of relevance in this regard is the impact of firms' experiences of the financial crises in 1997-98 and of the bursting of the IT bubble in 2001. Experiences during the financial crises reinforced managers' awareness of the importance of ensuring both the soundness and the transparency of financial conditions if they wanted their financing to remain stable.[8] The rapid economic contraction that followed the bursting of the IT bubble also pushed managers to change their attitudes, encouraging them to reduce stocks and fixed costs, and thus raise their ability to withstand unexpected shocks.

The second point is that, with the decline in asset values having continued for more than 10 years since the bursting of the bubble, the old practice of compensating for lower operating profits with unrealized gains on its assets has become unrealistic. This has meant that firms have become more focused on the importance of securing a stable cash flow from their business.

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[8] 1998 roughly marks the point at which rating companies' assessments of Japanese firms became especially harsh. For an empirical analysis of this phenomenon, see Sohei Kaihatsu "Will Japanese firms fundamentally recover – an evaluation of the extent of improvements in firms' finances using ratings forecast functions," Bank of Japan Research and Statistics Department Economic Summary, Feb 2004.

Thirdly, as financial and capital markets have become increasingly global, and as legal and regulatory changes have been made in response, firms have become obliged to take more notice than previously of the assessments accorded them by financial markets. Since the end of the 1990s, market-value accounting and the release of consolidated earnings reports have been required in an expanding number of areas. With impairment accounting becoming obligatory from fiscal 2005, the degree of transparency demanded from firms in reporting their earnings results and balance sheet conditions has been significantly raised. At the same time, cross-shareholdings have been increasingly disposed of and the ratio of foreign investors holding shares of Japanese companies has risen. Revisions have been made to the tax code and the law to make it easier to realize M&As and to carry out corporate reorganization as the market deems fit. These developments have acted to strengthen discipline with regard to the extent to which invested capital is being efficiently utilized. Moreover, as disposals of non-performing loans have progressed, specialist markets have slowly been taking shape which assess the value of the firms' rehabilitation and reorganization plans, and indeed the value of the firms.

(b) Wages and employment as firms focus on strengthening profitability

In light of the discussion above, the apparent persistence of firms' labor cost restraint even during the current economic recovery may be considered part of management efforts to raise the efficiency of their overall distribution of resources, in much the same way as, for instance, they sell assets of only marginal profitability and instead shift investment to growth areas. In short, it is not simply a case of firms thinking that the further they can reduce wages the better, but rather of firms looking to rationalize their wage systems and employment structures from the standpoint of costs versus benefits and risks versus returns. Perhaps against this background specific policies for keeping wages down have taken the form not of a uniform cut in employment and wages across the board, but of (1) the introduction of performance-based pay, and (2) the increased use of non-regular employees (Chart 13).

Taking performance-based pay first, we observe that, including firms that have completed partial introduction, the proportion of all firms that have introduced performance-based pay is close to 80%, and for large firms the figure is close to 90% (Chart 14 (1)). As for timing, the introduction of such schemes is seen to have accelerated from around 2000 (Chart 14 (2)). The timing is not only due to the fact that, as discussed above, it was at about this time that the structural changes affecting the business environment started to become apparent, but it is also due to the demographic impact of the baby-boom generation. Specifically, firms have become increasingly aware that, if they ignore the effect of societal ageing on their workforce, the result will be growing upward pressure on wages. The introduction of performance-based pay is ultimately, therefore, a sign that firms have become much stricter about asking whether their employees, especially their older employees, are actually providing the contributions to profits that justify their higher levels of pay.

In fact, if we look at the so-called wage curve, which has typically sloped up to the right as age increases (Chart 15), we observe a flattening of the curve, with wages falling for comparatively older workers in their 40s and 50s. This flattening process is seen to have accelerated between 2000 and 2003, especially for male university graduates. As a related phenomenon, reductions in the work forces achieved at many firms using means such as voluntary retirement, especially in the period from 2001 to 2002, were directed mostly at older age groups with their higher wage levels. Using the Ministry of Health, Welfare, and Labor's "Basic Survey on Wage Structure," which includes detailed data classified by age group, industry etc., we can calculate the extent to which firms succeed in holding down the average wages of employees as a whole by (1) flattening the wage curve, and (2) making heavier cuts in employees from older age groups. More concretely, we assume a benchmark case in which, since 1997, the shape of the wage curve remains unaltered and rates of retirement among older employees remain unchanged at their previous levels. For this benchmark case, we calculate the growth in wages that would have been expected by regular employees working

normal hours over the five year period from 1997 to 2002.[9]   We then compare this with the figure for actual wage growth over the same period (Chart 16).   The results indicate that actual wage growth over the five year period was lower than our hypothetical benchmark growth rate by an annual average of 0.8%, i.e. it was nearly a full percentage point lower. Within a five year period, firms have achieved cuts in labor costs of this magnitude every year by concentrating their reductions in employment and wages on older workers.

Next we look at the increased use of non-regular employees, and the impact this has had on wages as a whole.   Here, by "non-regular employees" we refer to those working on short-term contracts, those on temporary transfers from other companies or dispatched from temping agencies, temporary staff, part-timers – in short any employees who are not "regular employees" (Chart 17).[10]   Looking at recent movements in numbers of such employees, we see that in the five year period from 1998 to 2003, regular employees have been cut by about 10%, non-regular employees increased by more than 30%, and as a result the ratio of non-regular employment has risen almost to 30% (Chart 18).   The failure of wages per person to rise during the current economic recovery can be largely ascribed to this latter phenomenon.   Since non-regular employees are paid less than their regular counterparts[11], the increasing

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[9] Here, "regular employees" are employees who are not part-time or temporary staff.

[10] The terms "non-regular employee," "non-regular company worker" and so on are basically used interchangeably.   In addition, there has also been, mainly in the manufacturing sector, a recent expansion in the use of outsourcing involving the contracting out of operational processes in their entirety to business contractors.   The workers from business contractors engaged in these operations are in practice much the same as employees dispatched by temping agencies.   There are no precise statistics covering these workers from business contractors, although, according to the "Report into hourly wages offered, and recruitment trends for business contracting staff" (Aidem Co. Ltd), the number of vacancies to be filled rose by 50% in 2003.   Further evidence is gleaned from the "General report on the electrical machinery sector" Issue 285 (May 2003), in which a wide range of estimates for the scale of the business contracting sector were reported, with a broad majority of estimates putting the number of workers in the sector at around 1 million, but others topping this with estimates of about 3 million.

[11] In fact, where regular company employees receive monthly pay of about 410 thousand yen, the equivalent figure for part-timers is about 90 thousand yen (these are the figures for fiscal 2003, for regular employees and part-time workers respectively, from the Monthly Labor Statistics).   Meanwhile, if we calculate the monthly pay for staff dispatched from temping agencies from the hourly and daily rates quoted in the

share of non-regular employees in the labor force has acted to push down average wages per person. In fact, a factorial decomposition of growth in pay for scheduled hours worked (Chart 19) reveals that, in spite of the fact that pay started to rise slightly for both regular and part-time workers in fiscal 2003, this was more than outweighed by the impact of the rise in the share of part-time workers, with the net result that the level of hourly pay per person was actually pushed downwards.

Much the same is true of "special payments" (basically equivalent to bonuses). Most firms, even when they raise the bonuses paid to their regular employees in response to an increase in profits, either do not pay bonuses to non-regular staff, or if they do, they keep such payments small. On this point, if we make use of an estimating function that is often applied to explain movements in bonuses per person, the significant explanatory variables turn out to be firm profits, firms' expected growth rate, an index reflecting the perception that holdings of labor are in excess, and in addition to these, the share of part-time workers in the firm's workforce (Chart 20). Recently we can therefore confirm that, although firm profits have been acting to push bonuses up, the rise in the proportion of part-timers has been counteracting this and holding down the figure for bonuses per person.

(3) Structural changes in the labor market

Up until now, in discussing the expansion in the number of non-regular employees, we have looked only at the firm's side, focusing mainly on firms' incentives with regard to strengthening their profitability. Yet if we are to understand how incentives on the part of firms have been translated into an actual increase in the number of non-regular employees, we must turn our attention to the changes that have occurred on the labor supply side, or as they are more usually described, structural changes in the labor market.

"Summary statistics from the report on temporary staffing agencies" (Ministry of Health, Labor, and Welfare), and the number of days worked per month quoted in the "Survey of conditions at temporary staffing agencies" (same source), this turns out to have been 310 thousand yen in fiscal 2002.

Firstly, advances in the sophistication of information technology can be assumed to have improved the functioning of the labor market.   More specifically, with advances in IT many workplace tasks have become more standardized.   A greater proportion of the tasks previously performed by regular employees can now be devolved to part-timers or workers dispatched from temping agencies.   Furthermore, as internet penetration has progressed, it has enabled a wealth of information on recruitment, job hunting, and wage details to be made generally and promptly available, greatly raising the likelihood of matches being made between those supplying and those demanding labor.   The smoother functioning of the labor market not only means that the process of recruiting new employees costs firms less, but also that they run a reduced risk of being unable to boost their labor force from outside when they need to.   This, in turn, has reduced the merits of holding employees in reserve to accommodate cyclical peaks in demand.

Secondly, there has been a recent spate of employment-related deregulation, affecting mainly employees dispatched from temping agencies.   Originally, the use of such employees was restricted to 26 specific business tasks (sorting financial data, filing, etc.).   However, revisions to the legal framework in 1999 relaxed the rules governing employees dispatched from temping agencies, with the exception of 5 particular industries (manufacturing, the port industry, the construction industry, the security industry, and medical services).   Moreover, in 2000, a system was originated whereby it became possible for workers introduced to a company by a temping agency to become regular employees eventually (the "entry via temping" system).   With the increase in the number of workers dispatched from temping agencies accelerating from around the year 2000, the impact of these deregulatory measures is self-evident (Chart 21).   The system then underwent further deregulation in March 2004, as (1) the ban on the use of employees from temping agencies was lifted for manufacturing; (2) the length of time that employees from temping agencies engaged in the 26 professional tasks above were permitted to work was changed from a maximum of 3 years to an unlimited period; (3) for other business tasks (sales, sales assistance, etc.) the maximum period of employment was

extended from 1 to 3 years; and (4) the "entry via temping" system was made more user-friendly. As a result of these changes, the number of employment options available has been gradually increasing.

Thirdly, we turn to a change that has been taking place over a longer time frame. This is the growing diversity both in people's lifestyles and in the values that they attach to things. Employees themselves therefore have different ideas about what constitutes a favorable working situation, and this has been one of the factors behind the shift towards larger numbers of non-regular employees. For example, there is an intimate relationship between the growth in part-time workers' share of labor, and the trend of rising female participation in the labor force (Chart 22). There has been an increase in the number of women who wish to work and are well able to do so, but who require jobs that are compatible with the demands of married life and of raising children. The relatively short hours and greater flexibility accorded by part-time employment are attractive to such women. In this regard, we see from looking at part-timers' share of labor by industry sector that it is the sectors in which women are most eager to work that the share of part-time workers is particularly high: just under 50% in the wholesale and retail sectors; and over 20% in the service sector. In such sectors, therefore, a large part of recent declines in wages per person may be explained by rises in the share of part-timers in the workforce (Chart 23).[12]

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[12] The use of non-regular employees, especially employees dispatched from business contractors, has also been acting to push down total labor costs in the manufacturing sector. However, according to their employment contracts, employees from temping agencies are defined as temporary staff, and those dispatched from business contractors as business contracting staff – both of which are categorized as belonging to the service sector. The result is that when, for example, manufacturers reduce the number of their regular employees or of workers employed in-house on fixed-term contracts, and instead outsource this work to employees dispatched from business contractors, employment in the service sector increases while the number of manufacturing workers suffers an apparent decline. The effect may well be to push up average per capita wages for the employees who remain with the company. In Chart 23, average wages in the manufacturing sector are seen to rise after 2000, yet this may be a superficial feature of the data for the reason described above. Conversely, the decline in wages in non-manufacturing may actually have been contributed to, at least in part, by manufacturers' labor cost restraint.

(4) Firms' expectations of growth: still on the way to recovery

Up until now we have focused on structural changes in firm behavior and the labor market as the important background of the sluggishness observed in household income relative to the expansion of firm profits during the current economic recovery.   However, we should not overlook other influences.   Also of importance is the fact that the current recovery and firms' expectations of growth in the medium term have not proved strong enough to generate any tightness in the labor market. According to a Cabinet Office survey of firms' expectations for growth in industry demand over the next five years (Chart 24), while the downward trend followed for so long seems at last to be coming to an end with a slight rise in expected growth, nevertheless in terms of their historical level, expectations remain extremely low.

Firms confidence with respect to demand over the mid to long term is thus not sufficiently high for them to feel comfortable engaging in behavior that causes their fixed costs to rise, such as raising wages or securing a generous stock of regular company employees.[13] Looking back at the closing period of the bubble, from the end of the 1980s to the beginning of the 1990s, firms were worried that societal ageing and the declining birthrate would worsen the shortage of labor, and as a result they were unanimous in their eagerness to recruit new employees. Recently, however, concern has tended to shift instead towards the detrimental effect of the declining birthrate on the economy's capacity for growth.   Firms' behavior may therefore change depending on whether the same phenomenon encourages them to hold robust expectations for growth in the medium term, or whether it encourages the opposite sentiment.   The persistence of cautious appraisals of the country's economic prospects over the medium to long term can therefore be seen at the bottom of why improvements in firms' profits have not clearly filtered through to household income during the current recovery.

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[13] As is well known, the practice of long-term employment is firmly entrenched in Japan, and firms tend to consider regular company employees to be an even longer-term investment than business fixed capital.

3. Future prospects for employment and wages and their impact on prices

(1) The outlook for household income

Changes such as firms' increased emphasis on profitability and the smoother functioning of the labor market that has accompanied the strengthening of market mechanisms may be considered irreversible and structural. To the extent that this is so, firms' fundamental predisposition towards labor cost restraint may be expected to continue. However, the perception among firms that labor is in excess is becoming considerably less acute (Chart 25), and in light of this, we may reasonably anticipate that, if the current recovery continues, expectations of medium-term growth will gradually pick up and improvements in firms' profits will start to filter through more clearly into employment and wages. In fact, as remarked earlier, overall numbers of employees are already starting to trend back up (Chart 1 above), and within this general trend, the decline in numbers of regular employees is gradually slackening its pace, and the rate of increase in part-time workers' share of labor, which accelerated from 2002, recently seems to be losing some of its momentum (Chart 22 above). In addition, the first tenuous shoots of recovery are also starting to be seen in the figures for employment among new graduates (Chart 26).

However, the timing of a distinct increase in household income and the pace at which it will subsequently rise are sensitive to the strength of the economic recovery. Furthermore, there are at least three sources of uncertainty affecting the relationship between economic conditions on the one hand, and employment and wages on the other. These are: (a) uncertainty regarding the pace and sustainability of the rise in productivity; (b) uncertainty surrounding the persistence of the downward pressure on real wages; and (c) uncertainty surrounding the supply of labor to spare.

(a) Uncertainty surrounding the future path of productivity[14]

As mentioned earlier, the growth rate of hourly productivity has risen somewhat during the current recovery. While we limit ourselves, however, to looking merely at the recent productivity gains appearing in the statistics, we cannot really say whether or not the observed growth in productivity constitutes a genuine medium-term rising trend, since these gains can be considered to fall within the bounds of the expected cyclical fluctuation seen in previous recovery phases. Of course, bearing in mind the progress in disposing of NPLs and, as discussed above, the growing number of firms putting an increased emphasis on profitability, the prospect of productivity growth developing into a distinct medium term trend is considerably greater this time than in the previous two recoveries. However, at the current juncture, it is not yet indisputably supported by the data.

Of relevance in this regard was the issue discussed during the second half of the 1990s in the U.S. concerning whether the medium-term trend growth rate of productivity was undergoing a shift over the medium term. That was an issue that had significant ramifications for monetary policy. The U.S. economy enjoyed high economic growth rates of over 4% for several years in a row during the second half of the 90s, and these coincided with continuously high growth in labor productivity (Chart 27). As a result, although numbers of employees were rising, conditions in the labor market did not become as tight as the high growth rate might have warranted, and the economy was able to enjoy both a high growth rate and low inflation throughout this period. It is easy enough to confirm

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[14] The concept of productivity which we have in mind in this paper is basically labor productivity, obtained by dividing real GDP by the labor input (number of employees × hours worked). Another well-known concept of productivity is the total factor productivity (TFP), which is defined, when we assume that there are several factor inputs in the production process (typically we consider two, labor and capital), as the residual part of real GDP that cannot be explained by the contribution of labor and capital. TFP is thus generally used to capture advances in technology. In the current paper, we are focusing solely on one factor input, namely labor. In such cases, considering capital more explicitly, a rise in labor productivity, as we define it, may also be generated by a rise in the relative use of capital equipment (in other words the capital input rises relative to the labor input), or by a rise in TFP.

this now, after the event.   However, from a position right in the middle of such a period of sustained high productivity growth, which in the light of U.S. experience to date at that time would have been considered an aberration, there would have been significant uncertainty about how long such a high productivity growth rate could be maintained, and thus for how long the high economic growth rate would remain consistent with low inflation.

It now seems that, in the last 2 or 3 years since 2002, the growth rate of U.S. productivity has once again picked up.   As might be expected following a deep recession such as that experienced in 2001, it is not unusual to see this as an entirely unexceptional cyclical phenomenon. Anyway, it is still too earlier to say this with complete certainty. Whatever the answer to this particular question, the one thing we can say with confidence is that the task of predicting the future path of productivity for any country is beset with difficulties.

(b) Uncertainty relating to downward pressure on real wages

Downward pressure on real wages has continued in spite of the economic recovery, and the second source of uncertainty mentioned above relates to how long this pressure is likely to persist.   Ultimately, the level of real wages is determined in relation to labor productivity.   While it is of course unrealistic to expect wages to adjust frequently to every short-term fluctuation in productivity, nevertheless, over the long-term it is only natural to assume that they will basically fall to whatever level is broadly consistent with labor productivity.   Based on this thinking, we define the level at which real wages are consistent with long-term productivity as the "long-run equilibrium," and then calculate the difference between our estimate of this equilibrium level and the actual path of real wages (Chart 28).[15]   Looking at the results, we see that while real wages have basically fluctuated around a high level vis-à-vis productivity since the mid 1990s, very recently they have fallen to the

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[15] For the theoretical background and details of the estimating methodology, see Nishizaki, K., T. Sugou, "A consideration of labor share in Japan," Bank of Japan Working Paper Series, June 2001(in Japanese).

lowest relative level seen in over 10 years.   The analysis suggests that, in terms of the level of real wages vis-à-vis productivity, adjustment pressures pushing wages down have diminished considerably.   Put a little differently, it can be interpreted as implying that the downward pressure on labor share has abated.[16]

This analysis, however, is based on certain assumptions, such as labor force homogeneity etc.   The results above should therefore be considered to have a wide margin of error.   As mentioned earlier, faced with developments such as the globalization of financial and capital markets, firms have been placing increasing emphasis on profitability, and in light of this it is entirely possible that the long-run equilibrium level of real wages has itself fallen.   At the very least, it would be naïve to claim that, because real wages are now below the long-run equilibrium level suggested by the above analysis, they will immediately cease to fall any further.

For example, as has been repeatedly stressed in this paper, the recent decline in wages is not the result of an across-the-board cut in the wages of all employees, but has been largely brought about by the replacement of regular employees by their non-regular counterparts.   In addition, according to corporate surveys, the expansion of non-regular employees is on course to spread to areas of work that demand relatively high levels of skill and decision-making (Chart 29).   Behind this trend lie various advances in management technology, such as the increasing use of IT, the standardization of business procedures, and more efficient technical training programs.   Advances of this type act to raise the ceiling on the supply of labor and to speed up the obsolescence of parts of existing regular employees' skill sets.   By doing so, they make it possible that, at least for the present, downward pressure on real wages will persist for longer than suggested by the simple long-term equilibrium analysis above.

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[16] Please refer back to the definition given on p.5

(c) Uncertainty relating to the ceiling on the labor supply

Related to the above, the third source of uncertainty is that surrounding the ceiling on the labor supply.   Since peaking at 5.5% in January 2003, the unemployment rate has been on a declining trend Chart 30).   This may basically be understood in terms of the business cycle, demonstrating that pressure on firms to reduce personnel has run its course for the time being, and that the situation surrounding employment has started to improve.   However, in light of the fact that the unemployment rate did not fall during the previous two recoveries, the current trend is also an indication that the labor market's matching function is being performed rather more efficiently.

Movements in the unemployment rate generally include both a cyclical component, reflecting supply and demand conditions in the labor market, and a structural component, reflecting factors such as the expansion of labor market mismatch.   We can get a visual handle on what is happening by performing a UV analysis (Chart 31).[17]   Looking at developments since the 1990s, we see that during recessionary phases the unemployment rate has risen and the vacancy rate fallen – in other words, there has been movement down and to the right along the UV curve.   By contrast, during recovery phases, instead of the unemployment and vacancy rates simply reversing their recessionary phase directions, what we see is unemployment failing to decline at all, and the UV curve heading vertically upwards.   This phenomenon can be explained as follows.   As the economy recovers, the vacancy rate rises.   During these recovery periods, however, this process was accompanied by expansion in labor market mismatch (captured by shifts of the UV curve

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[17] UV analysis is so called because it puts the unemployment rate on the horizontal axis and the proportion of vacancies that remain unfilled (vacancy rate) on the vertical axis, and conducts analysis accordingly.   Thinking about labor market supply and demand conditions over the course of the business cycle, we would expect to see an inverse correspondence between the unemployment and vacancy rates.   In a recession, for example, the unemployment rate would typically rise, and the vacancy rate would fall. Looking at this from another angle, it would be natural to assume that, if we were to observe both the unemployment and vacancy rates rising simultaneously, this would not be because of slackness in the labor market, but because of an expansion in the mismatch between supply and demand.

up and to the right) which has been an ongoing trend over the medium term. The net result was that the UV curve became vertical. The situation is different, however, in the current recovery phase. This time we see the economic recovery being translated directly into a rise in the vacancy rate and a decline in unemployment, i.e. the UV curve is moving up and to the left, movement that represents a cyclical upturn. The implication of these developments is that the brakes may finally have been applied to the trend expansion in labor market mismatch which has lasted so long.[18] With firms seeking a wider variety of personnel and people desiring a greater diversity of lifestyles, the developments depicted occurring above suggest that the labor market is performing its matching function more successfully, and they may constitute a fundamental change that is acting to extend the frontier of the labor supply.

Another point of interest relating to the flexibility of the labor supply is how far hourly wages have the freedom to rise. Looking at hours worked by part-time workers (Chart 32 (1)), we observe firstly that regular working hours display considerable flexibility to move up and down in response to changes in economic conditions; and secondly that overtime has been on a gentle upward trend. The increasing share of non-regular employees in the workforce has allowed employee numbers to be adjusted on a larger scale and may also have increased the relative ease of adjusting hours worked. It may thus be seen as a factor that would act to buttress the supply of labor in an ongoing economic recovery.

The evidence gathered above supports the view that there is little likelihood of the labor supply acting as a drag on the economy in the near future. Yet there is also some evidence that warns us not to ignore the possibility of emerging constraints on the labor supply. As examples we

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[18] From 2003 to 2004, and in particular during the period when the pace of industrial production accelerated, there was a sharp increase in vacancies in the business contracting sector. With the business contracting sector needing to recruit people swiftly, it appears to have been common to put duplicative recruitment notices in several job centers, and this could well have led to an artificially high vacancy rate. The implication in the current context is that the most recent UV curve should actually be placed somewhat lower, suggesting that the mismatch between labor market supply and demand has started contracting.

can cite the following: (1) the main valve for adjusting employee hours, overtime, is already at a high level (Chart 32 (2)); (2) the rate of increase in the proportion of part-time workers has recently started to slow down, implying that there is a limit to how long firms can maintain the rapid pace at which they have been shifting employment from regular to non-regular employees, and that this limit may now have been reached (Chart 22 above); and (3) the labor force ratio for those aged 65 and over has been on a clearly declining trend for the last few years (chart 33). Ultimately, we can only state that, right in the middle of a period of structural change in the labor market, and looking only at individual indicators such as the unemployment rate, it is extremely difficult to draw firm conclusions about how far firms will be able to increase their labor input without generating unmistakable upward pressure on wages.

(2) Impact on household consumption

Given these various sources of uncertainty, even if household income starts to recover, estimates of how rapidly it will do so should be treated with some circumspection. Bearing in mind also that households are going to be paying for various increases in the burden on the welfare state, a degree of caution is advisable when thinking about the outlook for household consumption. On the other hand, during the last year or so, considering that household income has remained flat, the relative robustness of personal consumption suggests that, at least in some areas, firms have become more skillful at generating consumer demand. In light of this, we may perhaps be more optimistic about the chances of a recovery trend emerging in household consumption.

Let's consider this last point in more detail. Recently, the propensity to consume has been on a rising trend; in other words, the saving rate has been declining. This has of course been influenced by demographic factors, such as the increasing proportion of the population made up of elderly people who have a fundamentally higher propensity to consume. However, a more important influence is observed in the fact that the propensity to consume of those in the higher age brackets has itself been rising (Chart 34 (1)). This rise in the propensity to consume can be linked

to changes in firm behavior as, faced with ongoing structural adjustment, they have begun to put more effort into generating demand. Firms' increased emphasis on profitability, stressed throughout this paper, has pushed management not only simply to cut costs, but also to move more aggressively into markets which offer opportunities for development. In order to achieve success in the latter, they have also been required to adopt more ingenious technology and marketing strategies to support their enterprises. Not only do the older age brackets offer a large potential market, but they are also liberally endowed with savings, making them an ideal target for higher value products (Chart 34 (2), (3)). Having become aware of this potential, many firms, all across the manufacturing, distribution, and service sectors, have stepped up their efforts to generate the corresponding demand, and this may be seen as a significant factor in the continuing robustness of household consumption relative to household income.

In addition, since the middle of 2003, there has also been improvement in a range of indicators of broader consumer sentiment, witnessed among households generally and not just among the older age brackets. With the increasing health of firms' balance sheets and profitability, concern for the future has been seen to diminish and consumers to be slowly regaining their confidence, and it is these developments that have been underpinning household consumption.

Of course, sustainable growth is most likely to emerge in a situation where there is a balanced expansion in both firm and household income. In this sense, as long as evidence of an increase in household income remains somewhat tenuous, the risk of household consumption falling should be borne in mind. In short, the timing and pace of the recovery in household income merits continued attention.

(3) Impact on prices

At some point during an economic recovery there emerges upward pressure on prices. One of the significant features of the last couple of years, however, has been that, in spite of the fact that economic growth

has risen somewhat, there has been no especially notable movement in consumer prices. This is best understood with reference to the fact that consumer prices are much more sensitive to employment and wage conditions than other price indicators.

There is generally considered to be a close relationship between average movements in consumer prices over the longer term and labor costs per unit of production (i.e. the "unit labor cost"). In the U.S. and many other countries, therefore, considerable attention is paid to unit labor costs when assessing the extent of upward pressure on prices.

The unit labor cost, which represents the cost of the labor required to produce one unit of real GDP, is thus defined:

(employee compensation / real GDP) = (number of employees × hours worked per person / real GDP) × nominal wages per hour

This may be rewritten as follows:

unit labor cost = nominal wages per hour / hourly labor productivity

In other words, the unit labor cost is the nominal wage relative to labor productivity. Generally speaking, during an economic upturn, and especially at the beginning, the unit labor cost tends to fall. This is because firms are able to increase production relatively easily by putting to work their hitherto underutilized existing labor force. However, when compared with previous recoveries, the decline in the unit labor cost observed during the current recovery is conspicuous (Chart 35).[19] This may considerably explain the fact that, for example over the last year or so, substantial increases in the prices of materials such as crude

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[19] This breakdown of the unit labor cost is very similar to that carried out for labor share on p.5 above, the only difference being the absence of the GDP deflator from both sides. The same caveat that attended our breakdown of labor share is also applicable, therefore, to recent movements in the unit labor cost. More concretely, although an accurate factoral decomposition of the decline in the unit labor cost presents difficulties beyond the scope of this paper, we may safely say that it is the result both of a rise in labor productivity and of a decline in wages.

oil and steel have tended not to be translated into increased consumer prices for goods and services. This is because at each stage of the journey from up to downstream, via production, distribution, and retailing sectors, there is a cumulative increase in the share of labor costs in total costs, with the result that the impact of raw material prices is considerably diluted.

The flip side of the above phenomenon is that consumer prices tend to rise more easily when the economic recovery continues, labor market conditions tighten, and wage costs rise. As mentioned above, however, it is far from simple to obtain a clear picture of supply and demand conditions in the labor market. Moreover, it goes without saying that prices are affected not only by labor market conditions but also by supply and demand conditions in the economy as a whole. A useful concept in this regard is the output gap. Making a number of assumptions about matters such as the ceiling on the labor supply, and taking into account the capital utilization rate and total factor productivity, the output gap provides us with an estimate of the spare supply capacity left in the economy. It thus offers one indication of the extent of upward or downward pressure on prices viewed over the longer-term. There are a number of different ways of thinking about the output gap, and hence a variety of different specific methods used in its estimation. Here we look at the relationship between a representative measure of the output gap used by the Research and Statistics Department of the Bank of Japan and consumer price inflation. Over the medium term, this relationship is seen to slope gently down to the right, in other words we can discern a Phillips Curve (Chart 36).[20]

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[20] As described in "The Output Gap and the Potential Growth Rate: Issue and Applications as an Indicator for the Pressure on Price Change," Bank of Japan Monthly Survey, February 2003, (Research and Statistics Department), the Research and Statistics Department of the Bank of Japan makes use of a number of different estimates of the output gap. Of these, the one illustrated in Chart 36 is that used in the Bank of Japan's "Outlook for Economic Activity and Prices" (the so-called Outlook Report). This estimate of the output gap is calculated by comparison with the maximum level of output that the economy would be able to attain if it employed its capital and labor resources to the full. Since it is calculated relative to the maximum achievable level of output, this measure of the output gap will by definition always take a negative value. Since many of the output gap measures used by various

In thinking about the outlook for consumer prices based on this Phillips Curve relationship, however, we should bear in mind the large margin of error. Not only could there be considerable error in the estimate of the output gap itself, but as is clear in the above chart, there are often phases when, in the short term, the relationship between consumer price inflation and the output gap is far from consistent. In addition to these general caveats, when we recall that the current recovery is being played out against a background of structural changes affecting firm behavior as well as employment and wages, we should also bear in mind two further reasons why prices may prove relatively unresponsive even to a fairly high output growth rate.

The first of these is the possibility that, as firm management becomes more efficient, there may be a clear increase in the rate of productivity growth. High productivity growth means that the labor input, i.e. employment and working hours, does not rise in direct proportion to output growth, so that, at least until output growth really takes off, there is little improvement in the output gap.

Secondly, even if the output gap does improve, this will not necessarily be translated into a rise in prices of the magnitude that past experience might lead us to expect. In this regard, if we focus attention on the Phillips Curve post 2000 (the part indicated by white circles in Chart 36), the gradient of the curve is seen to have become shallower than that of the long-term trend traced by the data as a whole. Although movements since fiscal 2003 have followed the long-term trend line, this was a period when commodity prices and especially oil prices surged, causing prices of items such as gasoline to rise at consumer levels. With this in mind, the true slope of the curve here should be seen as somewhat shallower. At the current juncture, it is too early to say conclusively what weight we should put on this apparent flattening of the curve. However, as a working hypothesis, it seems safe to suggest that, due to the changes in the labor market described in this paper, there is an increased flexibility in the supply of labor, with the result that

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international bodies and other institutions are defined so as to be able to take both positive and negative values, it is impossible to compare them directly in terms of level.

wages, and hence prices, are becoming less responsive to changes in economic activity than previously.

Considering this last point in a little more detail, we may observe that, compared with the time when regular workers made up more than half the work force, the recent increase in the share of non-regular employees has made it relatively easy for firms to adjust their labor input in response to changes in the volume of production. Recruitment and dismissal of regular employees are costly, leaving firms comparatively few ways to adjust their labor input: in the short term by increasing or decreasing hours of overtime; in the longer term by curbing the replacement of retiring employees and the recruitment of new graduates. In the case of non-regular employees, however, not only is it easier on the whole to make adjustments to employee numbers because contracts are for shorter periods, but since it is also possible to make changes, for example, to the number of days that are worked per month, firms have considerably more leeway to adjust normal working hours as well as overtime (Chart 32 above). Turning to conditions on the labor supply side during the same period, we see that, with a wider variety of employment options becoming the norm, there are an increasing number of job-seekers who take a more relaxed perspective regarding their employment options: instead of looking to secure a certain income at all times, their attitude is to take only work that suits them, and only then if it happens to be available locally. As a result, it seems that the labor supply side has also been responding more smoothly to changes in conditions on the demand side. If this has indeed become the case, then it would go some way to explaining the lack of responsiveness of wages and prices to economic changes – in other words the flattening of the Phillips Curve.[21]

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[21] It is also possible to hypothesize that this flattening of the Phillips Curve is due not to developments in the labor market, but to those in product markets. For example, it could be suggested that, with the international division of labor across Asian countries and the progressive globalization of product markets, there is more competition in import product markets, and it is this which is causing prices to be unresponsiveness to economic recovery. An alternative hypothesis appeals to the idea that prices have been failing to rise for a long time now and that this has become the status quo. As a result, the argument runs, expectations of growth in prices will not suddenly emerge just because there has been a degree of economic recovery. If such hypotheses are correct,

Bearing in mind, therefore, that the shape of the Phillips Curve may recently have changed, we should be cautious about discussing price developments purely in terms of their relationship with the output gap. Although the information contained in the unit labor cost can generally be considered to be included in the output gap, this does not necessarily remain true during phases when the shape of the Phillips Curve is unstable. Moreover, considering the size of the errors attending the estimation of the output gap, we may expect to get a much clearer picture of price developments by supplementing our output gap data with the more reliable data we have on the unit labor cost. With this in mind, we used both the output gap and the unit labor cost as explanatory variables of an equation for estimating prices (Chart 37). The results indicate that the unit labor cost has a significant statistical impact on prices, independent from that of the output gap, and that although the extent of this impact has diminished recently compared to its level around 2002, nevertheless it is clear that the decline in the unit labor cost is acting to push down prices.

As discussed above, an important factor behind the reluctance of prices to rise during the current economic recovery, in spite of rises in crude oil and other materials prices, has been the decline in the unit labor cost that has taken place against the background of structural changes in firms' behavior and the labor market. With the decline in wages already coming slowly to a halt, the pace at which the unit labor cost has been falling may be expected to moderate, although there is considerable uncertainty about the extent of this moderation. For example, while the rise in part-time workers' share of the labor force has up until now contributed significantly to the decline in the unit labor cost, their share has recently been increasingly less rapidly. At this point, however, it is not yet clear how far this should be considered a trend development. The future direction of the unit labor cost and its impact on prices should continue to be watched closely and without

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then the recent downward pressure on wages would be more readily attributed to the behavior of firms which, unable to raise prices, have been seeking to preserve or raise their margins via more forceful wage restraint.   In reality, of course, the product and labor markets are closely interrelated, and so it is not realistic to try to explain the flattening of the Phillips Curve by appealing to just one hypothesis.

preconceptions.

4. Conclusion: towards sustainable economic growth

In this paper, we have put a basically positive interpretation on the significant decline in labor share that has been a feature of the current economic recovery. We have seen it as an aspect of the structural changes raising the efficiency of firms' distribution of their resources – changes such as the increasing emphasis of firms on profitability, and the improving functioning of the labor market. At the same time, however, the long-term economic downturn that has afflicted the Japanese economy since the 1990s has left firms with subdued expectations of growth over the medium-term, and we have pointed to this as another cause of firms' persistent labor cost restraint. If Japanese economic vitality is to be maintained, or indeed raised over the longer term, even more will be required from the labor market.   Here, we draw attention to three points that may be thought relevant to the more effective functioning of the labor market.

The first of these is the development of the skill-set of the younger generation. Although the unemployment rate is falling, a glance at the figures for different age groups reveals that unemployment remains as high as ever among the younger generation of 15-29 year olds, and that a gap is opening up between them and other age groups (Chart 38).   The shift towards non-regular employment also comes with its own set of problems. The problem of "*freeters*" is often pointed out. Compared with regular company employees, these members of the younger generation have relatively few opportunities to raise their levels of knowledge or develop their skill-sets (Chart 39), with the result that even after they have worked for many years, their wages tend to remain low. Moreover, survey results suggest that, of these *freeters*, although there are those who deliberately choose a working environment that leaves them relatively free to pursue their own private dreams, a greater proportion are engaged in part-time or temporary jobs because there are no openings for regular company employees and so they have no other

choice.[22]   Increasing attention has also been paid recently to the so-called NEETs[23]: members of the younger generation who are not in school and who show no inclination to search for a job.   It goes without saying that, for Japan to maintain or increase its productivity over the longer term, it is essential that the country develops its human capital. The establishment and continued reinforcement of an environment that helps the younger generation in their efforts to find work and develop their abilities is therefore of the utmost importance.

The second point is to build an environment which is more conducive to keeping the older generation in work.   One of the characteristics of the older generation in recent years has been the long-running trend decline in its labor force participation ratio (Chart 33 above).   In other words, employees themselves have been exhibiting a disinclination to continue working, and have been dropping out of the labor force.   Of course, deciding whether or not to work is a matter of personal choice, and the growing number of older employees who choose not to work may be seen as an indication of the maturity of Japan's economy, as well as of how far it has progressed in terms of its social security system and its accumulation of financial assets.   However, given Japan's current demographic circumstances, in which a shrinking population is combined with a rising proportion of elderly people, individuals with skills and experience, whatever their age, are a precious human resource.   It is therefore vital to ensure that the social security and other systems are not set up in such a way that they heavily discourage older workers from participating in the labor force.

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[22] According to the 2003 White Paper on the Nation's Lifestyles (Cabinet Office), *freeters* are those of 15~34 years of age, who do part-time or temporary jobs (including working for temping agencies) or who are unemployed and have no inclination to work. There were some 4,170,000 such *freeters* as of 2001.   Also, according to the Survey of Attitudes in the Younger Generation (in Japanese, Cabinet Office, 2003), the proportion of *freeters* who actually wanted to find regular employment with companies exceeded 70%.

[23] NEET stands for "Not in Employment, Education, or Training."   According to the 2004 White Paper on Labor and the Economy (Ministry for Welfare, Health, and Labor), NEETs are defined as those aged 15~34 who have finished school and are unmarried, but who are not working, not looking for jobs, or in further education.   They numbered 540 thousand as of 2003.

The third point is to make effective use of human resources, including across regions. The employment situation is improving on the whole, although there remain regional variations (Chart 40). The situation can be improved through the revitalization of regional economies. At the same time, the emergence of variations in economic performance across regions is an inevitable result of the action of a dynamic market economy. This reality needs to be borne in mind when considering how to make effective use of regional resources, and approaches to the problem should focus on the creation of a society which does not impose heavy costs on shifting resources between regions, quite often related to housing and education.

Appendix

The expansion of non-regular employment: declining wages or rising productivity?

Let us consider the case of a firm which replaces part of its regular labor force with part-time workers with a view to economizing on its labor costs. Assuming that total hours worked and total output both remain the same, then productivity, calculated in a simple fashion as the latter divided by the former, will clearly also remain the same. By contrast, since the wages of part-time workers are generally less than those of regular employees, then the figure for average hourly wages obtained by combining the two will decline. In somewhat impressionistic terms, this broadly describes what has happened in the Japanese economy over the last 2~3 years, and when we look at the statistics, we can confirm this general picture in Charts 5 and 6 of the main text.

This kind of calculation should, however, be treated with a degree of circumspection, since it is based on the assumption that regular and part-time employees are of equivalent quality on average, and that their hours worked can thus be simply added together. This, of course, is not a very realistic assumption. If there is no difference between the quality of regular and part-time employees, then how can we rationally explain the significant observed difference in their respective wage levels? Putting this a little differently, it seems natural enough to suggest that the "real" labor input from one hour of work by a part-time employee is less than the equivalent figure for a regular employee.

At this point, we follow common practice among economists and assume that the difference between the respective hourly wages of regular and part-time employees reflects their relative productivity. The labor input attained from an hour's work by a part-time employee can then be expressed in terms of the labor input from a regular employee by multiplying it by the ratio of part-time to regular employees' hourly wage rates (part-timers' hourly wage / regular employees' hourly wage). Using the "real labor input" obtained by carrying out the above adjustment, we can then calculate productivity. To the extent that the rise in

part-timers' share of the labor force is counted as a reduction in the labor input, this measure of productivity is seen to rise faster than the previous unadjusted measure (Appendix Chart, upper figure).   Recently, in particular, the rapid rate of growth in part-timers' share of the labor force has meant that the difference between the adjusted and unadjusted measures of productivity has widened.

We can carry out a similar adjustment for nominal wages. Specifically, we consider that the labor cost savings from raising the share of part-timers in the workforce are achieved not by a decline in wages but by a reduction in the real labor input.   Carrying out such an adjustment, we see, much as we would expect, that the observed decline is smaller for adjusted than for unadjusted wages, and that the difference between the two has become large in recent years (Appendix Chart, lower figure).

During the phase of expanding non-regular employment, therefore, a phenomenon has been taking place which, conceptually speaking, we may interpret as rising productivity.   This phenomenon does not appear directly in the statistics, but is included as a part of the observed decline in wages.   However, if it were actually the case that the difference in wages between regular and part-time employees was perfectly reflected in their relative productivity, then firms would have no incentive to replace regular employees with part-timers.   In reality, firms' increased demand for part-time employees can only be explained by assuming that, against the background of advances in IT and continuing deregulation, the wages of part-timers have fallen relative to their productivity.   And if this is indeed the case, then it becomes reasonable to return to the idea that, as firms have made increasing use of relatively cheap part-time labor, this has been translated into an overall decline in wages. Ultimately, it is extremely difficult to distinguish accurately which of these two propositions (rising productivity or declining wages) offers a better description of what is happening along with the expansion of non-regular employment.   The truth, in all likelihood, is somewhere in the middle.
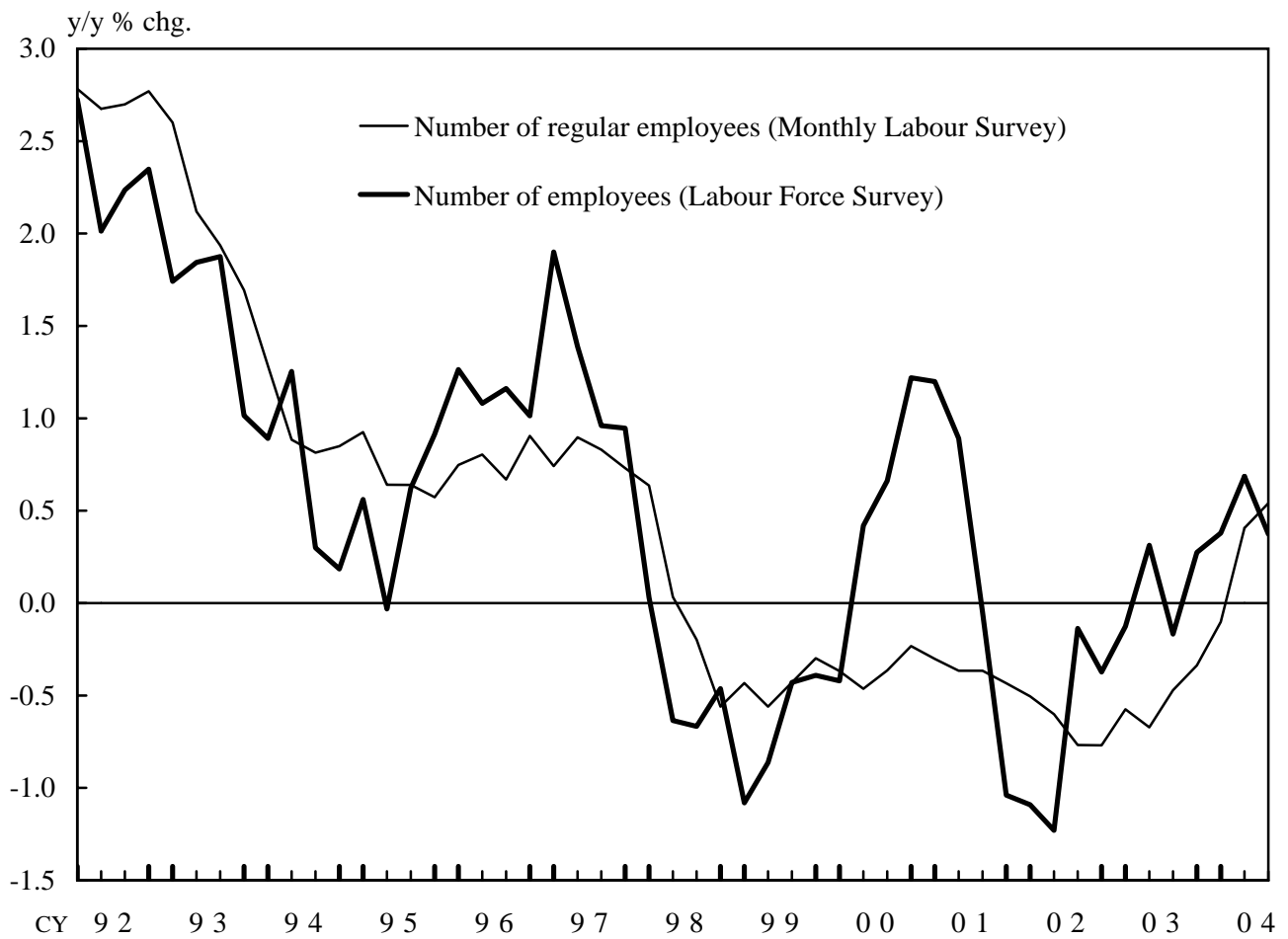
Chart 1

Number of Employees

Note: Data are for establishments with at least 5 employees.

Sources: Ministry of Internal Affairs and Communications, "Labour Force Survey";
          Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 2

Nominal Wages per Employee

y/y % chg.

Special cash earnings (bonuses, etc.)

Non-scheduled cash earnings

Scheduled cash earnings

Nominal wage per employee

CY 9 2   9 3   9 4   9 5   9 6   9 7   9 8   9 9   0 0   0 1   0 2   0 3   0 4
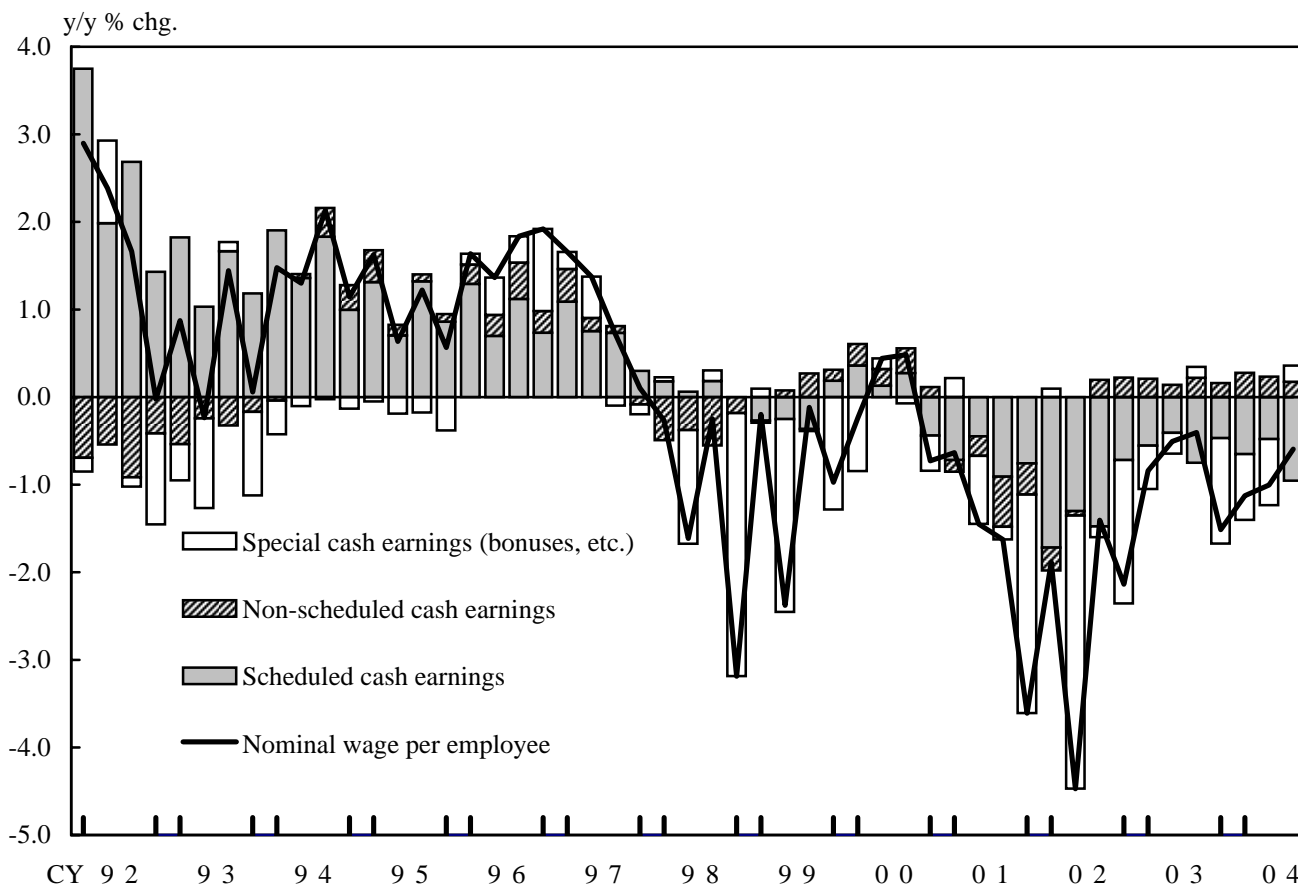
Notes 1. Q1=Mar.-May, Q2=Jun.-Aug., Q3=Sep.-Nov., Q4=Dec.-Feb.
　　　 2. Figures for 2004/Q3 are those of September.
　　　 3. Data are for establishments with at least 5 employees.

Source: Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 3

Compensation of Employees

s.a.; CY2000=100
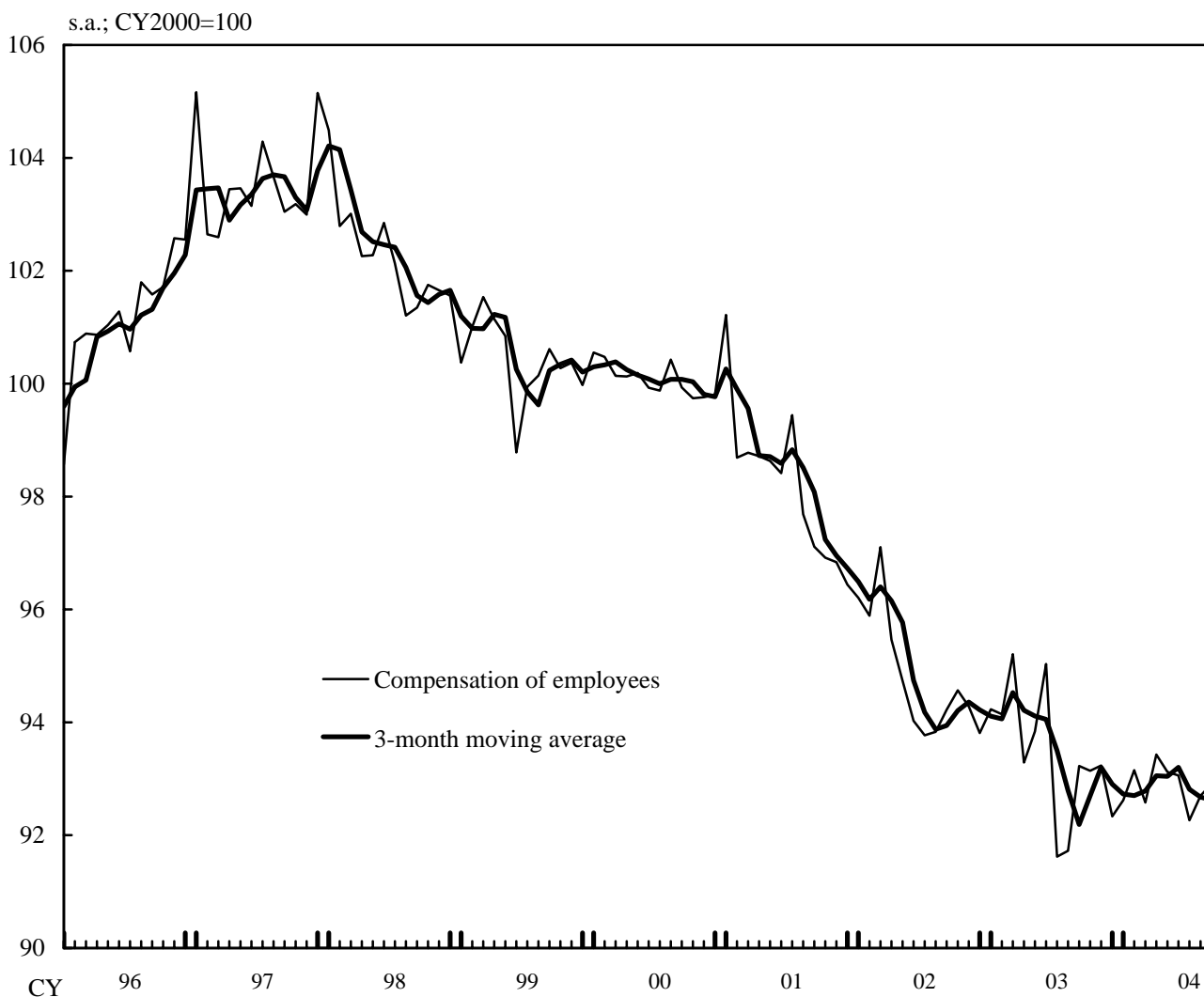
Notes: 1. Compensation is calculated by the Bank of Japan as the index of total cash earnings times the index of
regular employees divided by 100.
2. Figures are seasonally adjusted by the Bank of Japan using X-12-ARIMA.
3. Data are for establishments with at least 5 employees.

Source: Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 4

Labor Share

s.a.; %

| | 3-quarter moving average | Labor share |
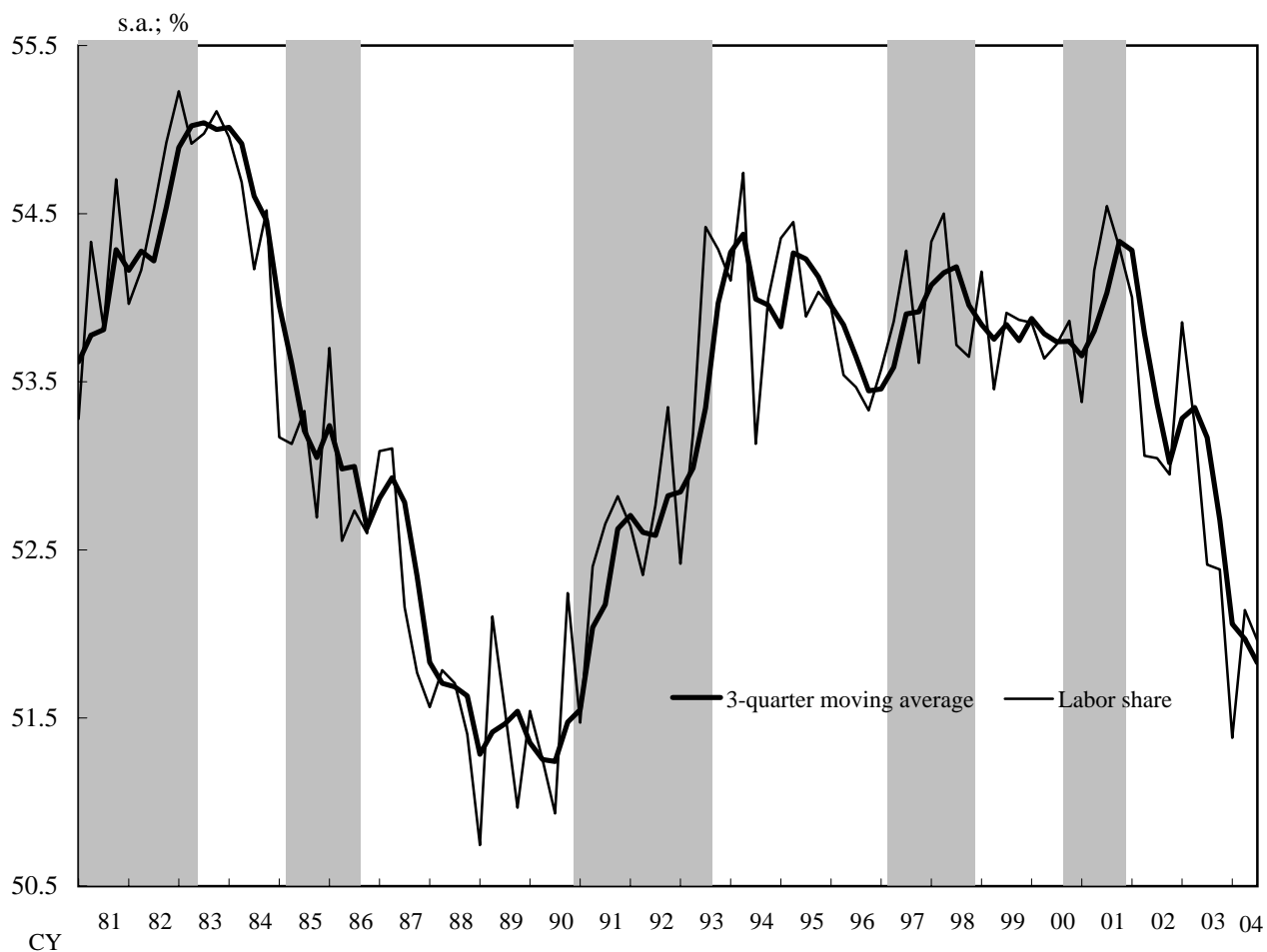
Notes 1. Labor share = compensation of employees/nominal GDP.
       2. Shaded areas indicate recession periods.

Source: Cabinet Office, "National Accounts."

Chart 5

Labor Productivity per Hour

y/y % chg.

Average of 91/2Q - 02/1Q (+1.3%)

Average of 02/2Q - 04/3Q (+1.8%)

Labor productivity per hour
3-quarter moving average

CY 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
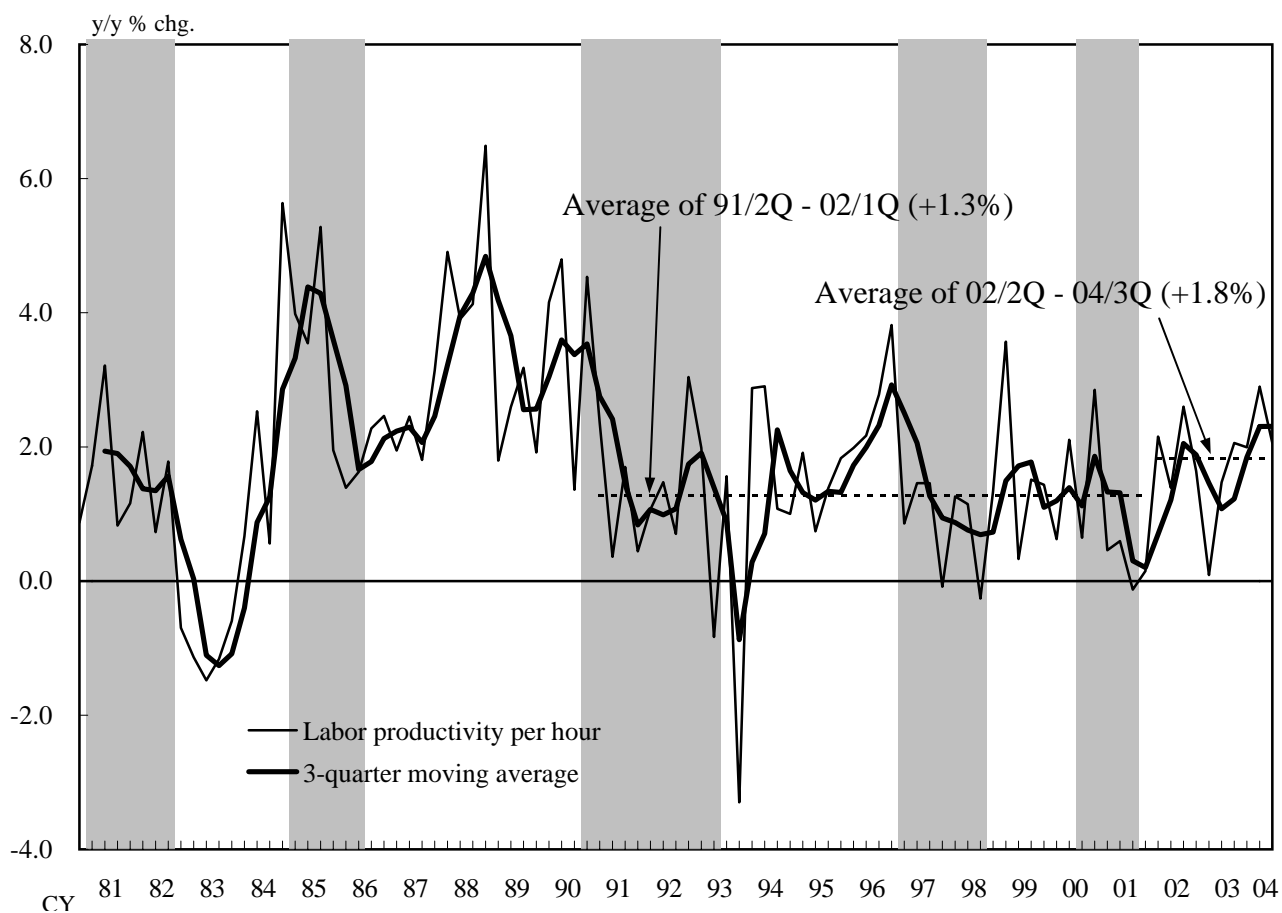
Notes: 1. Labour productivity per hour = real GDP/(no. of employees in the *Labour Force Survey* *
total hours worked in the *Monthly Labour Survey*).
2. From 90/1Q, the total hours worked (in the *Monthly Labour Survey*) uses figures based on establishments
with at least 5 employees. Figures prior to 89/4Q are retroactively revised using year-on-year figures of
establishments with 30 employees and over.
3. Shaded areas indicate recession periods.

Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications,
"Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 6

Real Wages per Hour

y/y % chg.

Average of 91/2Q - 02/1Q (+1.8%)

Average of 02/2Q - 04/3Q (+0.0%)

—— Real wages per hour   —— 3-quarter moving average

CY   81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
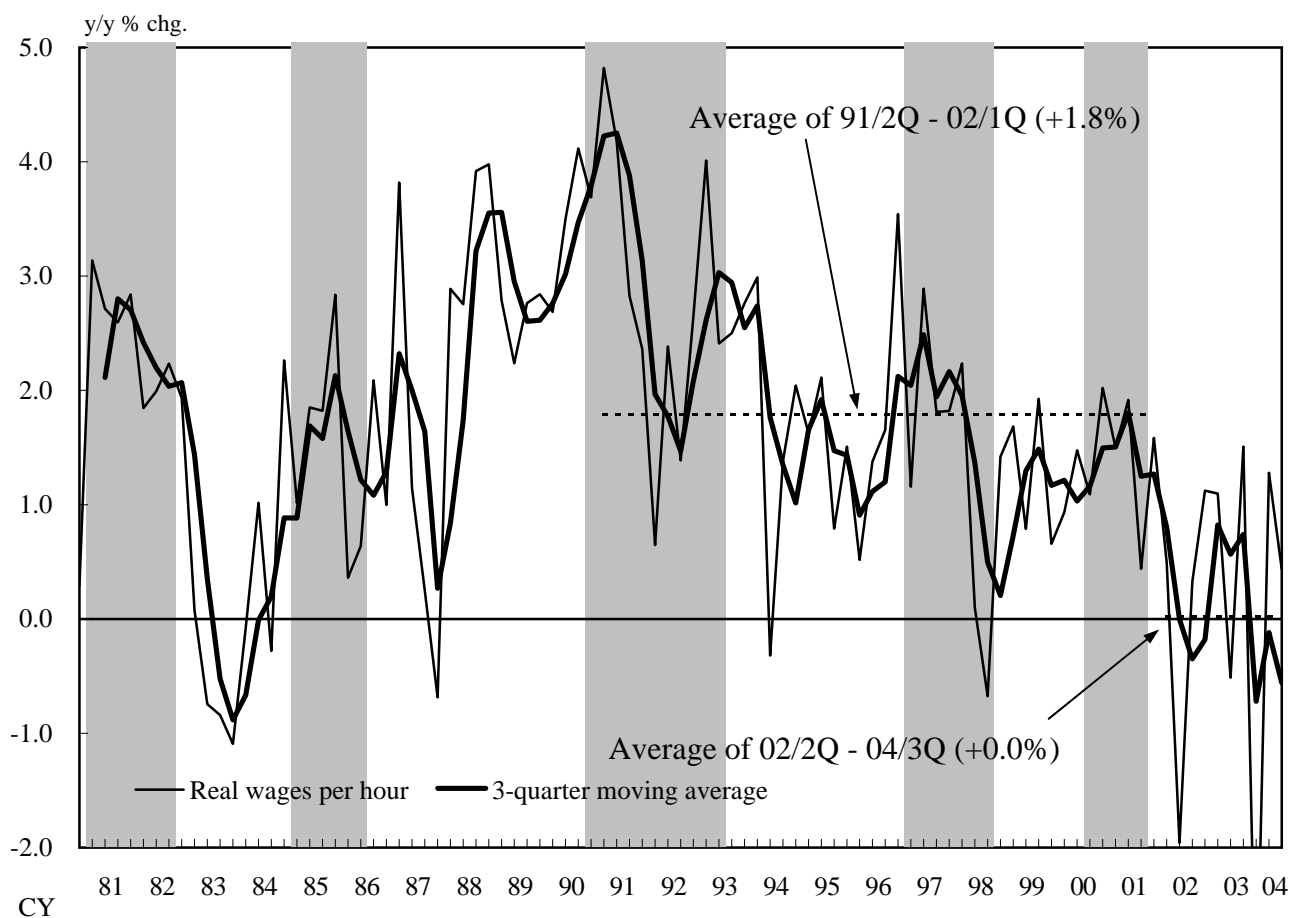
Notes: 1. Real wages per hour = (compensation of employees/(no. of employees in the *Labour Force Survey* *
total hours worked in the *Monthly Labour Survey*)/GDP deflator.
2. From 90/1Q, the total hours worked (in the *Monthly Labour Survey*) uses figures based on establishments
with at least 5 employees. Figures prior to 89/4Q are retroactively revised using year-on-year figures of
establishments with 30 employees and over.
3. Shaded areas indicate recession periods.

Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications,
"Labour Force Survey"; Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 7

Number of Employees by Industry

s.a.; 10 thous. persons

s.a.; 10 thous. persons

—— Manufacturing (left scale)

- - - - Wholesale and retail trade, and Eating and drinking places (left scale)

– – – Services (left scale)

▬▬▬ Construction (right scale)

——— Transport and Electricity (right scale)

–·–·– Finance and Real estate (right scale)
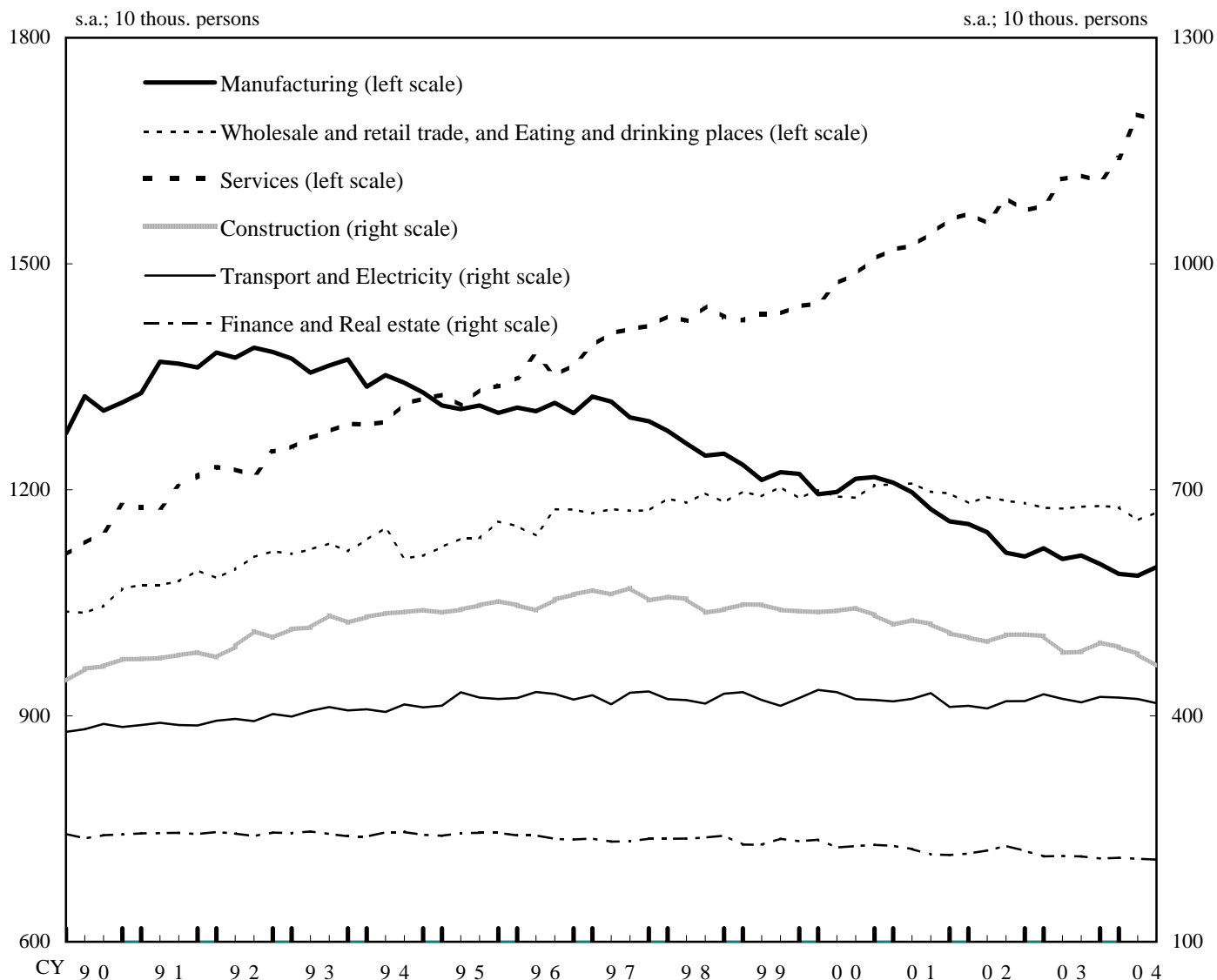
Note: 1. As the data was switched over to the new industry classification in January 2003, retroactive figures calculated from
         year-on-year figures based on the new industry classification are used from January 2003 onward.
      2. Seasonally adjusted by the Research and Statistics Department, Bank of Japan using X-11.

Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

Chart 8

Employment in the Construction Industry

s.a.; trill. yen   s.a.: 10 thous. persons

— Amount of public Construction Completed (left scale)

▬ Number of employees in construction (right scale)

CY 9 4   9 5   9 6   9 7   9 8   9 9   0 0   0 1   0 2   0 3   0 4
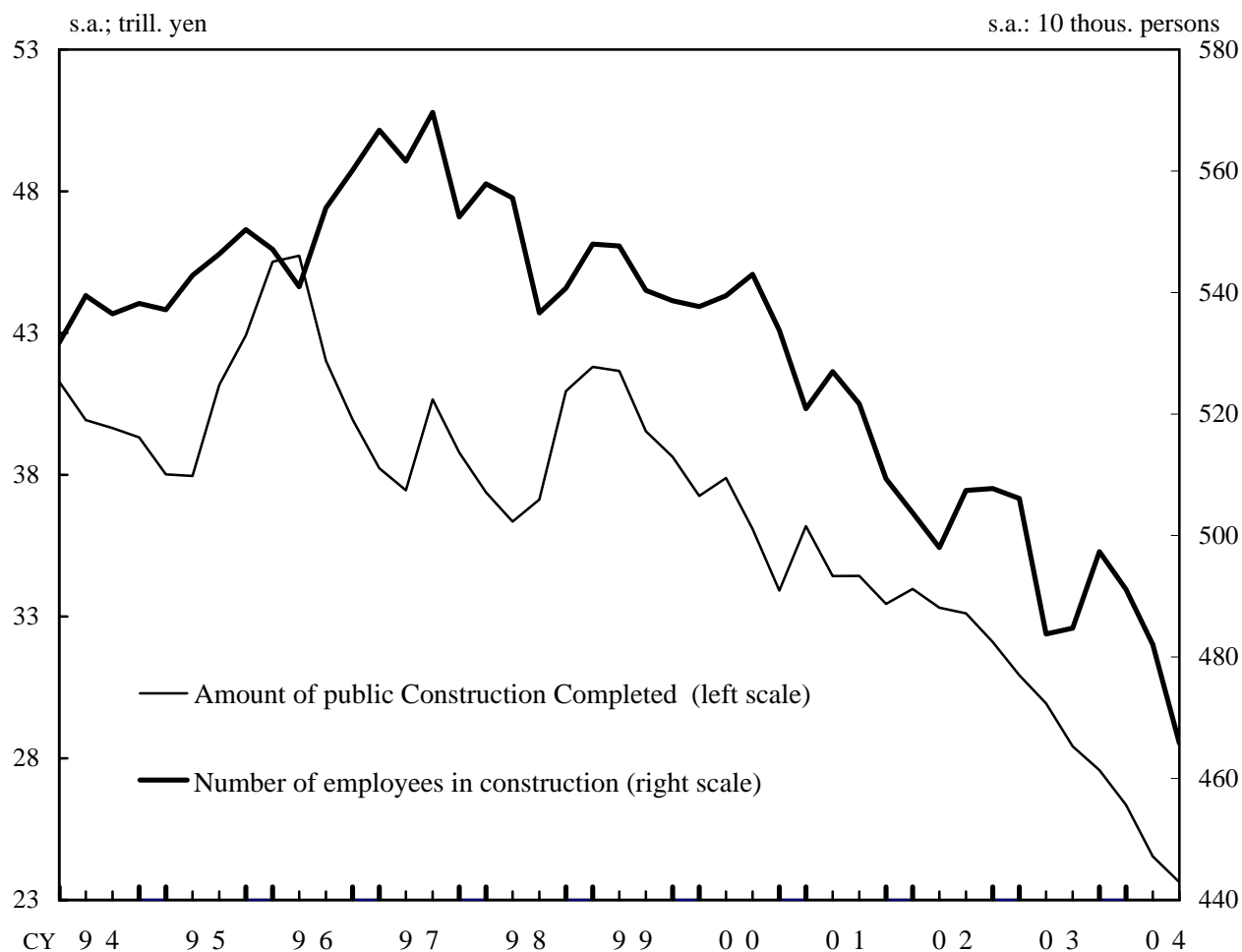
Note: Amount of Public Construction Completed uses figures of the chain-linking method
           (estimated by the Cabinet Office).

Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications,
         "Labour Force Survey."

Chart 9

Employment and Degree of Import Penetration

Rate of change in no. of regular employees; %

0

Food ◆

-5

Transportation
machinery ◆

◆ Chemicals

◆ Publication

◆ Rubber

-10

◆ General machinery   ◆ Precision machinery

◆ ◆ Processed metals

Pulp and paper

-15

Iron and steel

◆ ◆ Furniture   ◆ Electrical machinery

◆ Nonferrous metals

◆ Ceramic and clay
products

-20

◆ Timber

-25

◆ Textiles

◆ Apparel

-30

-3   0   3   6   9   12   15   18

Degree of change in import penetration; % points

Notes: 1. The above chart shows the rate (degree) of change from CY1999 through CY2003.
   2. The degree of import penetration is calculated as follows using "The Summary Report on Trade of Japan"
      (Japan Tariff Association), "Census of Manufactures" (Ministry of Economy, Trade and Industry),
      and "Input-Output Tables" (Ministry of Internal Affairs and Communications), etc. :
      Degree of import penetration = imports from overseas/(domestic shipments + imports from overseas).
   3. Data are for establishments with at least 5 employees.

Sources: Ministry of Health, Labour and Welfare, "Monthly Labour Survey"; Ministry of Economy, Trade and Industry,
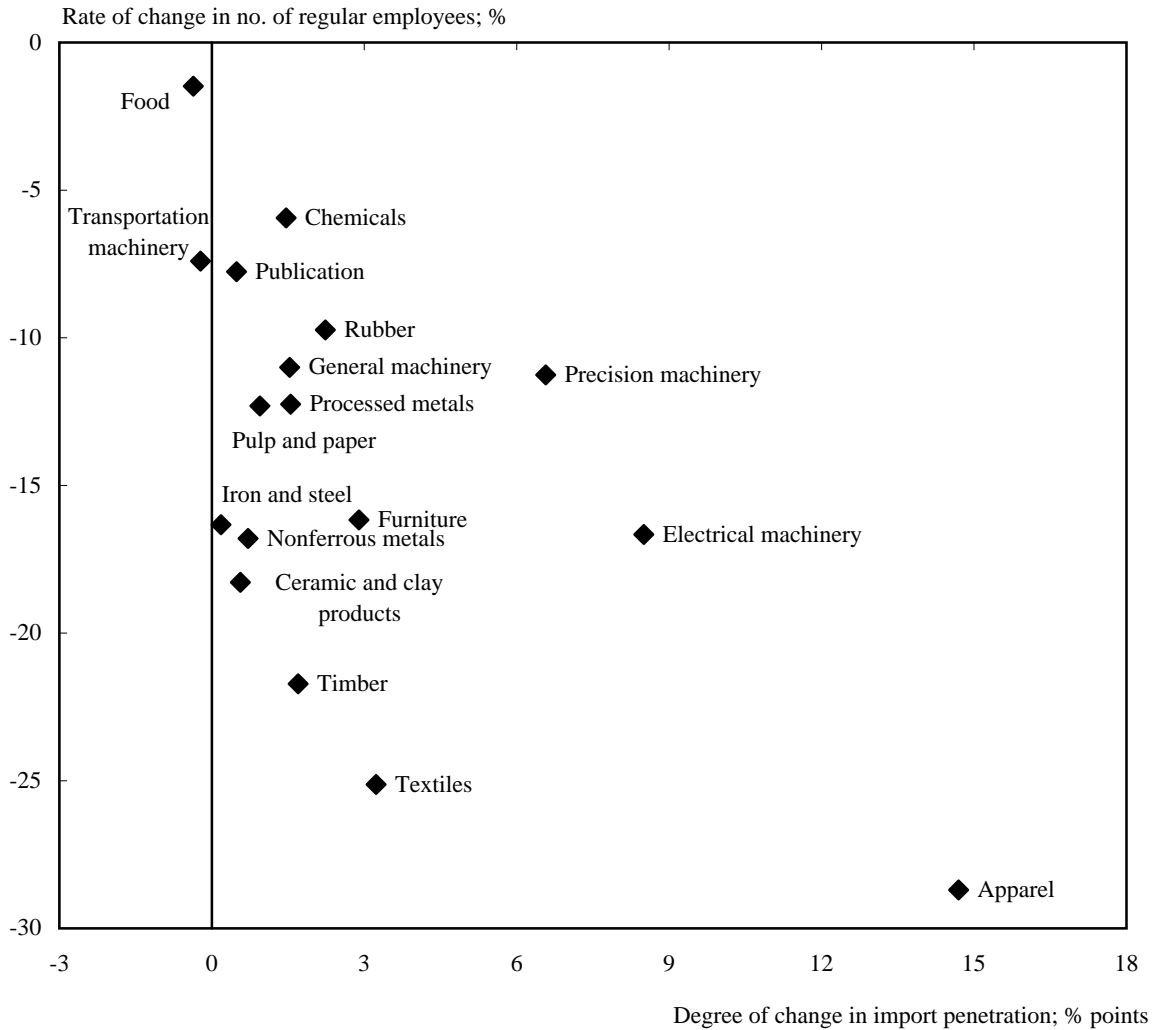   "Census of Manufactures"; Cabinet Office, "National Accounts"; Japan Tariff Association,
      "The Summary Report on Trade of Japan"; Bank of Japan, "Corporate Goods Price Index";
      Ministry of Internal Affairs and Communications, "Input-Output Tables"; etc.

Chart 10

Weight of University Graduates Among Labor Costs in 2003

(1) In relation to the ratio of R&D costs

Weight of university graduates among labor costs; %

Ratio of R&D costs; %

(2) In relation to imports from East Asia

Weight of university graduates among labor costs; %

Ratio of imports from East Asia; %
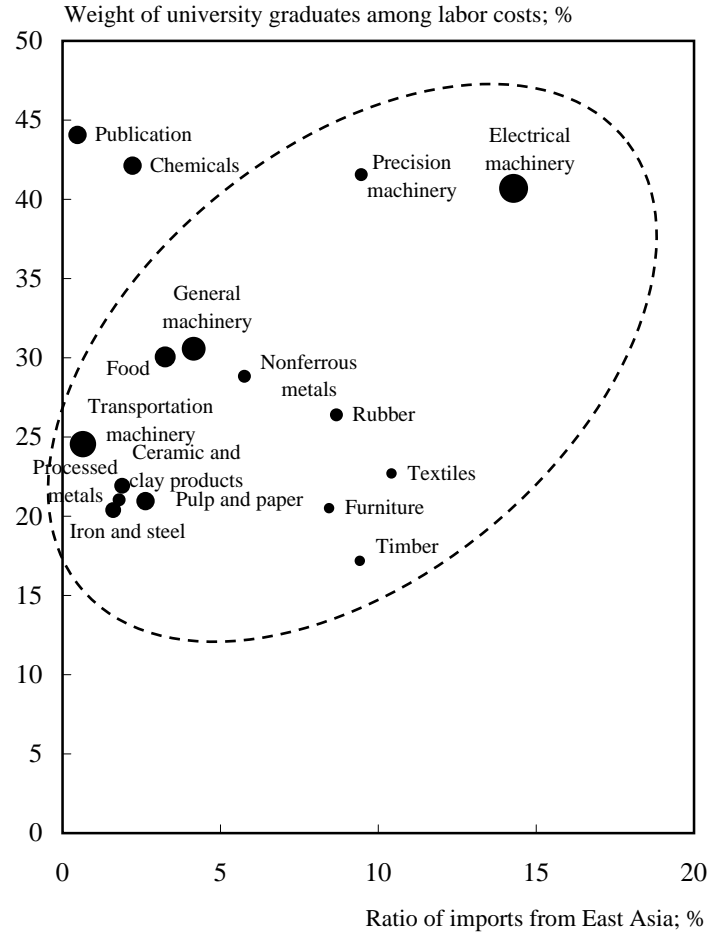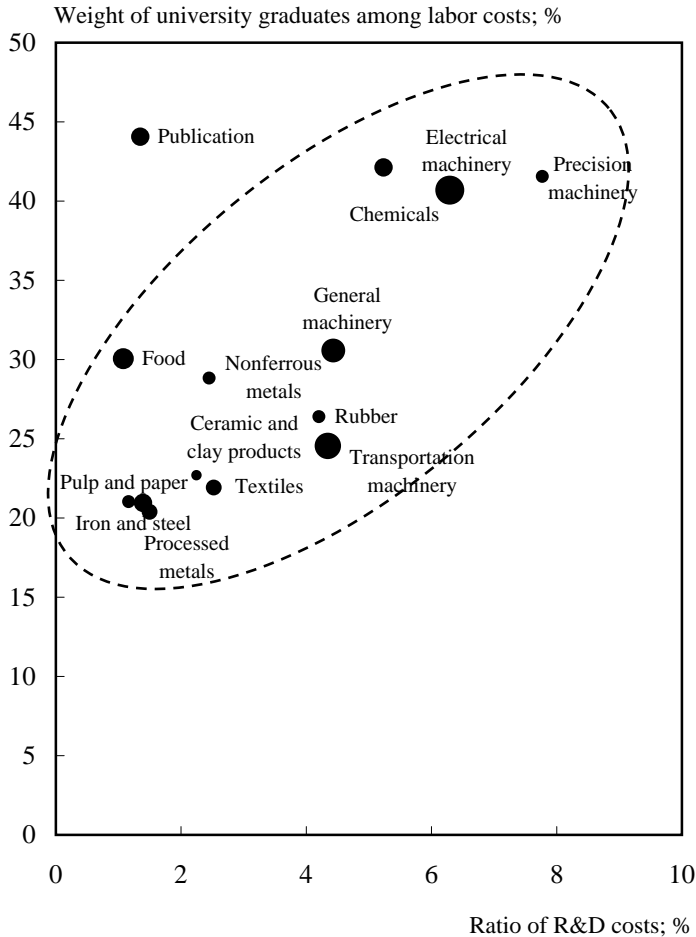
Notes: 1. The size of the black circles correspond to the number of male workers in each industry (the bigger the circle the larger the no. of male workers.)
2. Weight of university graduates among labor costs = (average cash earnings of male workers with university degrees*no. of male workers with university degrees)/(average cash earnings of male workers*no. of male workers); Ratio of R&D costs = in-house R&D costs/sales; Ratio of import from East Asia = imports from East Asia/ (domestic shipments + imports from overseas).

Sources: Ministry of Health, Labour and Welfare, "Basic Survey on Wage Structure"; Ministry of Internal Affairs and Communications, "Survey of Research and Development"; Ministry of Economy, Trade and Industry, "Census of Manufactures"; Cabinet Office, "National Accounts"; Japan Tariff Association, "The Summary Report on Trade of Japan"; Bank of Japan, "Corporate Goods Price Index"; etc.

Chart 11

Return on Assets (ROA)
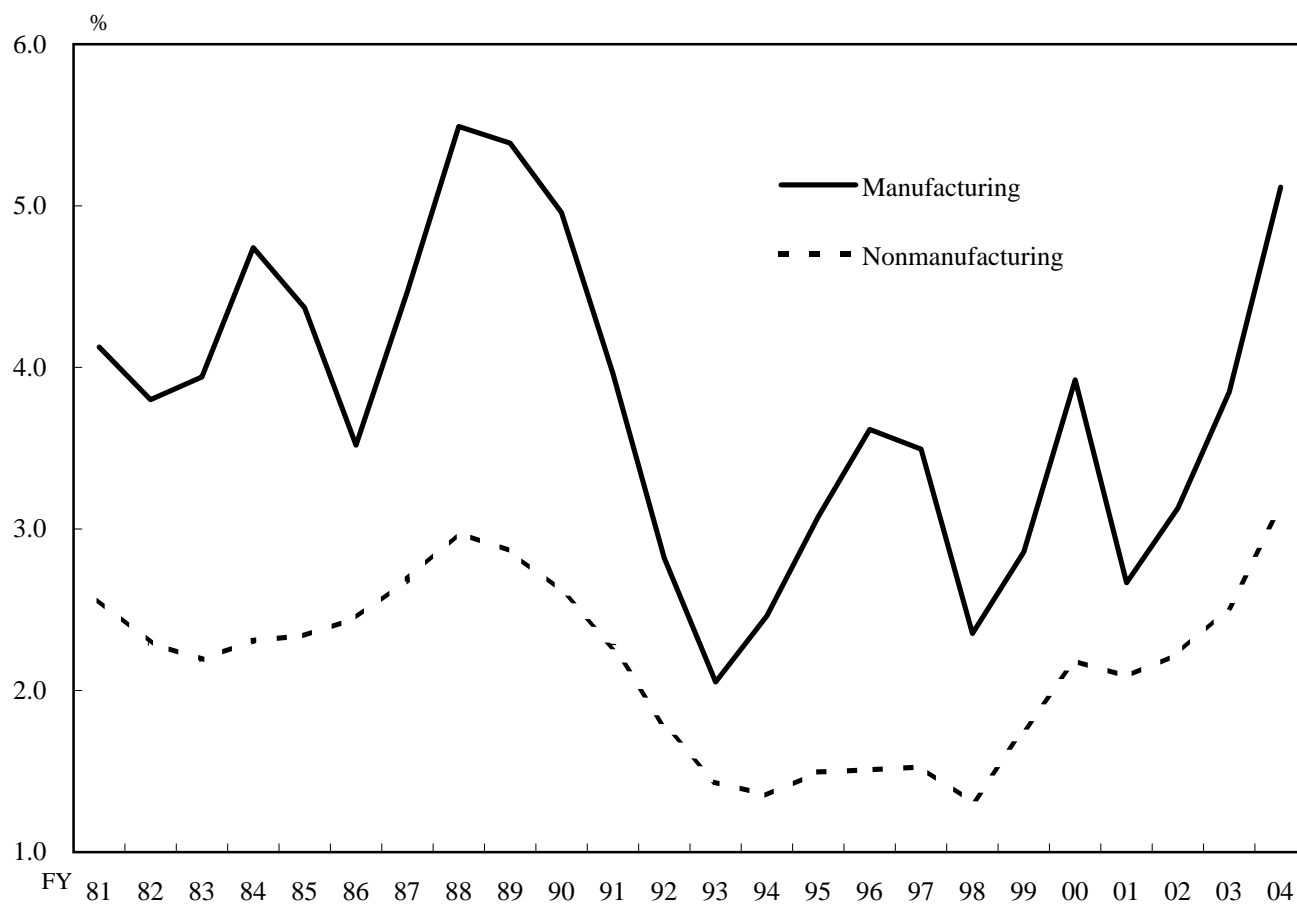
Notes: 1. ROA = current profits/total assets
       2. Figures for FY2004 are calculated from the 04/2Q based on the *Financial Statements Statistics of Corporations by Industry, Quarterly.*
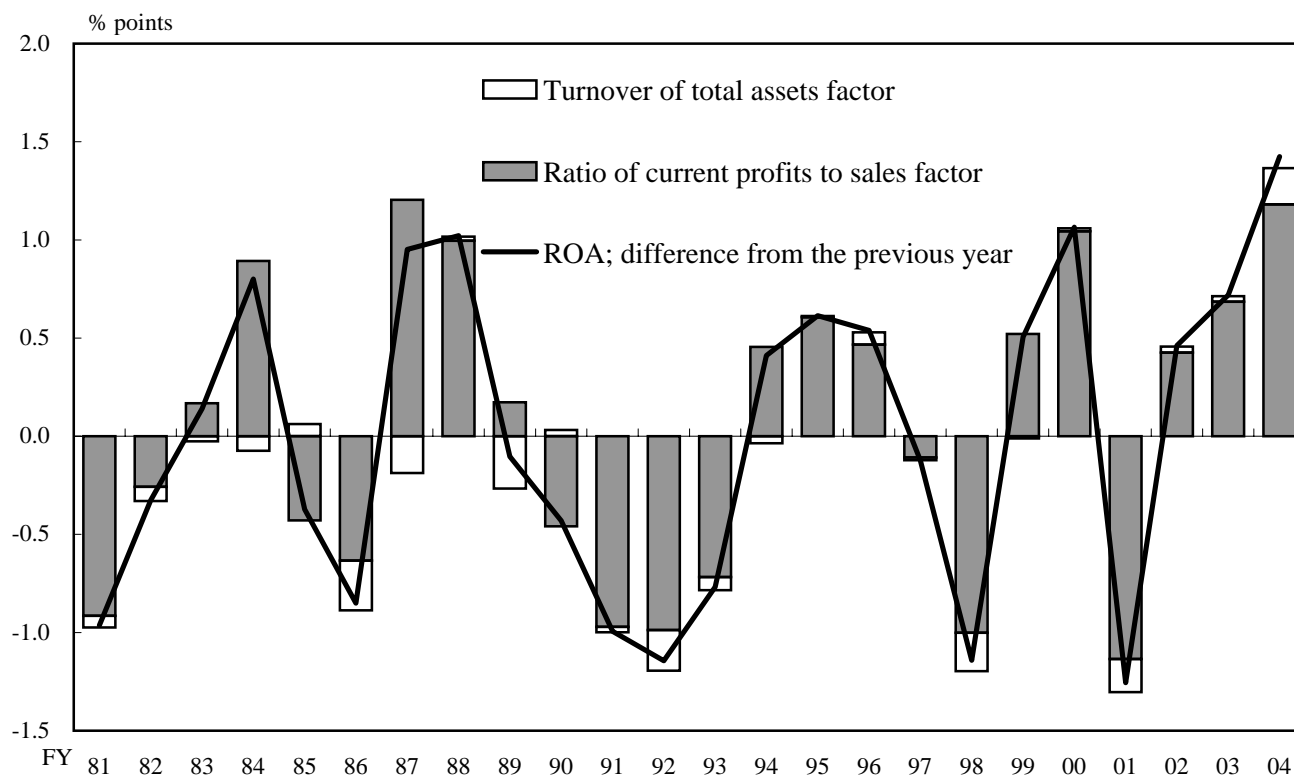
Sources: Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Annually,"
         "Financial Statements Statistics of Corporations by Industry, Quarterly."

Chart 12

Two Factors Determining the ROA

(1) Manufacturing

% points

Legend:
- ☐ Turnover of total assets factor
- ▨ Ratio of current profits to sales factor
- —— ROA; difference from the previous year

FY 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04

(2) Nonmanufacturing

% points

Legend:
- ☐ Turnover of total assets factor
- ▨ Ratio of current profits to sales factor
- —— ROA; difference from the previous year

FY 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04

Notes: 1. Ratio of current profits to sales = current profits/sales; Turnover of total assets = sales/total capital.
2. Figures for FY2004 are calculated from the 04/2Q based on the *Financial Statements Statistics of Corporations by Industry, Quarterly.*
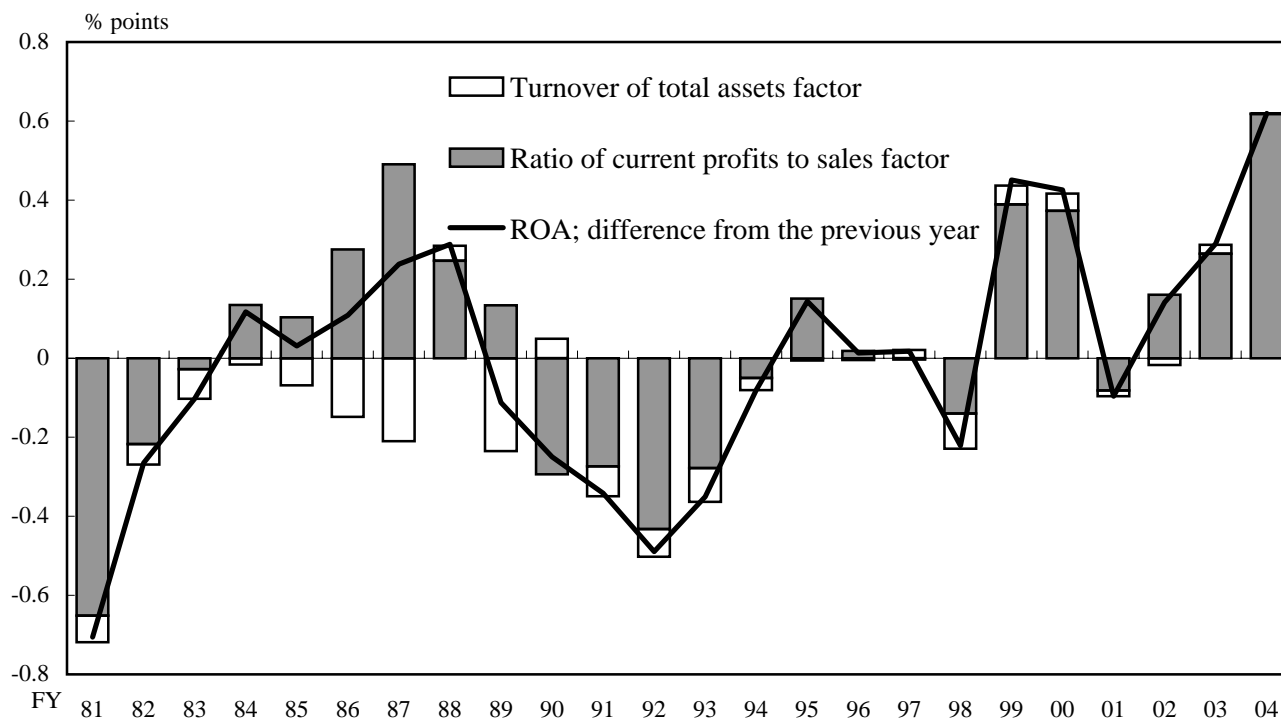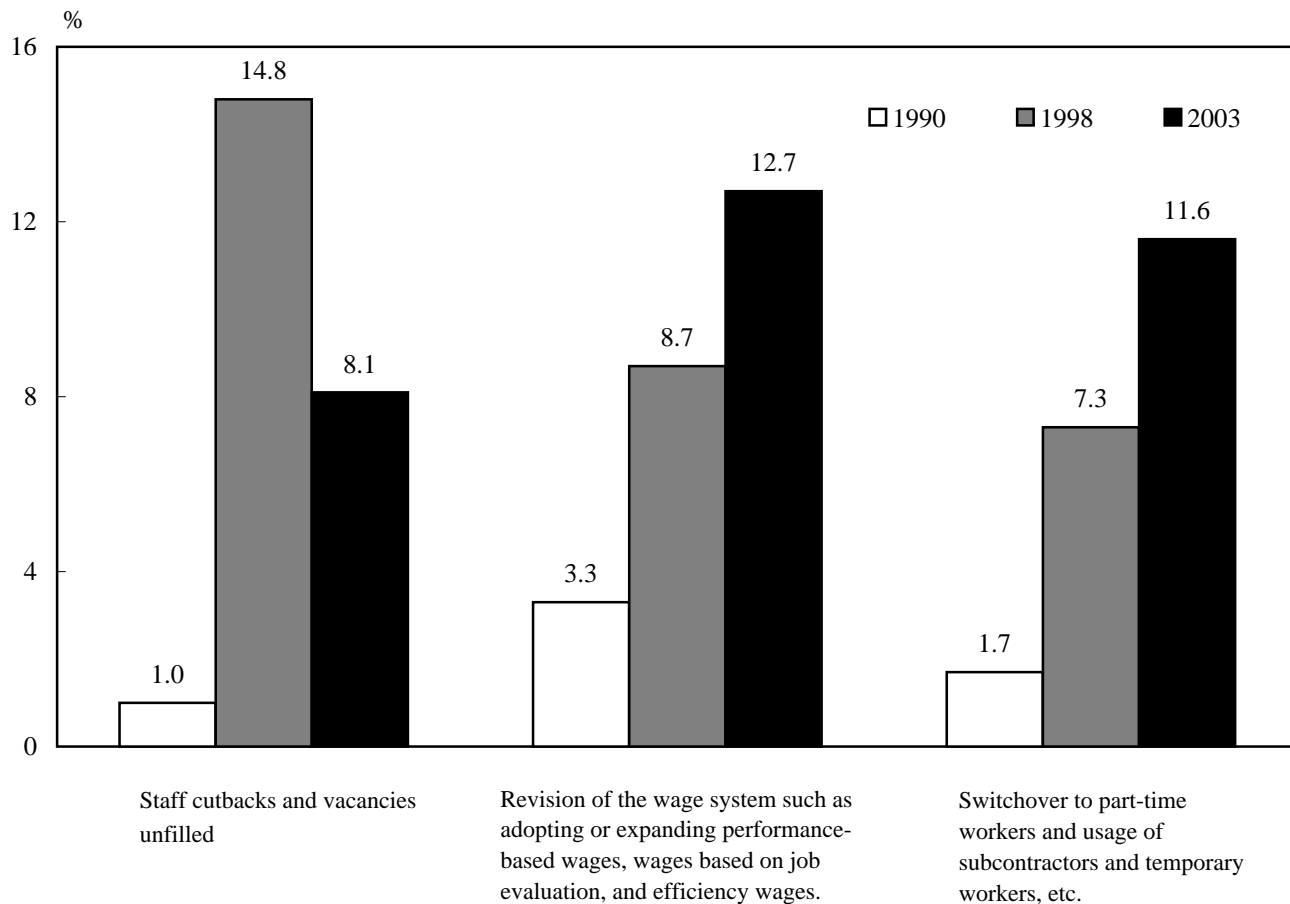
Sources: Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Annually,"
"Financial Statements Statistics of Corporations by Industry, Quarterly."

Chart 13

Methods Taken to Cut Labor Costs

%

□ 1990   ▨ 1998   ■ 2003

Staff cutbacks and vacancies unfilled: 1990: 1.0, 1998: 14.8, 2003: 8.1

Revision of the wage system such as adopting or expanding performance-based wages, wages based on job evaluation, and efficiency wages.: 1990: 3.3, 1998: 8.7, 2003: 12.7

Switchover to part-time workers and usage of subcontractors and temporary workers, etc.: 1990: 1.7, 1998: 7.3, 2003: 11.6

Note: The above results obtained from aggregating responses to the question "What measures are taken in particular for the time being to alleviate the burden of labor-cost?" Apart from the above responses, there were the following: "Increase sales and develop new products"; "reshuffle workers and improve working method"; "reduce expenses"; "introduce and expand machinery equipment to cut down the labor force"; "raise prices and charges"; and "a further shift to overseas production."

Source: Ministry of Health, Labour and Welfare, "Survey on Wage Increase."

Chart 14

Performance-based System

(1) Introduction of performance-based system

■ Introduced in all sections	▨ Introduced in some sections	☐ Not introduced	▨ Others	

(2) Year of introduction

Prior to 1995 8.2%
1996 4.1%
1997 8.2%
1998 5.5%
1999 8.2%
2000 20.5%
2001 15.1%
2002 15.1%
2003 15.1%
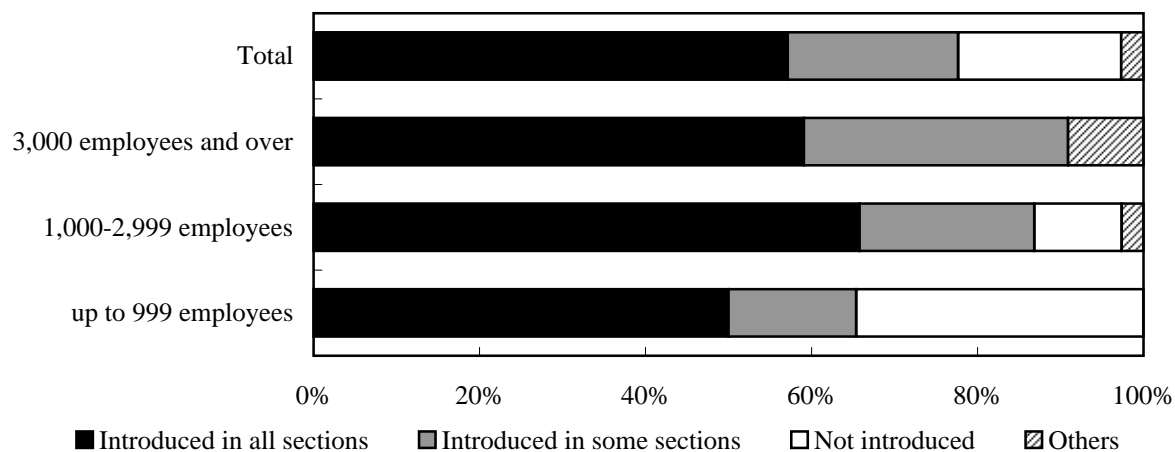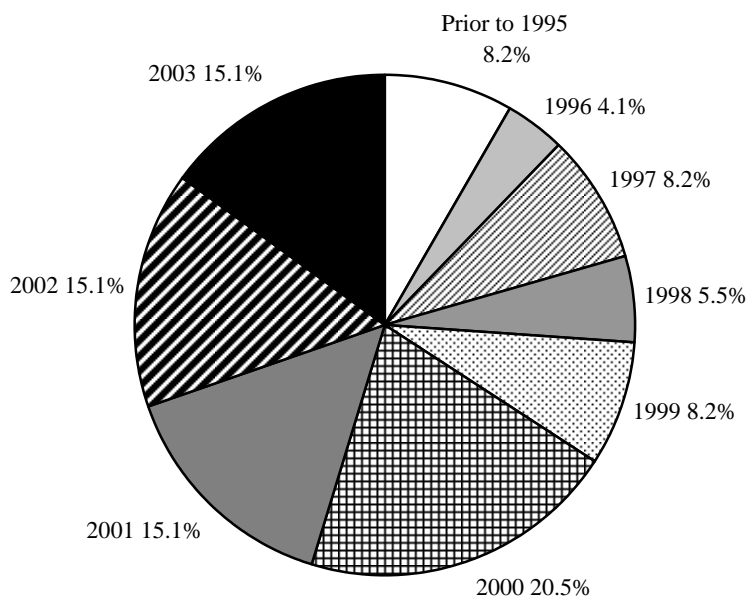
Note: This survey is conducted as of July 2003.
Source: The Institute of Labor Administration, "Survey on the introduction of the
              performance-based system and managers (available in Japanese only)."

Chart 15

Flattening of the Wage Curve

Total of all industries and firms

(1) Male; high school graduates
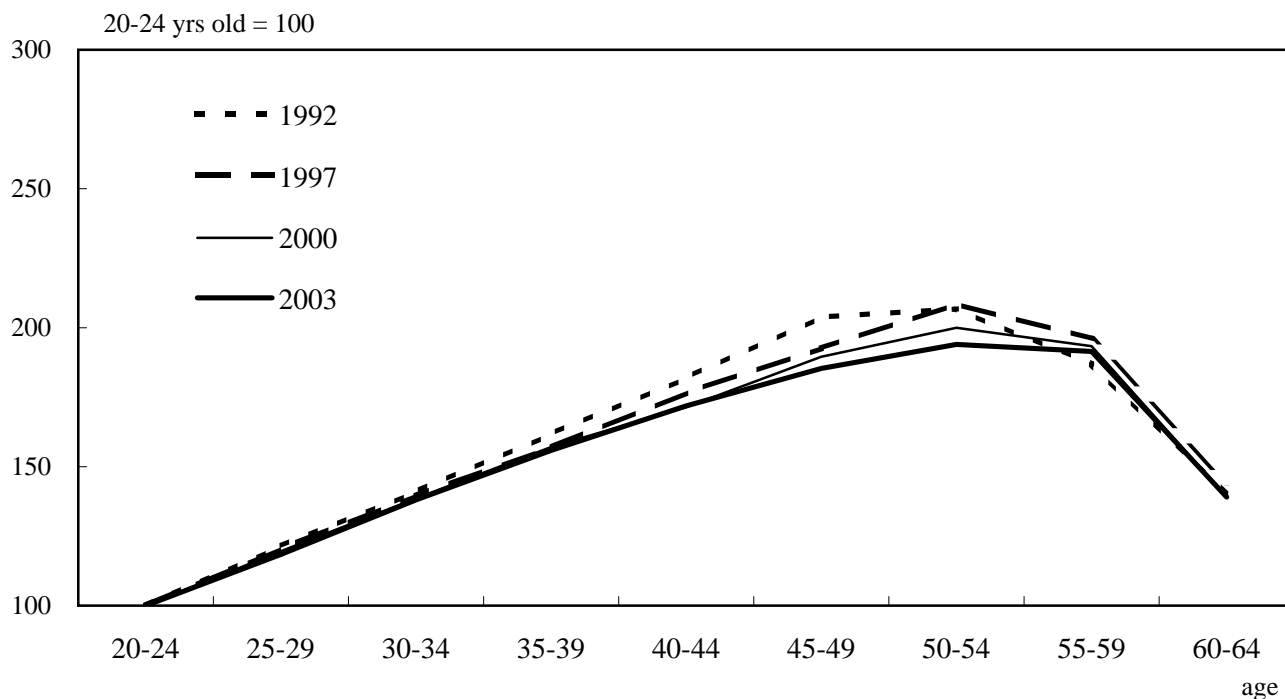
20-24 yrs old = 100
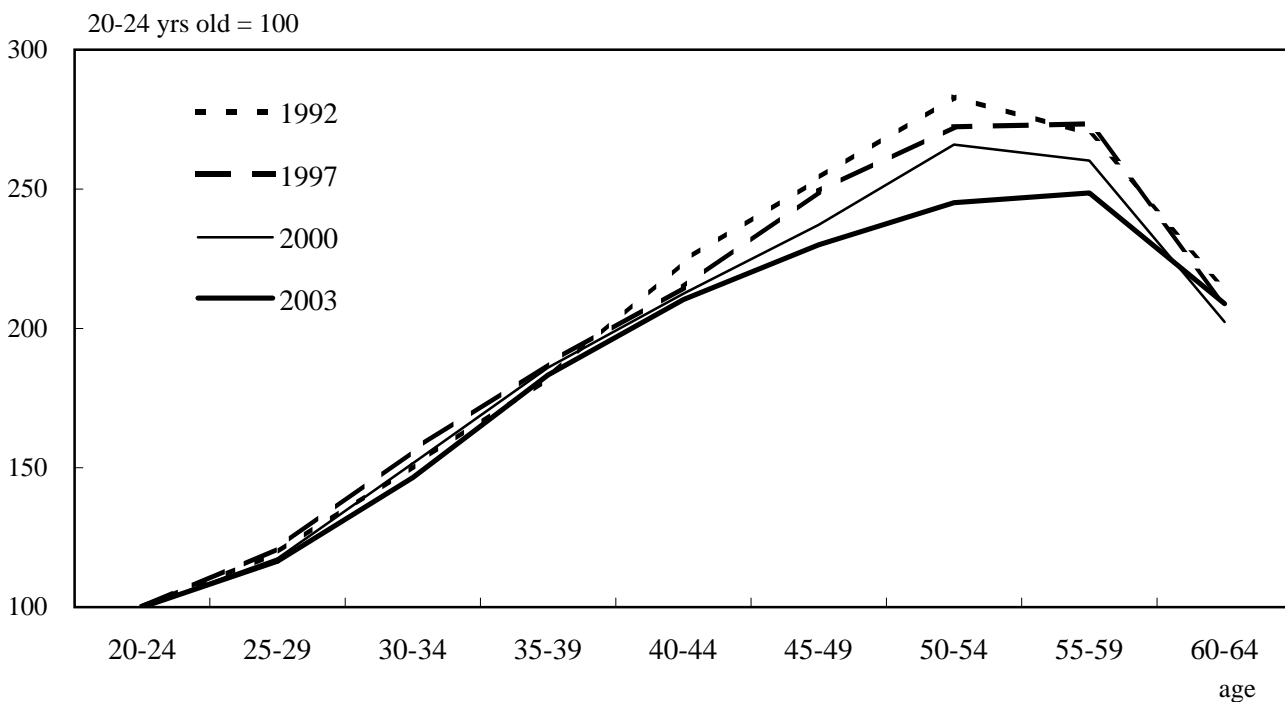
- - - - 1992
— — 1997
——— 2000
—— 2003

age

(2) Male; university graduates

20-24 yrs old = 100

- - - - 1992
— — 1997
——— 2000
—— 2003

age

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

Chart 16

Cutbacks in Labor Costs in the High-Wage Stratum

(1) Average rate of annual increase in scheduled cash earnings of regular workers (1997 to 2002)

Rate of increase in wages (c) assuming that the demographic composition is left to age in addition to (b)

%

Effects of the restraint on the share of the middle and senior age group

Effects from the flattening of the wage curve

Rate of increase in wages assuming that the wage curve remains unchanged from 1997 (b)

Actual rate of increase in wages (a)
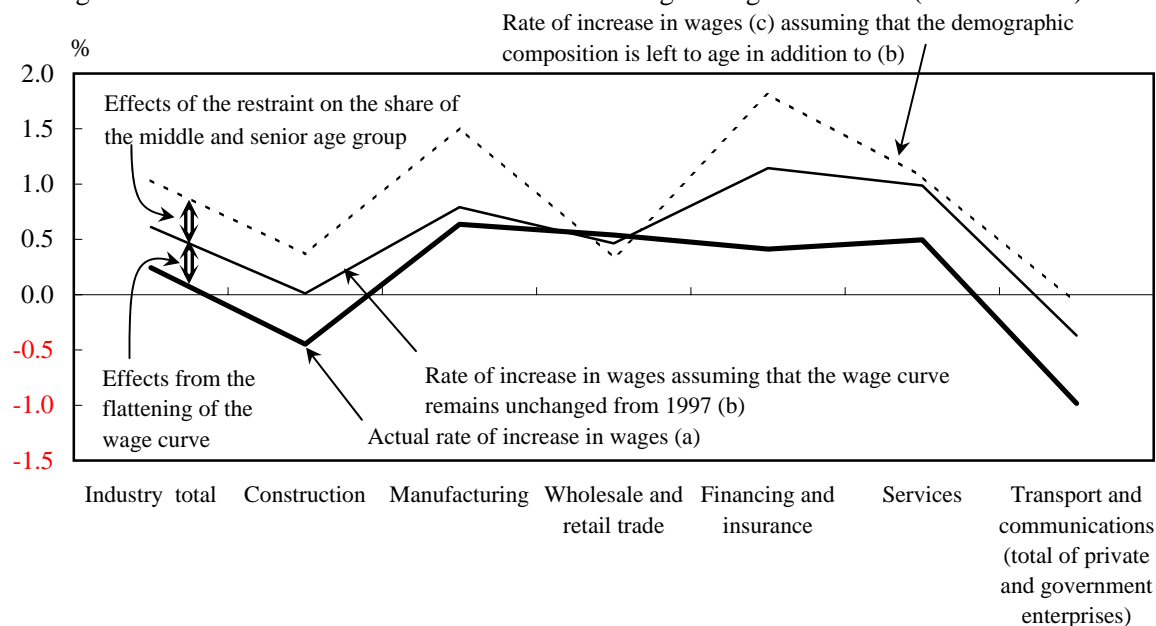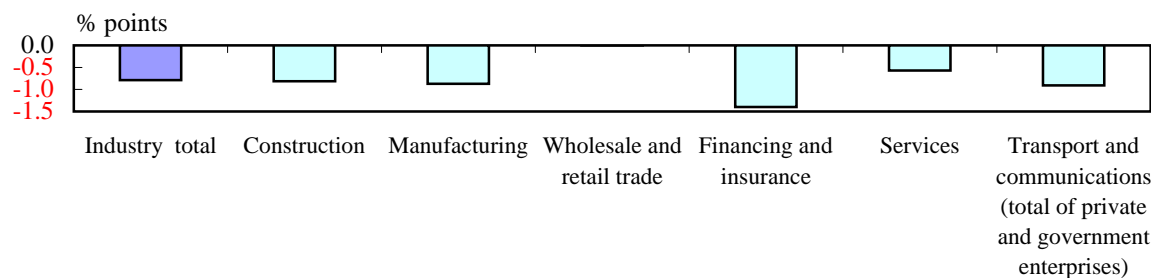
Industry total   Construction   Manufacturing   Wholesale and retail trade   Financing and insurance   Services   Transport and communications (total of private and government enterprises)

(2) Effects of "restraint on the share of the middle and senior age group" + "Flattening of the wage curve"(a-c)

% points

Industry total   Construction   Manufacturing   Wholesale and retail trade   Financing and insurance   Services   Transport and communications (total of private and government enterprises)

Estimation:

(b) Assuming that the wage curve remains unchanged from 1997:

The average scheduled cash earnings per worker is calculated from the estimate of scheduled cash earnings of each age group in 2002 (by sex and academic background) as of below and the actual number of workers in 2002.

$$\begin{pmatrix} \text{Estimate of scheduled cash} \\ \text{earnings of each age group} \\ \text{in 2002} \end{pmatrix} = \begin{pmatrix} \text{Scheduled cash} \\ \text{earnings of each age} \\ \text{group in 1997} \end{pmatrix} * \frac{\text{(Scheduled cash earnings of 20-24 year olds in 2002)}}{\text{(Scheduled cash earnings of 20-24 year olds in 1997)}}$$

(c) Assuming that the demographic composition is left to age in addition to (b):

The average scheduled cash earnings per worker is calculated from the estimate of the number of workers in each age group in 2002 (by sex and academic background) as of below and the scheduled cash earnings obtained in (b).

-Age groups of 25 yrs old and above are calculated as follows:

$$\begin{pmatrix} \text{Estimate of the no. of} \\ \text{workers in each age group} \\ \text{in 2002} \end{pmatrix} = \begin{pmatrix} \text{No. of workers in the age group 5} \\ \text{yrs junior in 1997} \end{pmatrix} * \begin{pmatrix} \text{Ratio of workers remaining within the} \\ \text{workforce for 5 years in each age} \\ \text{group from 1992-1997} \end{pmatrix}$$

$$\begin{pmatrix} \text{Ratio of workers remaining within} \\ \text{the workforce for 5 years in each} \\ \text{age group from 1992-1997} \end{pmatrix} = \frac{\text{(No. of workers in each age group in 1997)}}{\text{(No. of workers in the age group 5 yrs junior in 1992)}}$$

-Age groups of 24 yrs old and under

A constant ratio is used to adjust the number of workers in each age group in 2002 by academic background (the constant ratio is above 0 but below 1) so that the estimate of the number of workers (by academic background; total of both male and female, and age group) equals the actual number of workers in 2002.

Source: Ministry of Health, Labour and Welfare, "Basic Survey on Wage Structure."
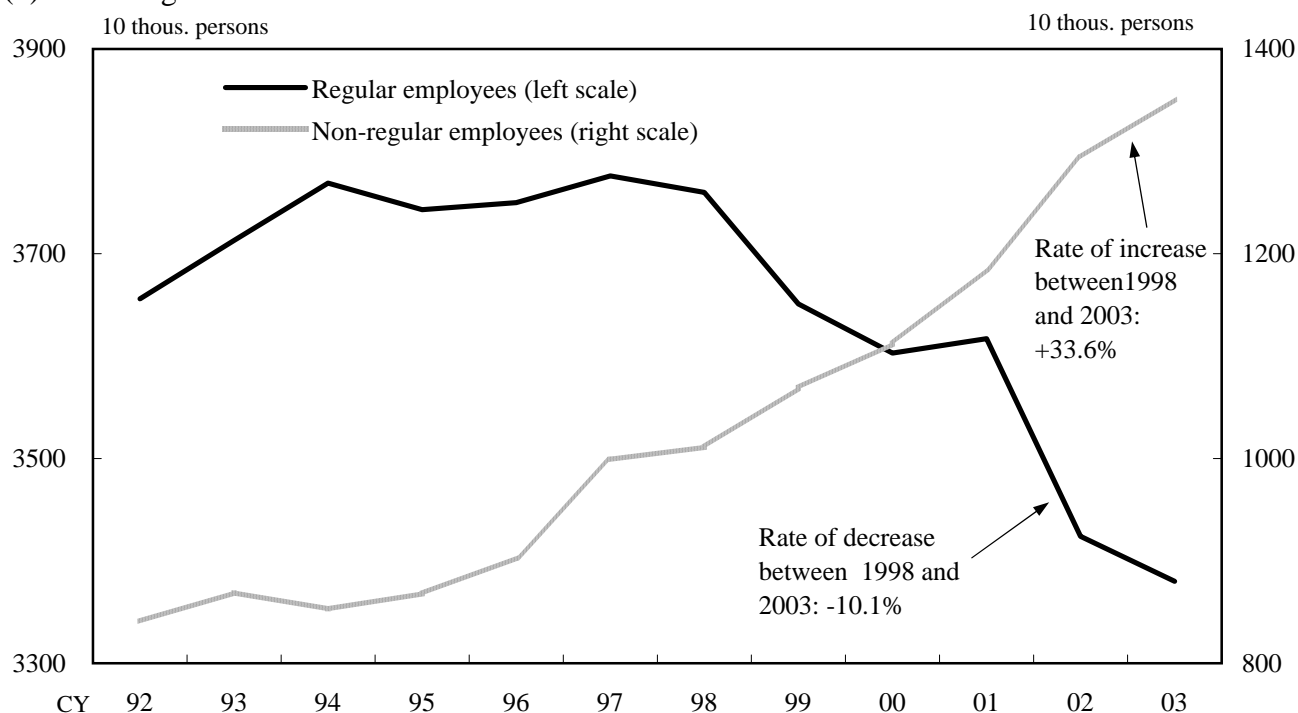
Chart 17

Definitions of Non-regular Employment

Employment type	Definition
Non-regular workers	Workers other than regular workers (contract workers, workers employed temporarily for specialized duties, workers transferred to affiliates or other companies under a contract of transferrence, dispatched workers, temporary workers, part-time workers, and others).
Contract workers	Workers with professional skills engaging in professional work under a fixed-term contract.
Entrusted workers	Rehire workers such as retired workers under a fixed-term contract.
Workers transferred to affiliates or other companies under a contract of transferrence	Workers transferred from other companies under a contract of transferrence. Workers do not necessarily have to be registered as staff members of the company they are transferred to.
Dispatched workers	Workers dispatched to companies by temporary staffing agencies (see note). "Registered-type" dispatched workers register their names and other information at temporary staffing agencies in advance. "Full-time employed-type" dispatched workers are recruited as full-time workers of temporary staffing agencies.
Temporary workers	Workers on a contract period of less than one month or those signing a contract on a daily basis.
Part-time workers	Regular workers whose scheduled working hours per day are shorter or the number of scheduled working days per week is less than full-time workers (workers on a contract period of over one month or those not on a fixed-term contract).
Others	Non-regular workers other than the above.

Note: A temporary staffing agency is an establishment which has either obtained the approval of the Minister of Health, Labour and Welfare or notified the Minister of Health, Labour and Welfare based on the "Law for Securing the Proper Operation of Worker Dispatching Undertakings and Improved Working Conditions for Dispatched Workers" (the so-called "Worker Dispatching Law").
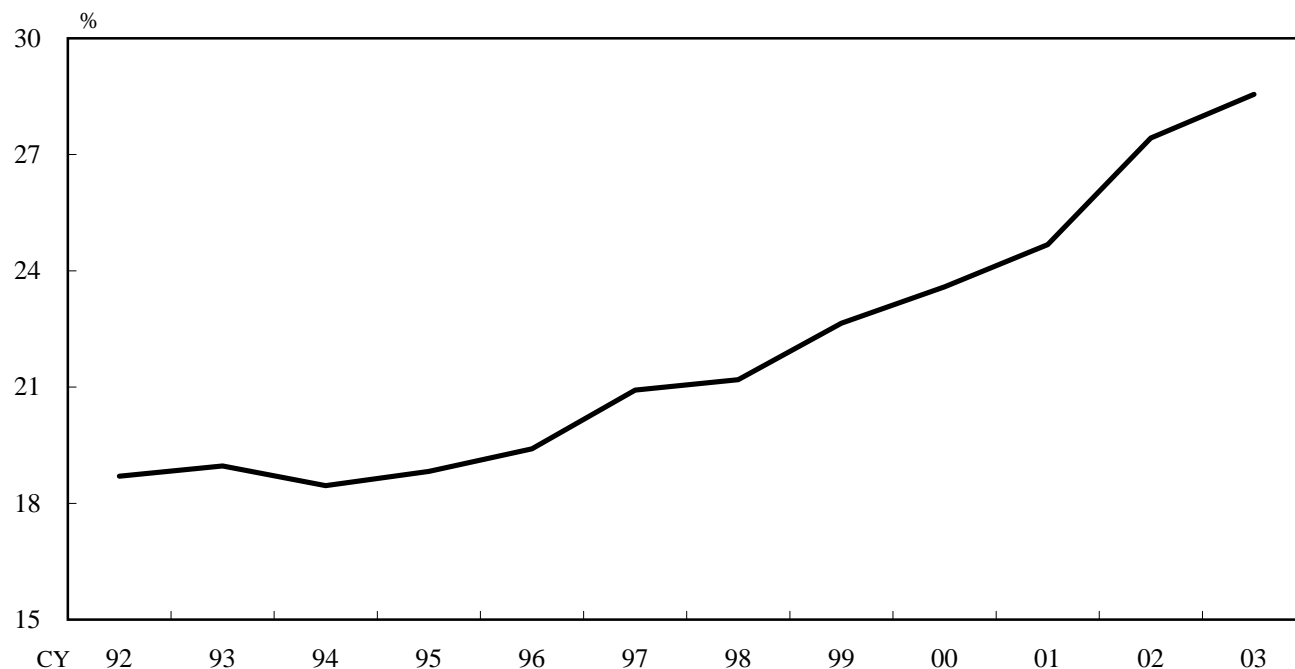
Source: Ministry of Health, Labour and Welfare, chart compiled using "General Survey on Diversified Types of Employment (2003)."

Chart 18

Developments in Non-regular Employment

(1) Actual figures

10 thous. persons   10 thous. persons

Regular employees (left scale)

Non-regular employees (right scale)

Rate of increase
between1998
and 2003:
+33.6%

Rate of decrease
between 1998 and
2003: -10.1%

CY 92   93   94   95   96   97   98   99   00   01   02   03

(2) Ratio of non-regular employment

%

CY 92   93   94   95   96   97   98   99   00   01   02   03

Notes: 1. Non-regular employees = "employees excluding executives of companies or corporations" minus
          "regular employees." Includes part-time workers, arbeit (temporary workers), dispatched workers, entrusted
          employees, etc.
       2. Ratio of non-regular employment = number of non-regular employees / number of employees excluding
          executives of companies or corporations.
Source: Ministry of Internal Affairs and Communications, "Report on the Special Survey of the Labour Force Survey."

Chart 19

Restraining Effects of the Increase in Non-regular Employment on Scheduled Cash Earnings
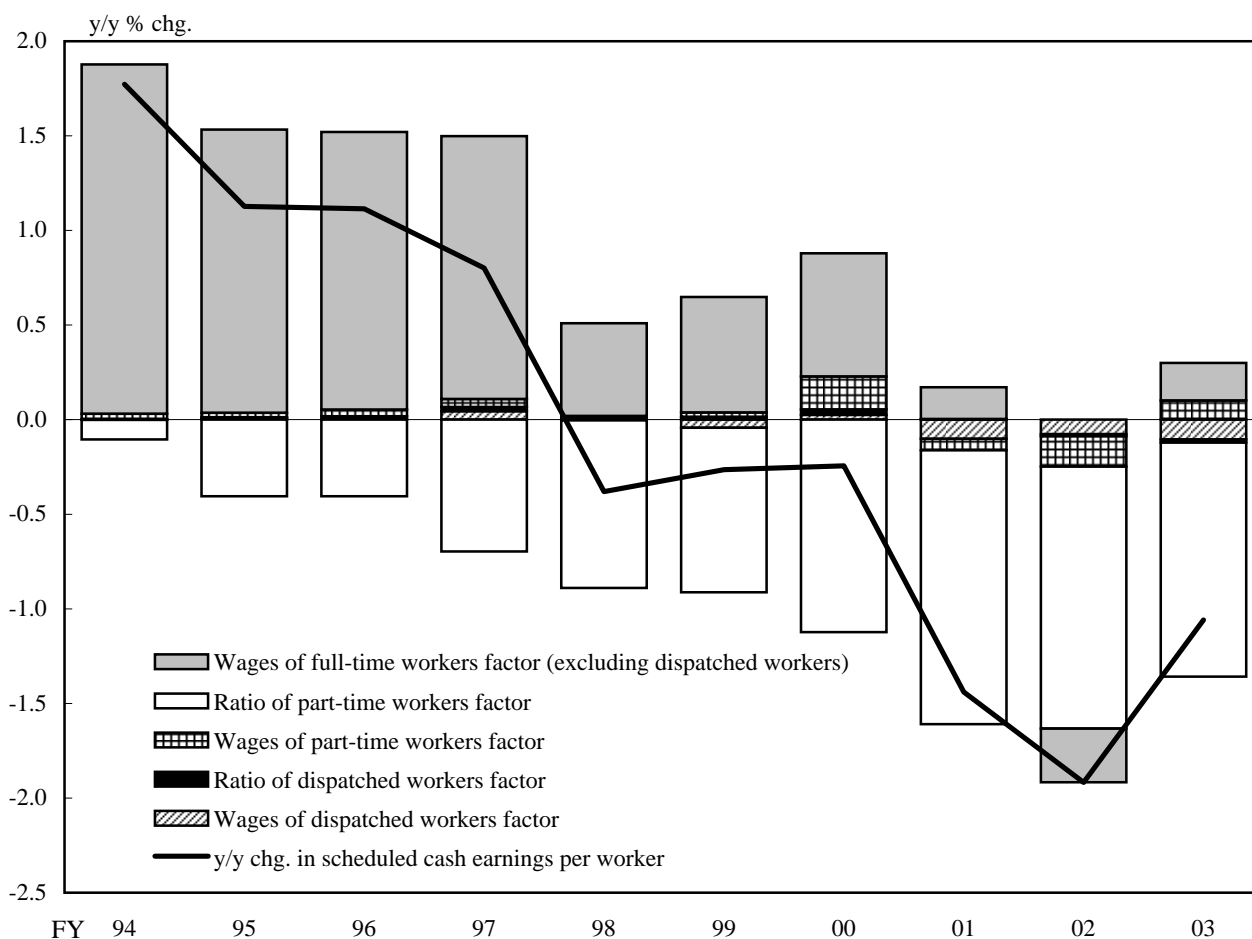
Notes: 1. Statistically, dispatched workers are included in full-time workers on calculation.
2. Ratio of dispatched workers = ratio of dispatched workers among full-time workers.
Ratio of part-time workers = ratio of part-time workers among the number of regular employees.
3. The number of dispatched workers in FY2003 is calculated using year-on-year figures of FY2003 aggregated by the Japan Staffing Services Association (an increase of 7.24%). Charges for dispatching workers are calculated using the year-on-year figures of "temporary employment services" in the CSPI (a decrease of 1.65%)
4. The *Monthly Labour Survey* is conducted on establishments with at least 5 employees.

Sources: Ministry of Health, Labour and Welfare, "Monthly Labour Survey," "Aggregated Results of Reports on Temporary Employment Businesses" (available in Japanese only), "Reports on the Actual Situation of Temporary Employment Businesses" (available in Japanese only); Bank of Japan, "Corporate Service Price Index"; Japan Staffing Services Association, "Report on Temporary Employment Businesses Statistics" (available in Japanese only).

Chart 20

Function of Bonuses Taking Into Account the Ratio of Part-timer Workers
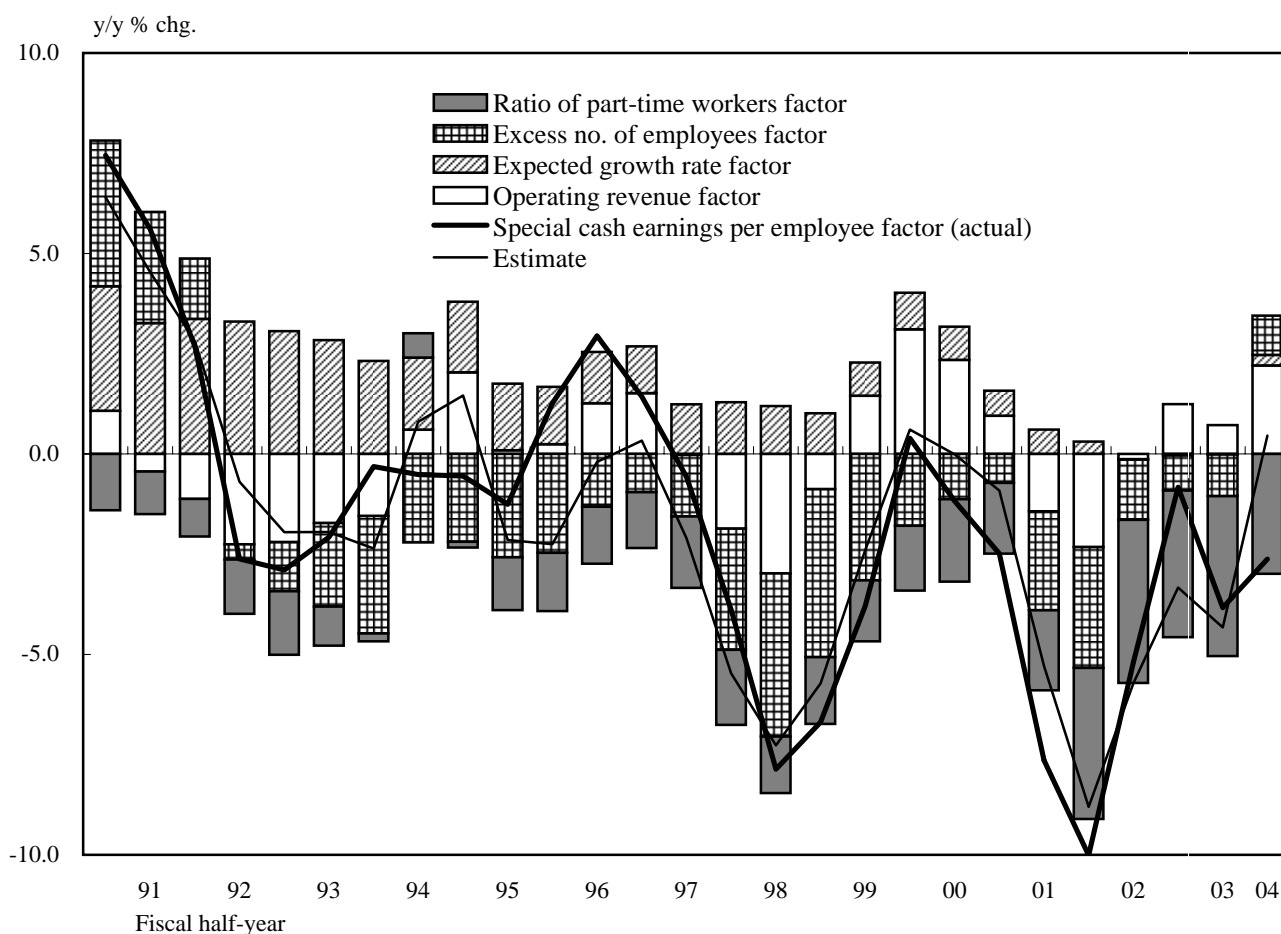

Estimation: Summer of 1991-Summer of 2004

Special cash earnings = 0.10*operating revenues (-1) - 45.9* deviation rate of real wages from the long-run equilibrium level (-1)

                        <4.3>   <-4.8>

                                + 0.54*nominal expected growth rate(-1) - 2.37*ratio of part-time workers

                                  <4.0>   <-4.4>

Adjusted-R2 = 0.73   Standard Error = 1.85   Durbin-Watson = 1.01   t-value in parentheses

Year-on-year % changes are used for special cash earnings and operating revenues, while the difference from the previous year is used for the ratio of part-time workers. The nominal expected growth rate is calculated by adding the CPI's 3-year moving average on a year-on-year basis to the "forecast of real economic growth rate for the next three years" in the Cabinet Office's *Annual Survey on Corporate Behavior* . See chart 28 for details on the divergence rate of real wages from the long-run equilibrium level (fluctuations in special cash earnings which can be explained by this variable are called "excess no. of employees factor" in the above chart).

Sources: Ministry of Health, Labour and Welfare, "Monthly Labour Survey"; Ministry of Finance,
       "Financial Statements Statistics of Corporations by Industry, Quarterly";
       Cabinet Office, "Annual Survey on Corporate Behavior";
       Ministry of Internal Affairs and Communications, "Consumer Price Index."

Chart 21

Number of Dispatched Workers

Unit: 10 thous. persons   Unit: 10 thous. persons
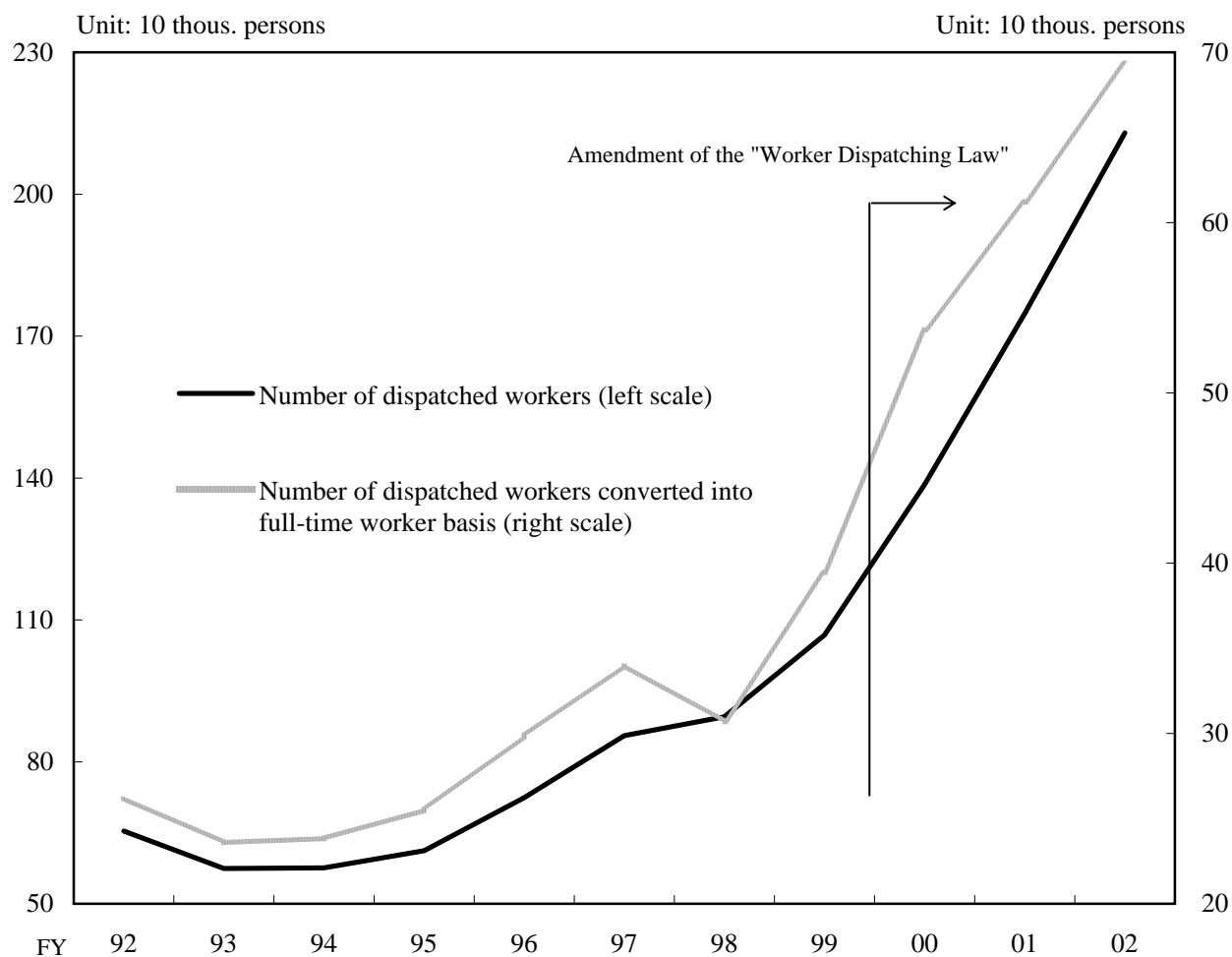
Note: Number of dispatched workers = number of regular employees + number of registered people in general
worker dispatching undertakings + number of regular employees in specified worker dispatching undertakings.
Number of dispatched workers converted into full-time worker basis = (i) total annual working hours of
"registered-type" dispatched workers / total annual working hours per regular employee of an establishment +
(ii) number of "full-time employed-type" dispatched workers in general worker dispatching undertakings
and specified worker dispatching undertakings.

Source: Ministry of Health, Labour and Welfare, "Aggregated Results of Reports on
Temporary Employment Businesses" (available in Japanese only).

Chart 22

Ratio of Part-time Workers

s.a.: %   original figures; %

Labor force rate of women (30-54 yrs old; left scale)

Ratio of part-time workers (right scale)

Fiscal half-year
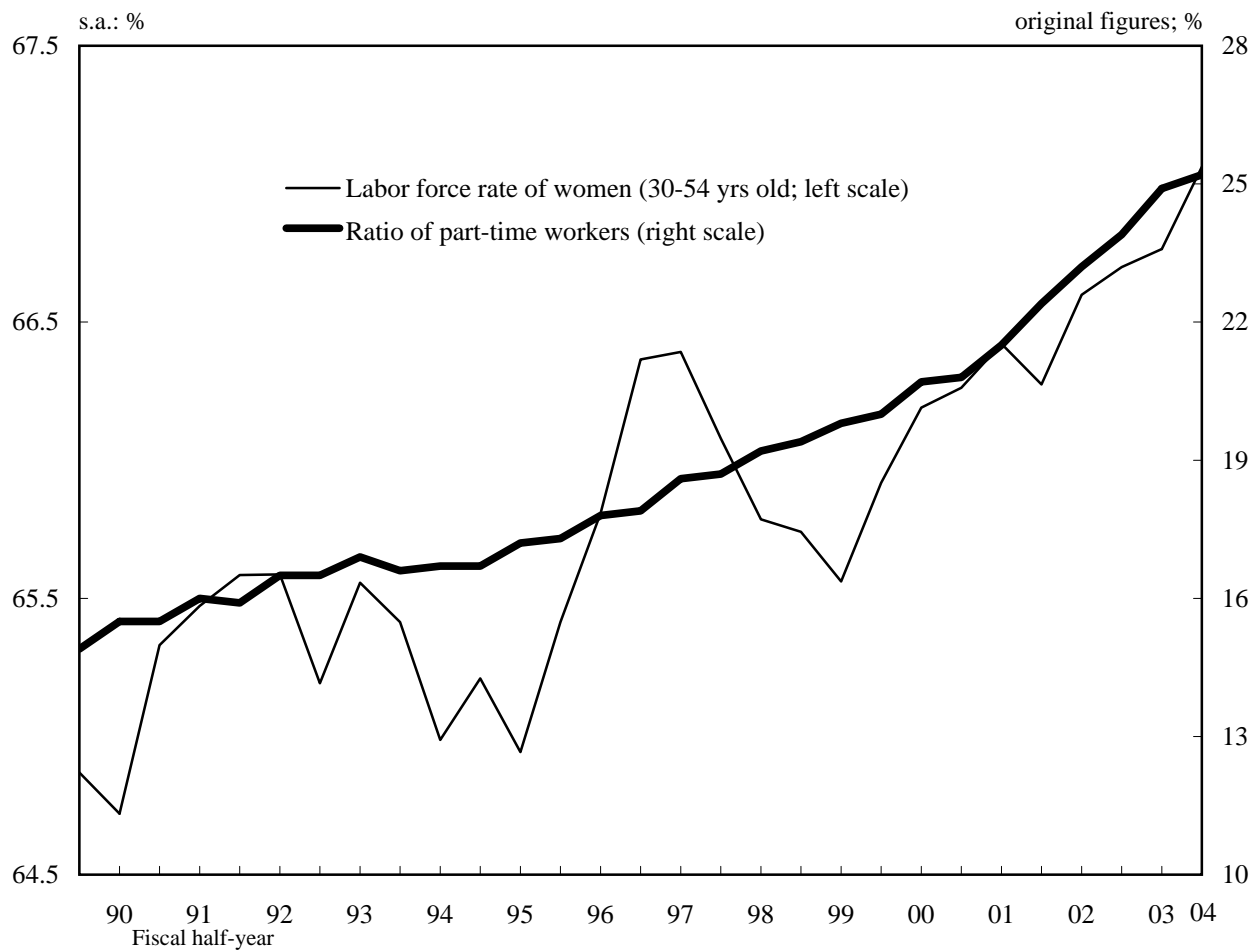
Note: Ratio of part-time workers is based on establishments with at least 5 employees.

Sources: Ministry of Internal Affairs and Communications, "Labour Force Survey";
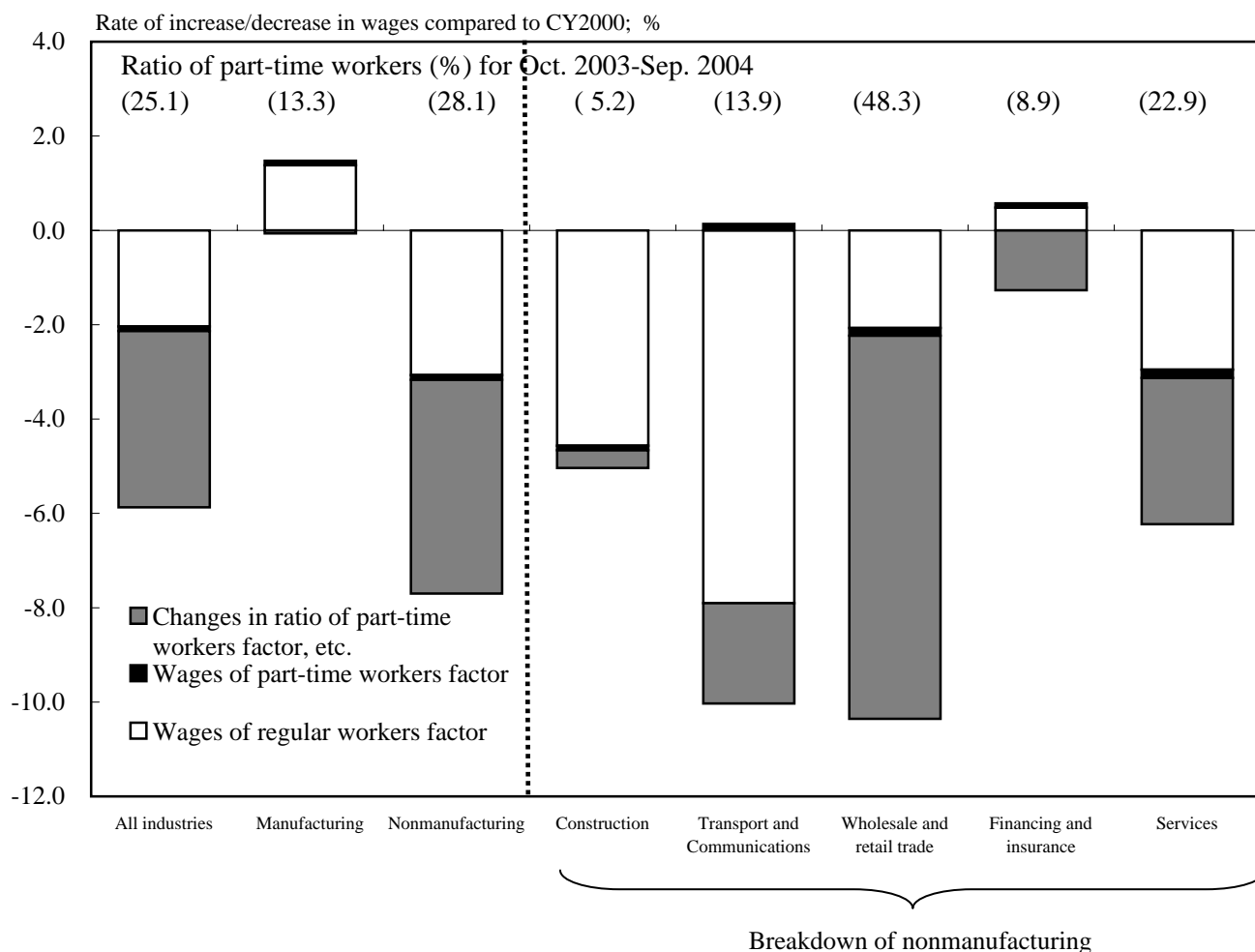   Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 23

Ratio of Part-time Workers and Wages by Industry

Rate of increase/decrease in wages compared to CY2000; %

Ratio of part-time workers (%) for Oct. 2003-Sep. 2004

(25.1)　　(13.3)　　　(28.1)　　(5.2)　　(13.9)　　　(48.3)　　　(8.9)　　　(22.9)

■ Changes in ratio of part-time workers factor, etc.

■ Wages of part-time workers factor

□ Wages of regular workers factor

| All industries | Manufacturing | Nonmanufacturing | Construction | Transport and Communications | Wholesale and retail trade | Financing and insurance | Services |

Breakdown of nonmanufacturing

Notes: 1. The above breakdown by factor are those of the ratio of the average cash earnings from Oct. 2003-Sep. 2004 compared to CY2000.
   2. The ratio of part-time workers in parentheses are calculated using the average figures of part-time workers and regular workers from Oct. 2003-Sep. 2004.
   3. Data are for establishments with at least 5 employees.

Source: Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 24

Expected Growth Rates of Firms
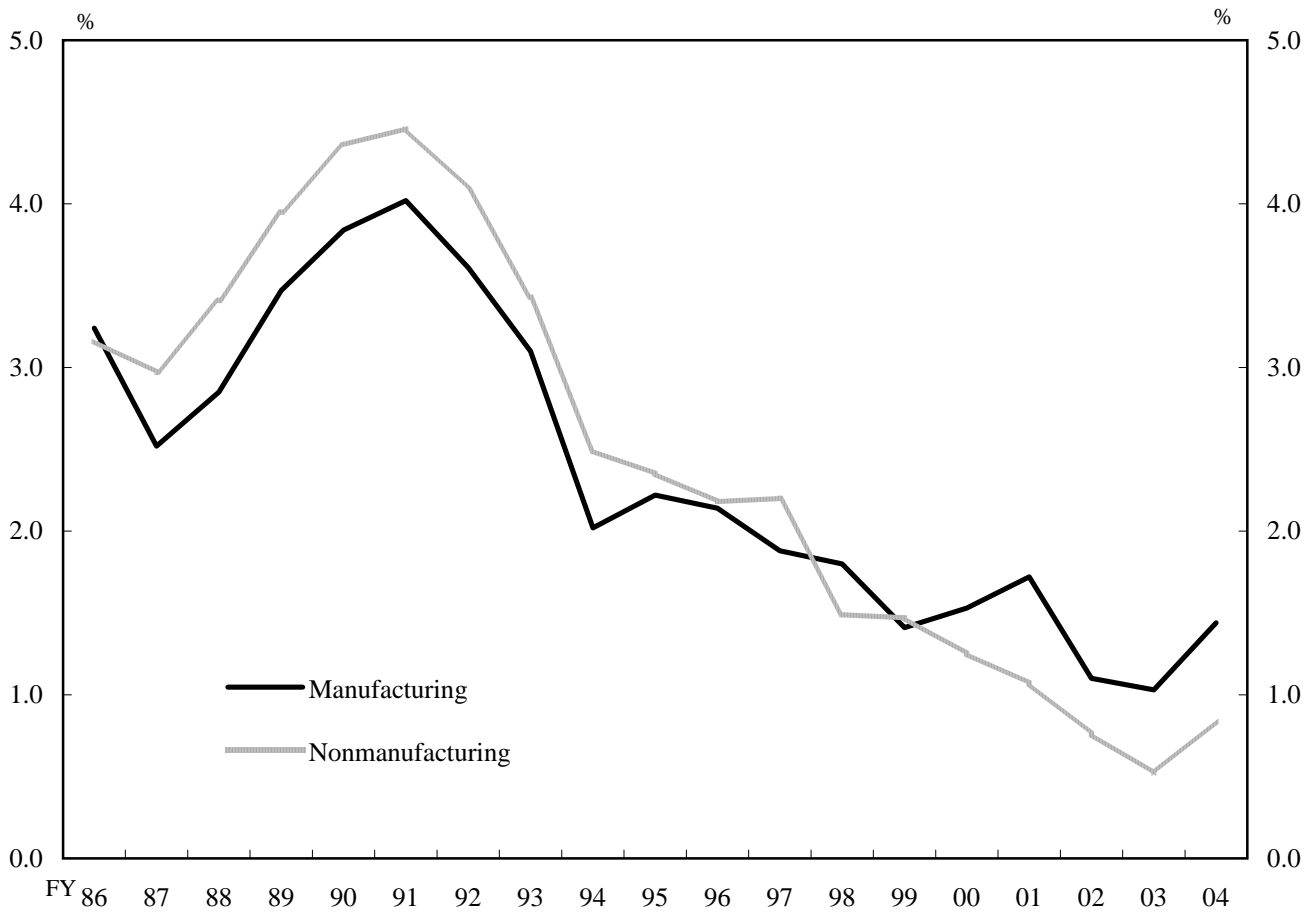
Note: For the above expected growth rate, those of "Forecast of the real growth rate of industry demand for the next five years (average figures)" in the *Annual Survey of Corporate Behavior* (available in Japnese only)" are used.

Source: Cabinet Office, "Annual Survey of Corporate Behavior (of each fiscal year)."

Chart 25

Employment DI (*Tankan)*

Employment conditions DI; % points

"Excessive"

"Insufficient"

Forecast

CY 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04
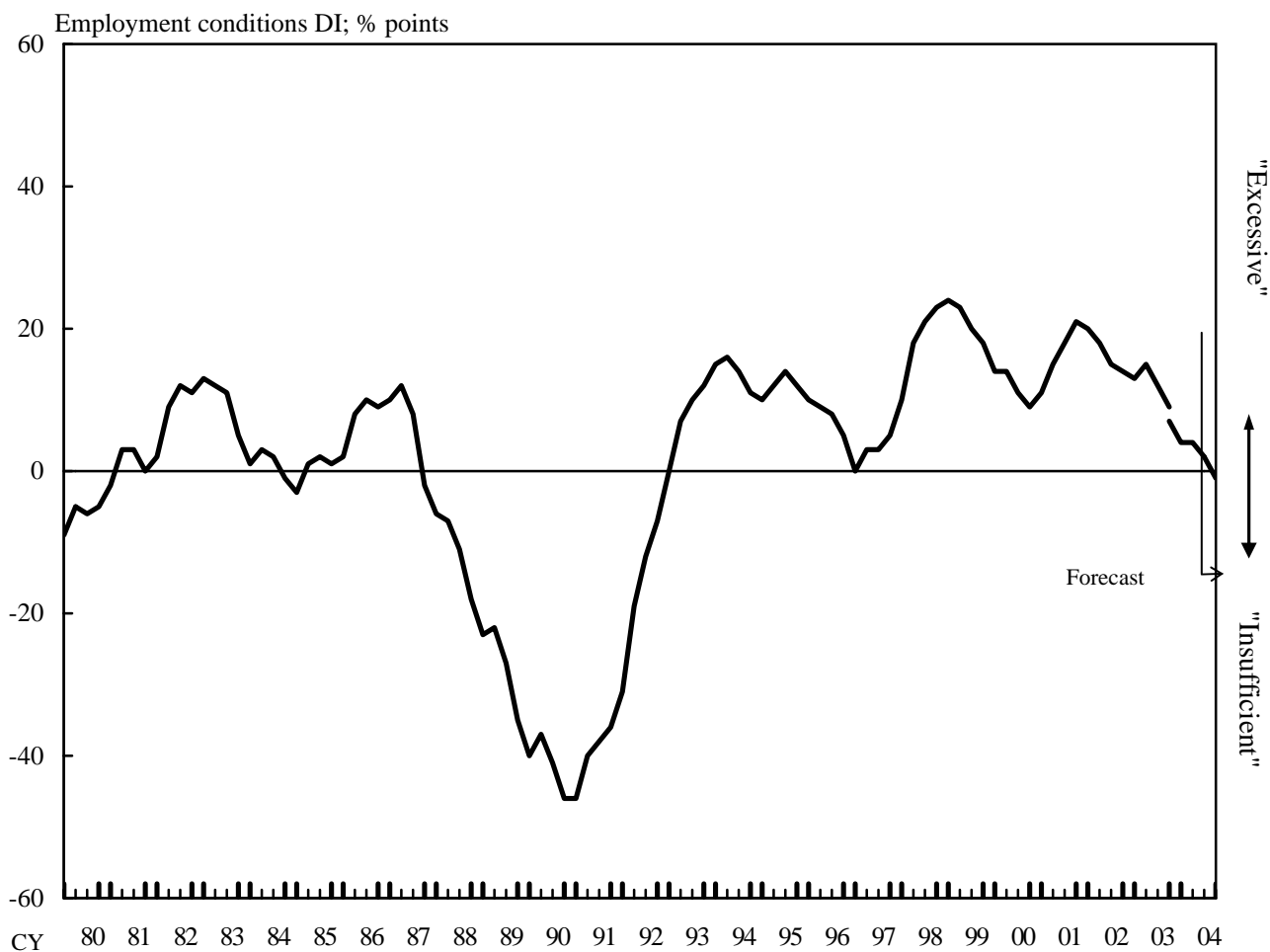
Notes: 1. The above employment DI is that of all industries.
2. The *Tankan* has been revised from the March 2004 survey. Figures up to the December 2003 survey are based on the previous data sets. Figures from the December 2003 survey are on the new basis.

Source: Bank of Japan, "*Tankan* , Short-term Economic Survey of Enterprises in Japan."

Chart 26

Hiring Plans of New Graduates
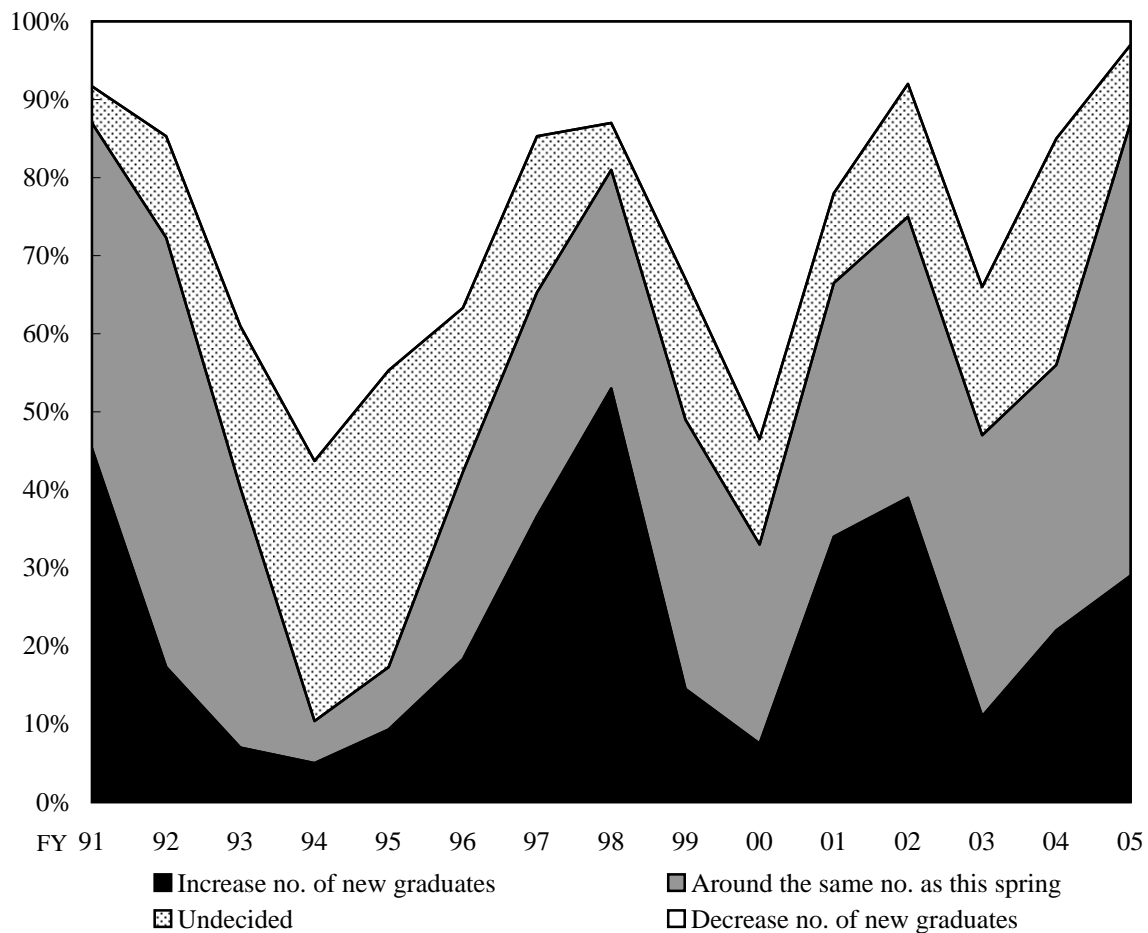
Note: Surveys of each year are conducted in Feb-March of the previous year. Survey
covers major firms. FY 2005 based on 100 firms.

Source: Asahi Shimbun Inc.; "Survey on the hiring plans of new graduates (available in Japanese
only)."

Chart 27

Productivity per Hour in the United States

y/y % chg.

Increase in GDP
Decrease in no. of employees
Decline in average working hours

Decrease in GDP
Increase in no. of employees
Increase in average working hours

■ Average working hours
▨ Number of employees
☐ GDP
— Labor productivity per hour (y/y)

CY 9 1   9 2   9 3   9 4   9 5   9 6   9 7   9 8   9 9   0 0   0 1   0 2   0 3   04
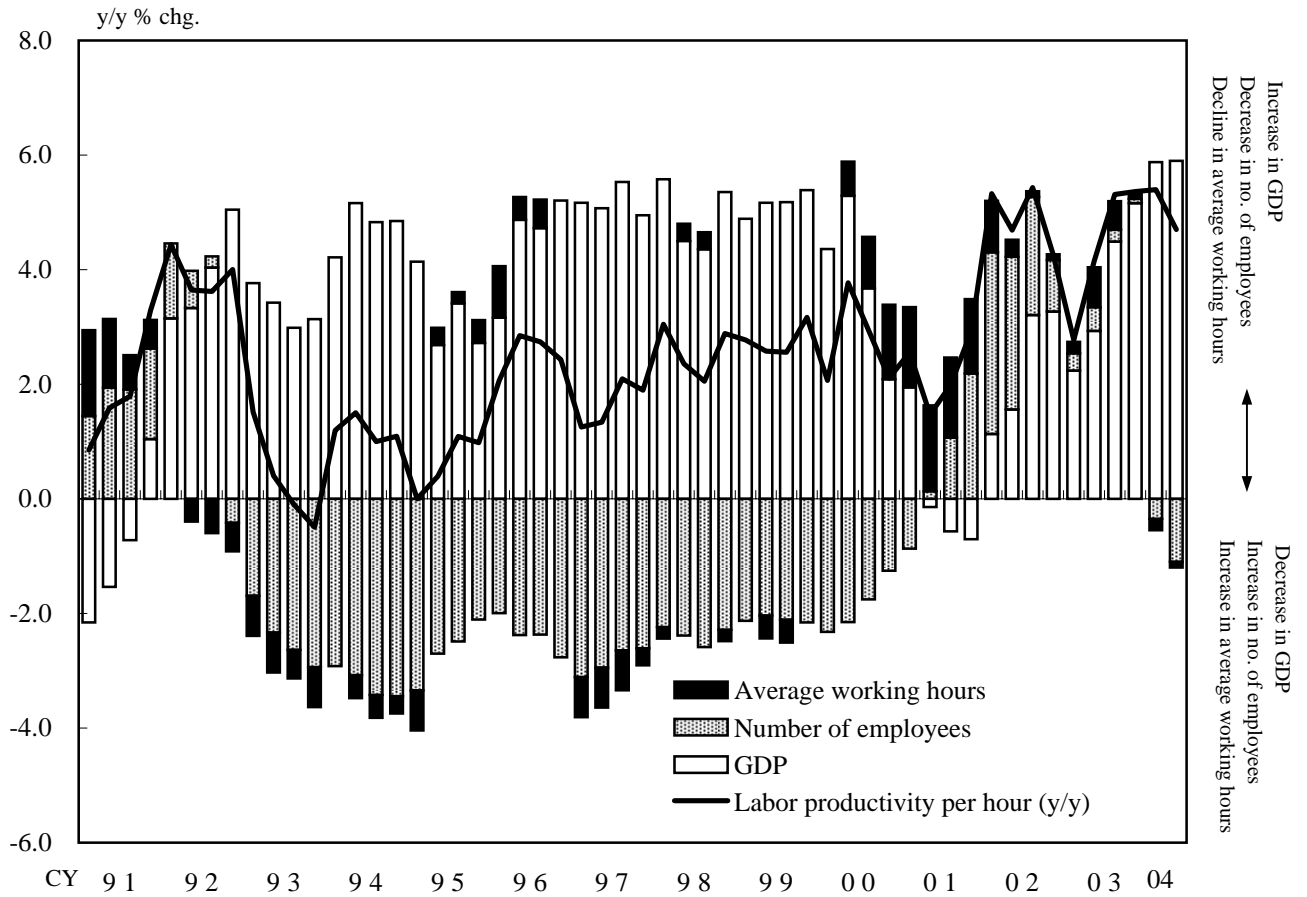
Source: Bureau of Labor Statistics, "Productivity and Costs."

Chart 28

Level of Real Wages Observed From the Long-run Equilibrium Relationship

Deviation of real wages from the long-run equilibrium level (calculated from the long-run relationship between labor productivity)
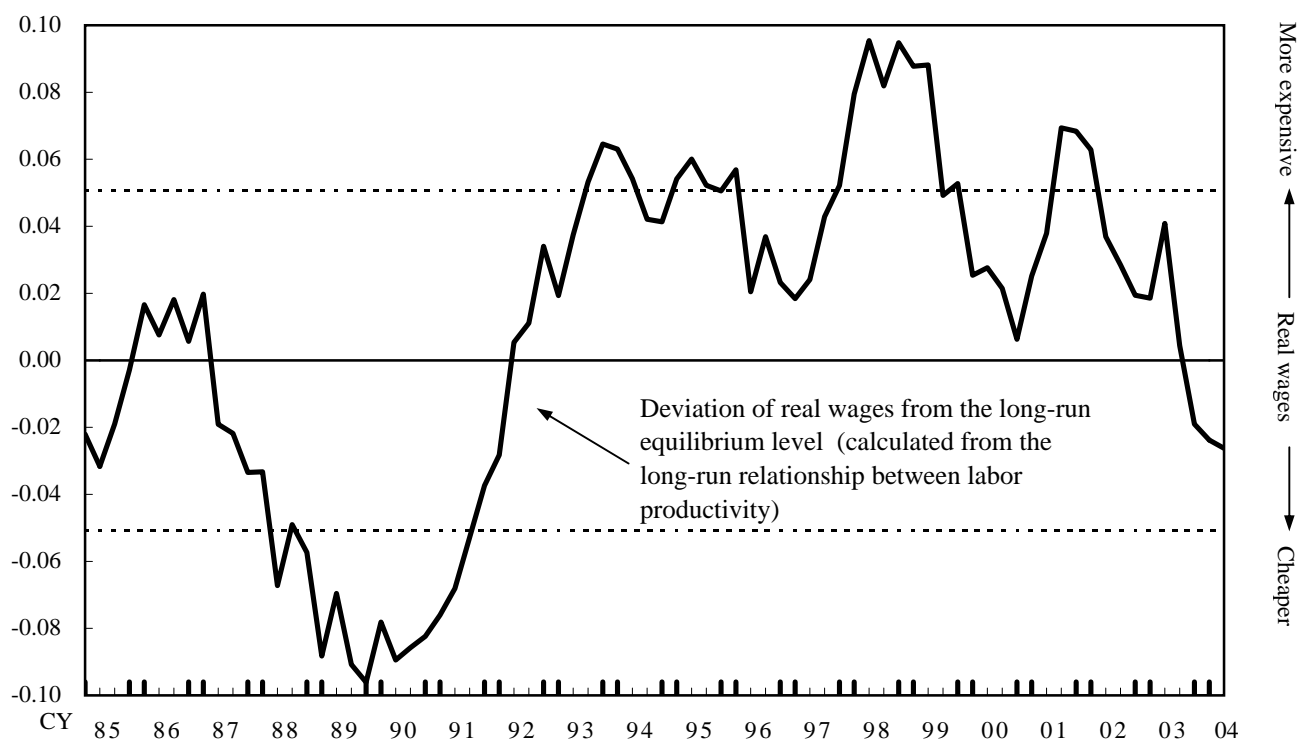
Notes 1. Real wages =(labor costs/no. of employees)/GDP deflator;
     Labor productivity = [(labor costs + operating profits + depreciation)/GDP deflator]/no. of employees.
  2. The deviation of real wages from the long-run equilibrium level is obtained first by estimating the following
     formula regarding real wages and labor productivity (both based on the level) and then the deviation rate
     is calculated from this estimate and the actual figure. Dotted lines show the ±1 standard error of the long-run
     equilibrium formula.
  (Real wages)= -4.41 +2.37*dum75 +1.28*(labor productivity) -0.16*(labor productivity)*dum75
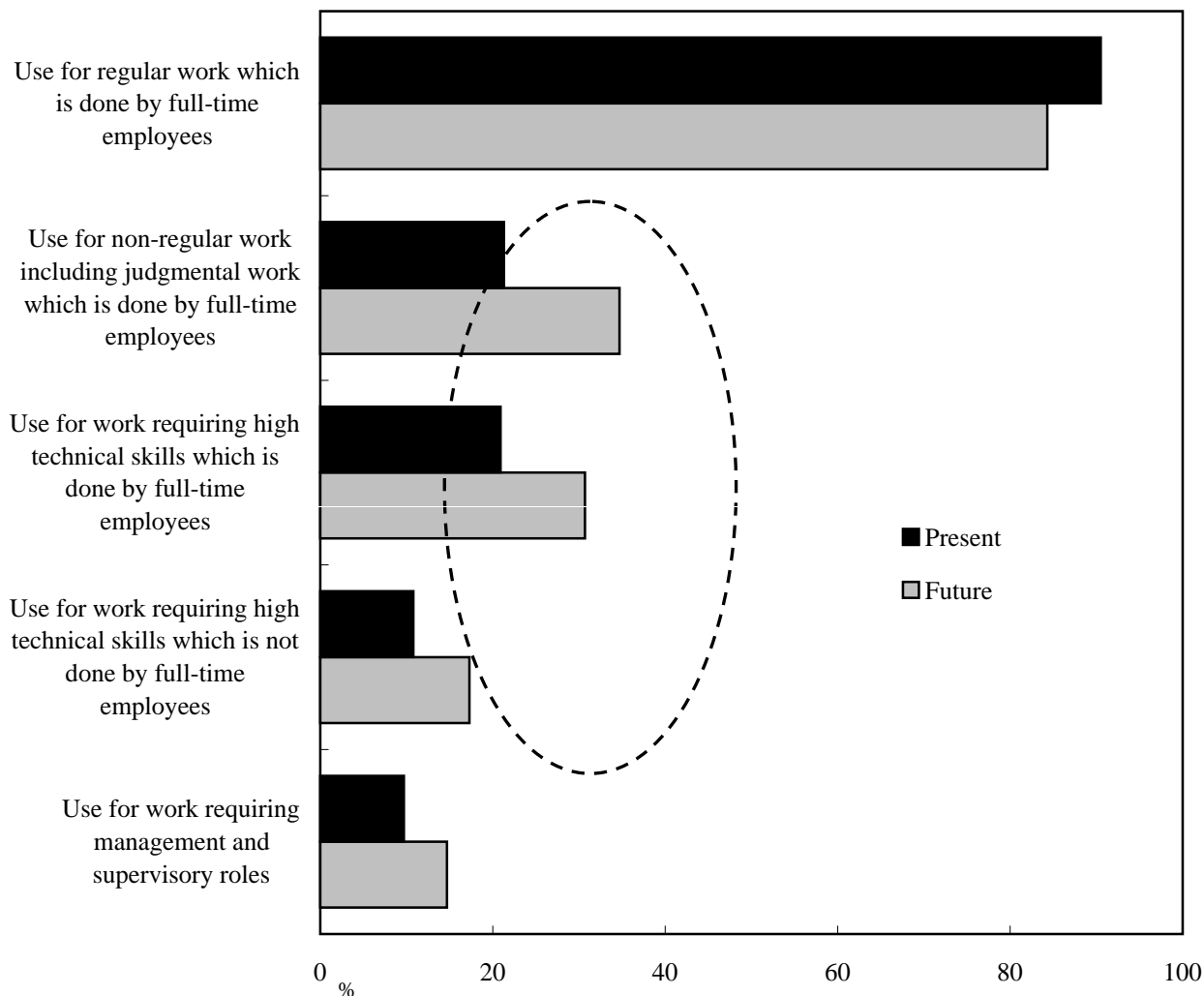   <-10.8><2.65>   <42.6>   <-2.50>
  adj-R2=0.98, D.W.=0.23, Estimation: 1960/2Q-2004/2Q, t-value in parentheses.
  The dummy75 is a dummy variable which is 1 from 75/4Q and 0 prior to that period.

Sources: Ministry of Finance, "Financial Statements Statistics of Corporations by Industry, Quarterly";
         Cabinet Office, "National Accounts."

Chart 29

Expansion of Part-time Workers in the Workplace

Use for regular work which is done by full-time employees

Use for non-regular work including judgmental work which is done by full-time employees

Use for work requiring high technical skills which is done by full-time employees

Use for work requiring high technical skills which is not done by full-time employees

Use for work requiring management and supervisory roles

■ Present
☐ Future

0 %   20   40   60   80   100

Source: The Japan Institute for Labour and Policy and Training, "Survey of Personnel Administration Strategy of Companies and Workers Consciousness about Employment (available in Japanese only)."

Chart 30

Unemployment Rate

s.a.; %

s.a.; 10 thous. persons

Unemployment rate (left scale)

Number of those involuntary
unemployed (right scale)

CY
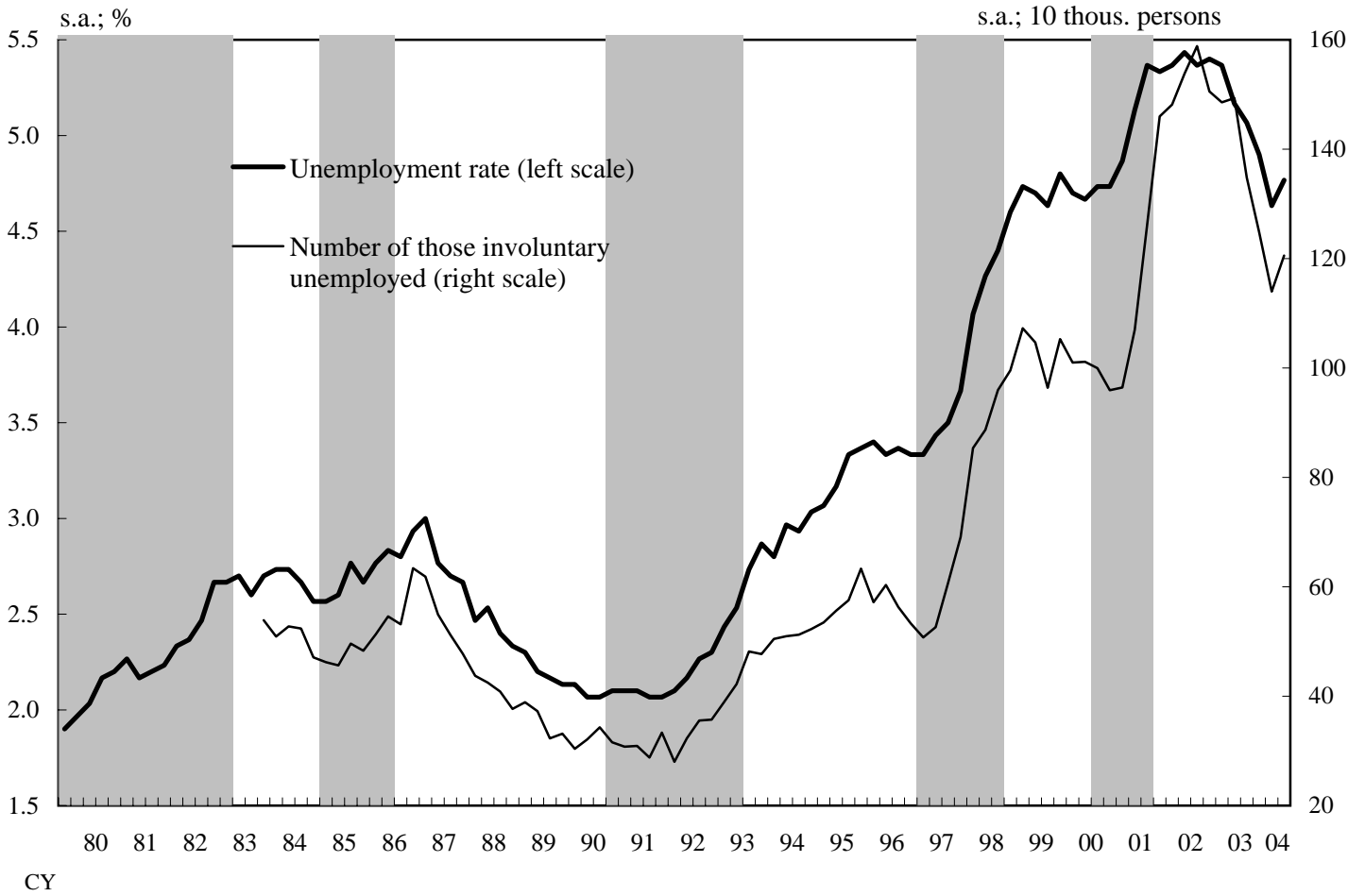
Note: Shaded areas indicate recession periods.

Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

Chart 31

Mismatch in the Labor Market

Vacancy rate; s.a.; %

Unemployment rate; s.a.; %
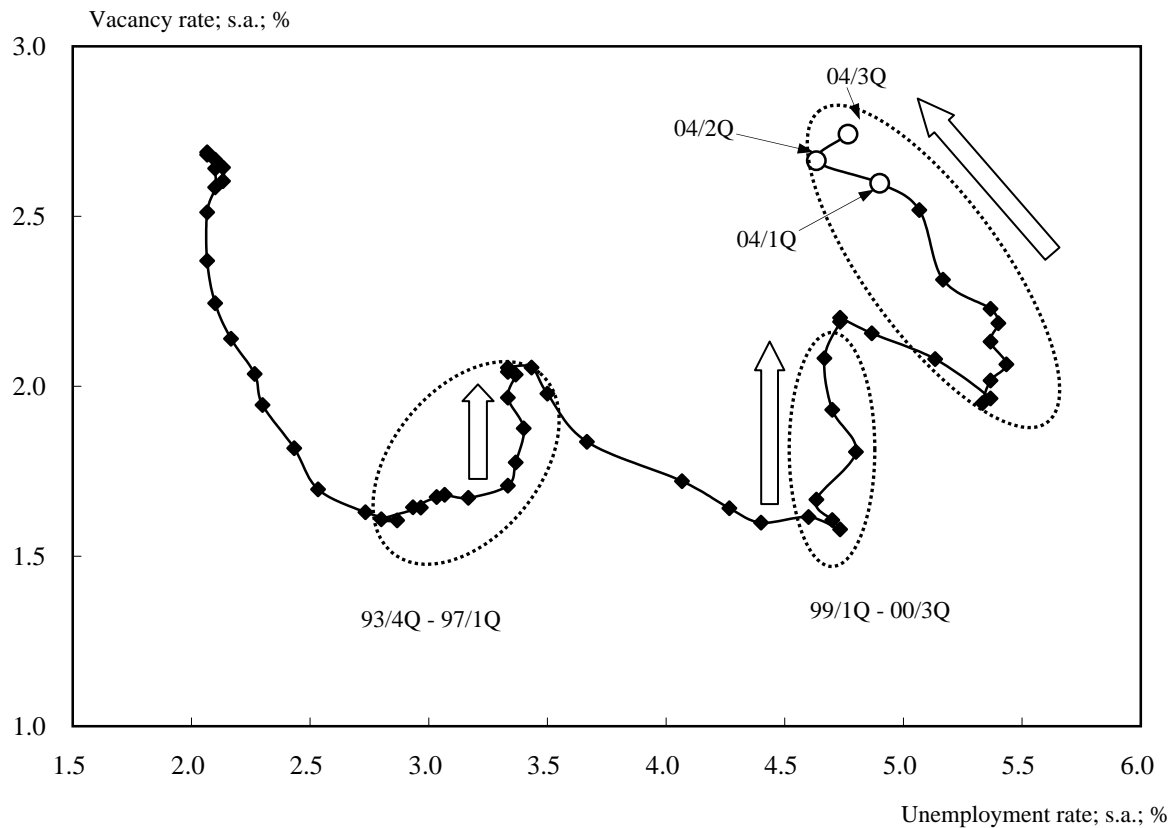
Notes: 1. Vacancy rate = (effective job openings - no. of employment) /
(effective job openings - no. of employment + no. of those
employed)*100.
2. Areas within the dotted line indicate recovery periods.

Sources: Ministry of Internal Affairs and Communications, "Labour
Force Survey"; Ministry of Health, Labour and Welfare,
"Report on Employment Services."

How to look at chart
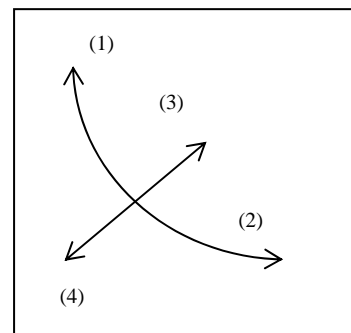
(1) Improvement in supply and demand
(2) Deterioration in supply and demand
(3) Increasing mismatch
(4) Decreasing mismatch

Chart 32

Increases and Decreases in the Number of Hours Worked

(1) Part-time workers

4-quarter moving average; s.a.; hours per month   4-quarter moving average; s.a.; hours per month

Scheduled hours worked (left scale)

Non-scheduled hours worked (right scale)

CY 9 4   9 5   9 6   9 7   9 8   9 9   0 0   0 1   0 2   0 3   0 4

(2) Regular workers

4-quarter moving average; s.a.; hours per month   4-quarter moving average; s.a.; hours per month

Scheduled hours worked (left scale)

Non-scheduled hours worked (right scale)

CY 9 4   9 5   9 6   9 7   9 8   9 9   0 0   0 1   0 2   0 3   0 4

Notes: 1. Data are for establishments with at least 5 employees.
       2. Seasonally adjusted by the Research and Statistics Deparment, Bank of Japan using X-11.

Source: Ministry of Health, Labour and Welfare, "Monthly Labour Survey."

Chart 33

Labor Force Ratio By Age Group
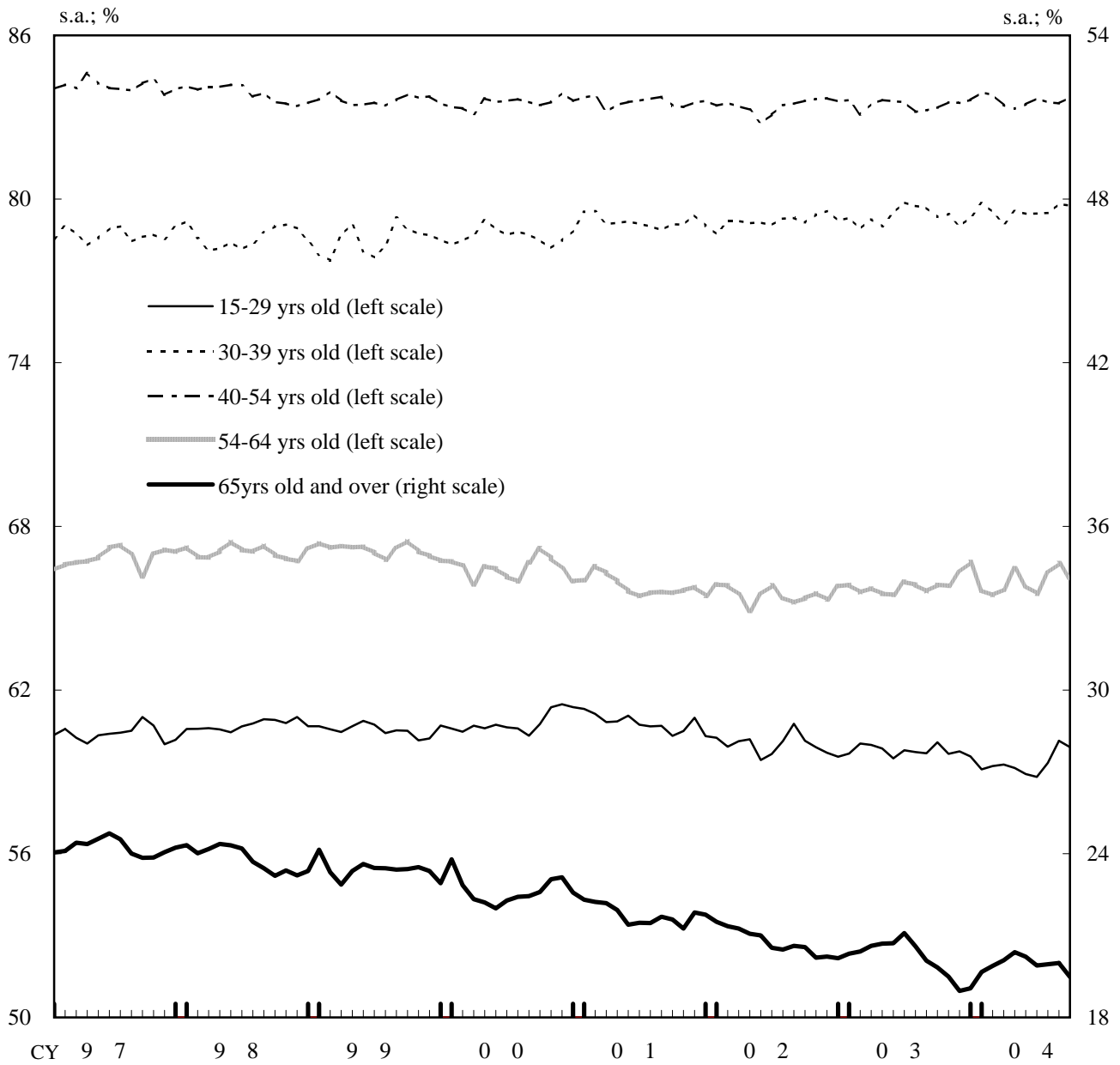
s.a.; %   s.a.; %

——— 15-29 yrs old (left scale)

- - - - 30-39 yrs old (left scale)

— · — 40-54 yrs old (left scale)

▬▬▬ 54-64 yrs old (left scale)

━━━ 65yrs old and over (right scale)

CY 9 7   9 8   9 9   0 0   0 1   0 2   0 3   0 4

Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

Chart 34

Decline in Savings Rates and Consumption Among the Middle and Senior Age Group

(1) Breakdown of propensity to consume

Difference from the previous year

Legend:
- 60 yrs old and over
- 50-59 yrs old
- up to 49 yrs old
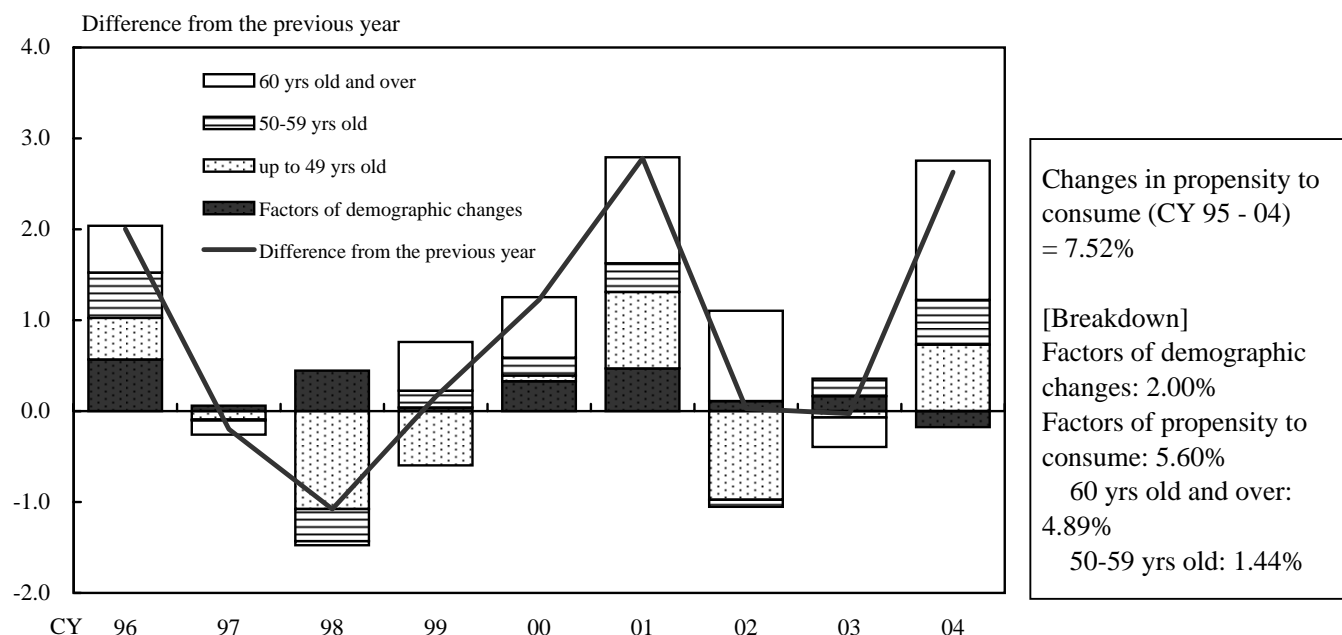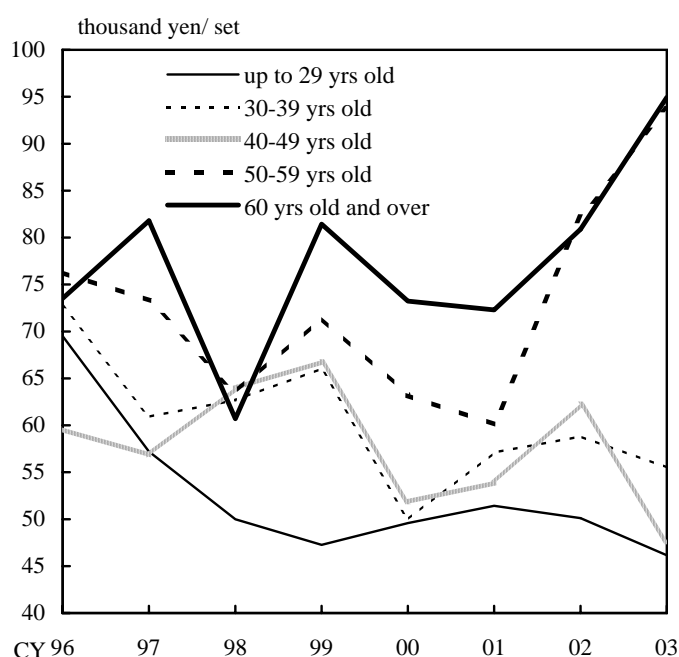- Factors of demographic changes
- Difference from the previous year

Changes in propensity to consume (CY 95 - 04) = 7.52%

[Breakdown]
Factors of demographic changes: 2.00%
Factors of propensity to consume: 5.60%
   60 yrs old and over: 4.89%
   50-59 yrs old: 1.44%

Notes 1. "Consumption" and "disposable income" of *National Accounts* are calculated by distributing
   the proportion of each generation in the *Monthly Report on the Family Income and Expenditure Survey* .
   2. Household heads of 60 years old and over = workers' household + households with no occupation.
   3. Figures of private consumption in 2004 and disposable income in 2003 and 2004 are calculated by using
   the year-on-year change rate of the QE ("consumption of households"and "compensation of employees").
   The 2004 figures are weighted by Jan.-Sep. figures of the *Monthly Report on the Family Income and
   Expenditure Survey.*

(2) Purchasing price of TV sets
   (by age group of household head)

thousand yen/ set

Legend:
- up to 29 yrs old
- 30-39 yrs old
- 40-49 yrs old
- 50-59 yrs old
- 60 yrs old and over

(3) Expenditure of package tours
   (by age group of household head;
   monthly average from Jan-Sep 2004)

thousand yen
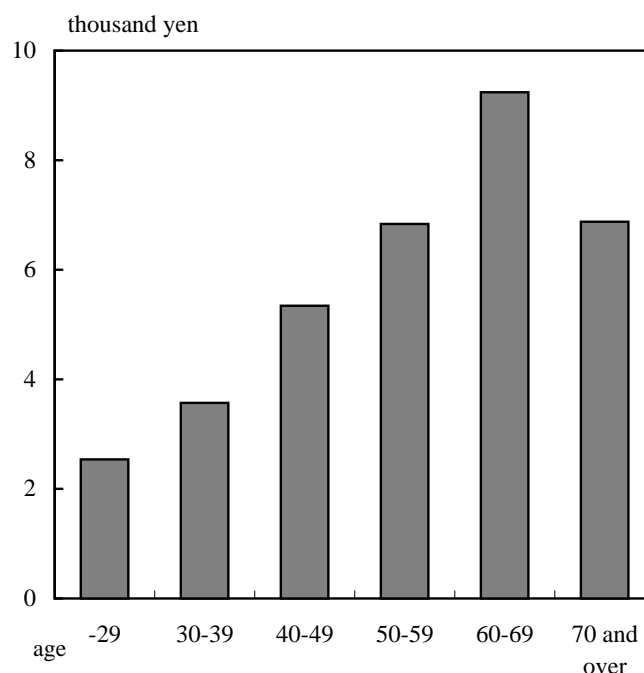
Notes: 1. Figures in (2) and (3) are those of all households.
       2. Figures in (3) are the Jan.- Sep. averages.

Sources: Ministry of Internal Affairs and Communications, "Monthly Report on the Family Income and Expenditure Survey,"
       "Survey of Household Economy"; Cabinet Office, "National Accounts."

Chart 35

Unit Labor Cost

s.a.; economic trough=100

Legend:
- - - - From the 2nd half of FY 1993
- - - From the 2nd half of FY 1998
From the 2nd half of FY 2001 to the 1st half of FY 2004
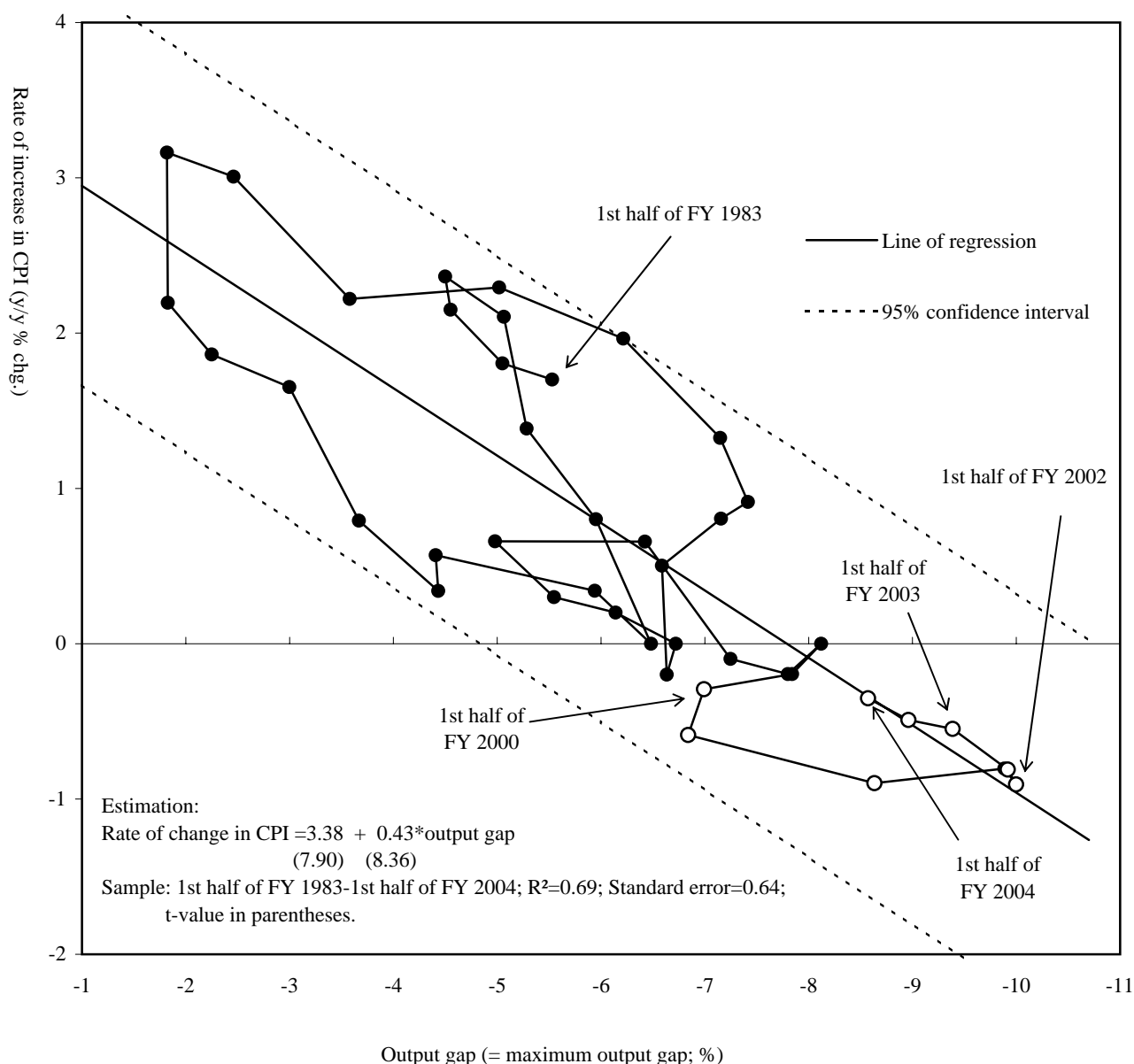Average from the 1980s
Trend from the 1990s

Fiscal half-year
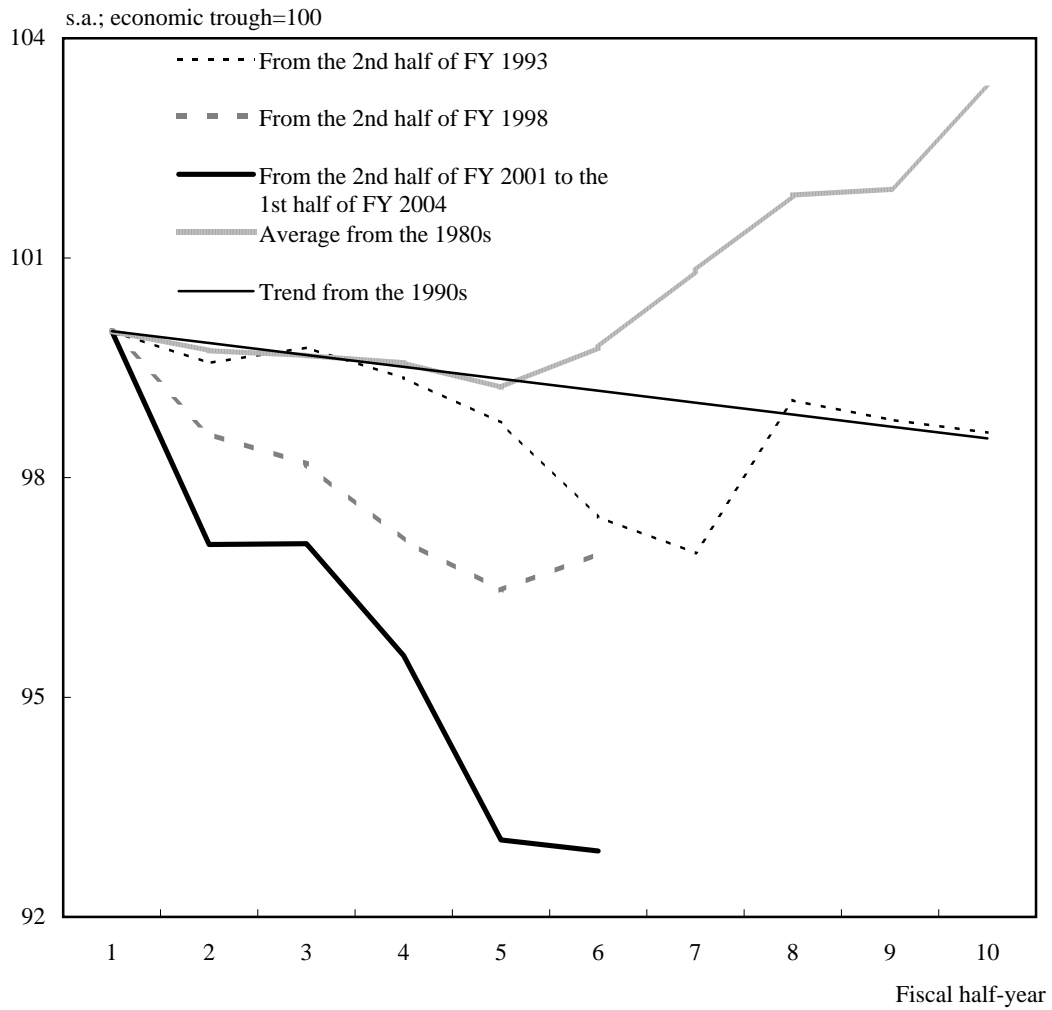
Notes: 1. Unit labor cost = compensation of employees / real GDP.
     2. Averages of each recovery period are used for the average from the 1980s. The trend from
      the 1990s is estimated using the least squares method covering the whole period from
      the 1990s.

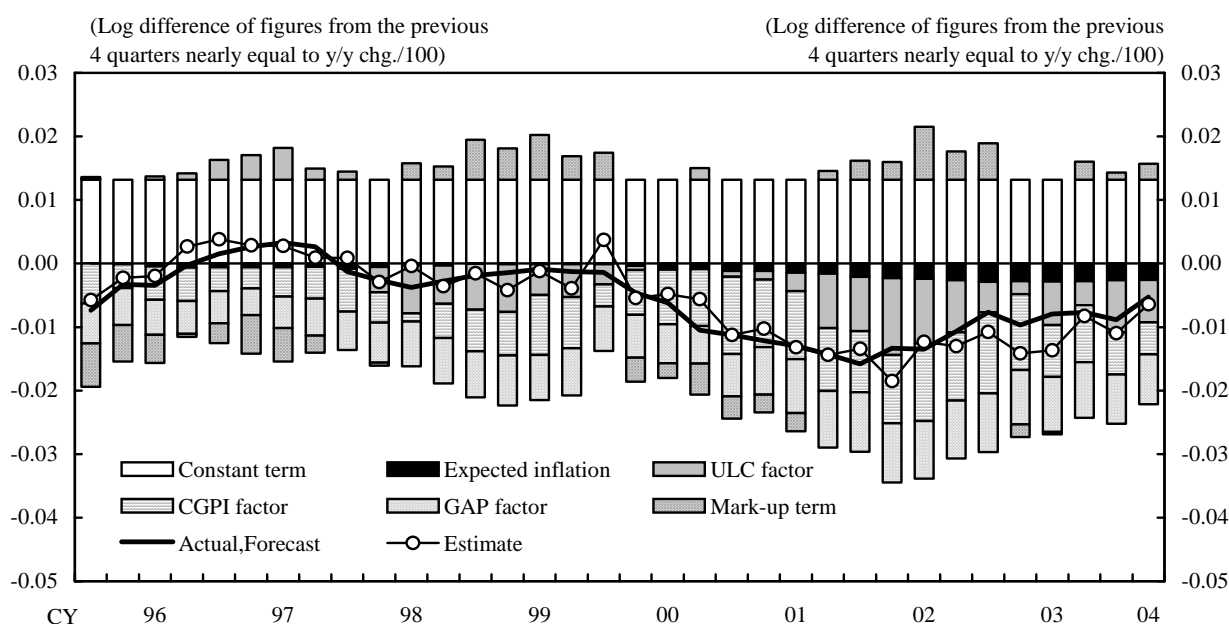Sources: Cabinet Office, "National Accounts."

Chart 36

Output Gap and Consumer Price Index

Rate of increase in CPI (y/y % chg.)

1st half of FY 1983

Line of regression

95% confidence interval

1st half of FY 2002

1st half of FY 2003

1st half of FY 2000

Estimation:
Rate of change in CPI =3.38 + 0.43*output gap
              (7.90)   (8.36)
Sample: 1st half of FY 1983-1st half of FY 2004; R²=0.69; Standard error=0.64;
        t-value in parentheses.

1st half of FY 2004

Output gap (= maximum output gap; %)

Notes: 1. The output gap is calculated in comparison to the maximum possible output. It is always a negative figure unlike
          the output gap compiled by other institutions which takes a positive figure (calculated by the Research
          and Statistics Department, Bank of Japan).
       2. Effects from the consumption tax adjusted in the CPI (excluding fresh food). Year-on-year figures until 2000
          are on the 1995 base.
       3. White circles indicate data from the 1st half of FY 2000.
       4. Data for the *Consumer Price Index* from FY 2003 are on a general basis excluding fresh food, and also medical
          fees, cigarette, and rice prices.

Sources: Cabinet Office, "National Accounts," "Gross Capital Stock of Private Enterprises"; Ministry of Economy, Trade
          and Industry, "Indices of Industrial Production"; Ministry of Health, Labour and Welfare, "Monthly Labour
          Survey"; Ministry of Internal Affairs and Communications, "Consumer Price Index," etc.

Chart 37

Consumer Price Function Taking Into Account the Unit Labor Cost

(Log difference of figures from the previous 4 quarters nearly equal to y/y chg./100)

(Log difference of figures from the previous 4 quarters nearly equal to y/y chg./100)

Legend:
- Constant term
- Expected inflation
- ULC factor
- CGPI factor
- GAP factor
- Mark-up term
- Actual,Forecast
- Estimate

CY 96 97 98 99 00 01 02 03 04

Estimation:

$$\pi_{t,t-4}^{CPI} = \underset{(6.32)}{0.013} + \underset{(5.47)}{0.241}\,\pi_{t-1,t-13}^{CPI}\big/3 + \underset{(6.51)}{0.244}\,\pi_{t,t-4}^{CGPI} + \underset{(8.36)}{0.439}\,\pi_{t,t-4}^{CGPI} + \underset{(2.58)}{0.092}\,GAP_t$$

$$+ \underset{(8.74)}{1.963}\sum_{j=1}^{3}\Delta M_{t-j}\big/3 - \underset{(-2.03)}{0.096}\,M_{t-2}$$

Period:1983/2Q - 2004/2Q,   t-value in parentheses
Adjusted R^2=0.952,   Standard Error=0.003,   Durbin-Watson Statistic = 1.678

Variable:

$\pi_{t,t-j}^{i}$: Rate of change in variable i from period j; *GAP* : Output gap; *M*: Mark-up

CPI : General basis excluding agricultural & aquatic products, public utility charges, cigarettes, and imputed rent; *ULC* : Unit labor cost;

CGPI : Corporate Goods Price Index, domestic final demand goods

$\pi_{t-1,t-13}^{CPI}\big/3$ (Average inflation rate for the past 3 years) is a proxy variable of the expected inflation rate.

----- The mark-up term *M* is obtained through the deviation from the equilibrium defined as a long-run relationship among the CPI, ULC, and final goods of CGPI.

$$M_t = CPI_t - \underset{(19.92)}{0.488}\,CGPI_t - \underset{(18.01)}{0.472}\,ULC_t - \underset{(22.74)}{0.002}\,T$$

Estimation period: 1980/1Q - 2004/2Q, t-value in parentheses, *T* indicates trend
Adjusted R^2=0.990, Standard Error=0.008, Durbin-Watson Statistic = 0.285

Changes in the mark-up term(difference of *M*) moves in the same direction as prices, while the level of the mark-up (*M*) itself moves in the opposite direction from prices as it reverts to the long-run relationship mentioned above.

Sources: Cabinet Office, "National Accounts"; Ministry of Internal Affairs and Communications, "Consumer Price Index"; Bank of Japan, "Corporate Goods Price Index," etc.
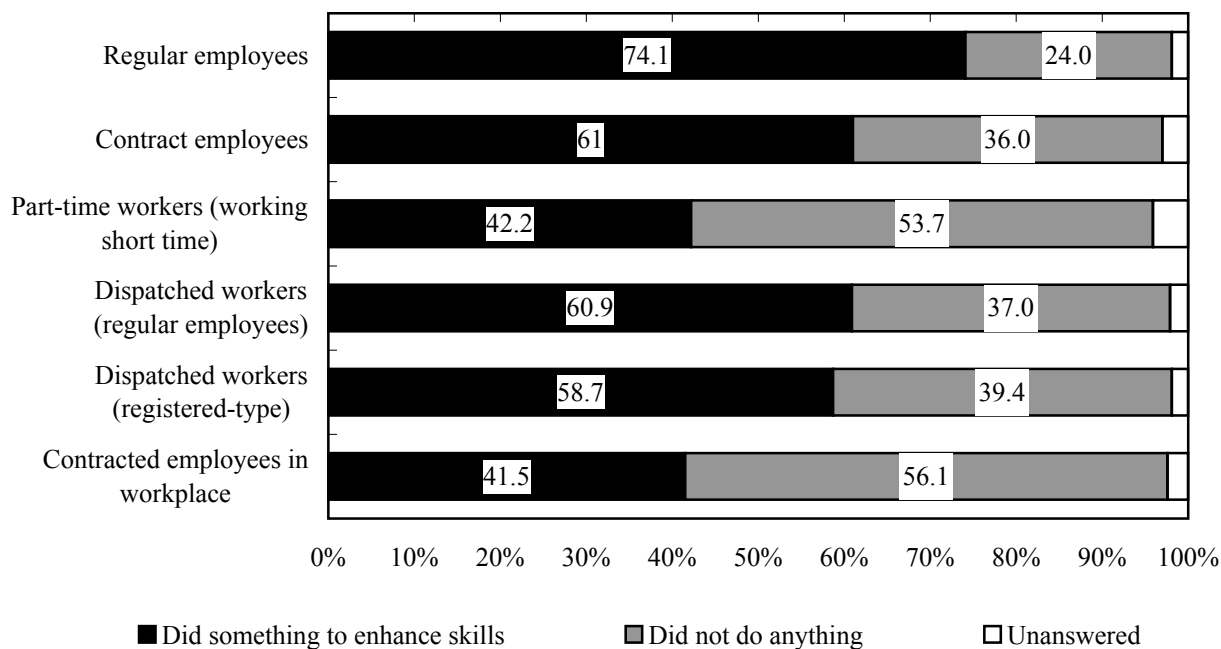
Chart 38

Unemployment Rate By Age Group
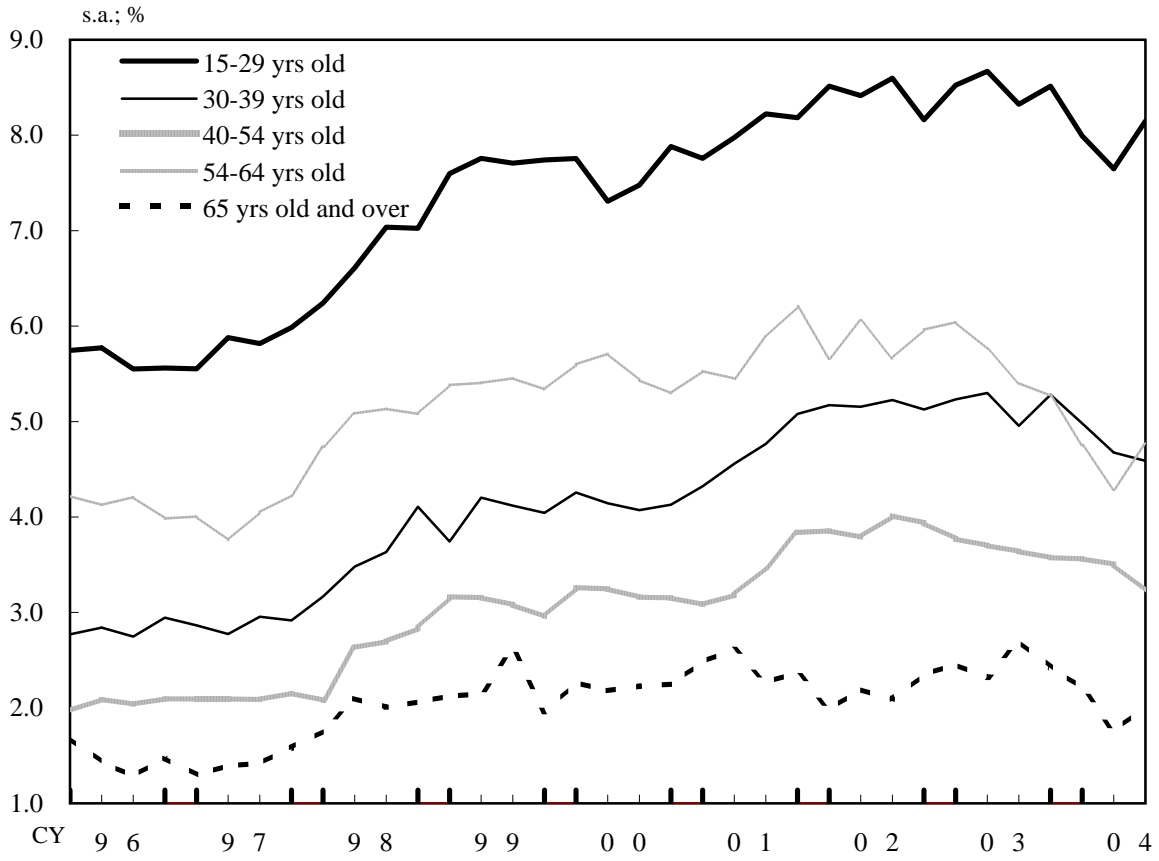
s.a.; %

Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

Chart 39
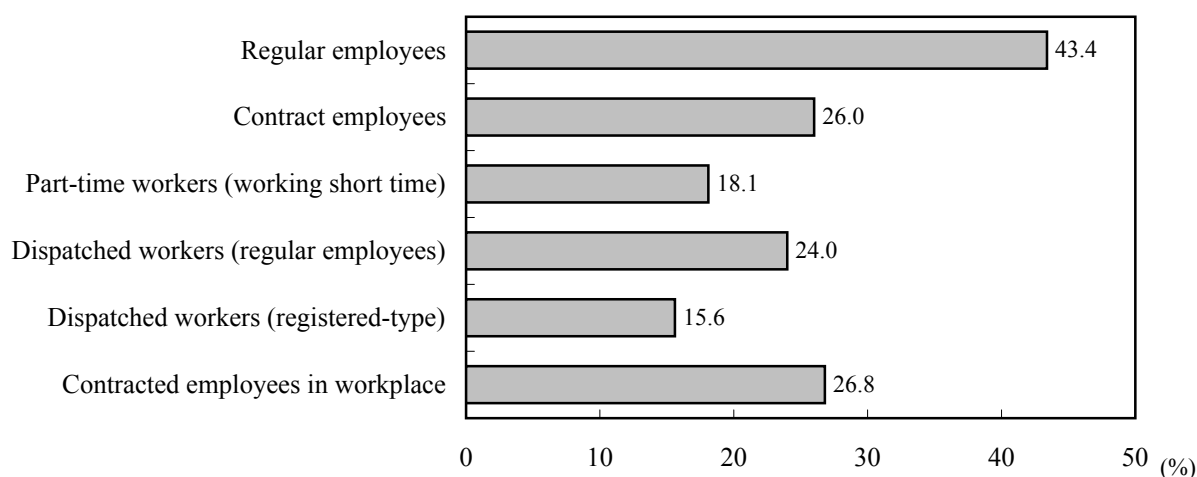
Types of Employment and Enhancement of Working Skills

(1) Skill-enhancing activities

—"Did you do anything to enhance your skills during the past one year?"

Category	Did something to enhance skills	Did not do anything
Regular employees	74.1	24.0
Contract employees	61	36.0
Part-time workers (working short time)	42.2	53.7
Dispatched workers (regular employees)	60.9	37.0
Dispatched workers (registered-type)	58.7	39.4
Contracted employees in workplace	41.5	56.1

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ Did something to enhance skills   ■ Did not do anything   □ Unanswered

(2) Training and education measures taken by firms

—Ratio of those giving "training and education measures taken by firms" as the answer
among those who "did something to enhance skills."

| Category	Ratio (%)
Regular employees	43.4
Contract employees	26.0
Part-time workers (working short time)	18.1
Dispatched workers (regular employees)	24.0
Dispatched workers (registered-type)	15.6
Contracted employees in workplace	26.8

0   10   20   30   40   50 (%)

Source: The Japan Institute for Labour Policy and Training, "Survey on firms' strategies on human resources and opinions on working (survey conducted on workers; available in Japanese only) in 2003."

Chart 40

Employment Situations By Region

(1) Unemployment rate by region

Original figures;
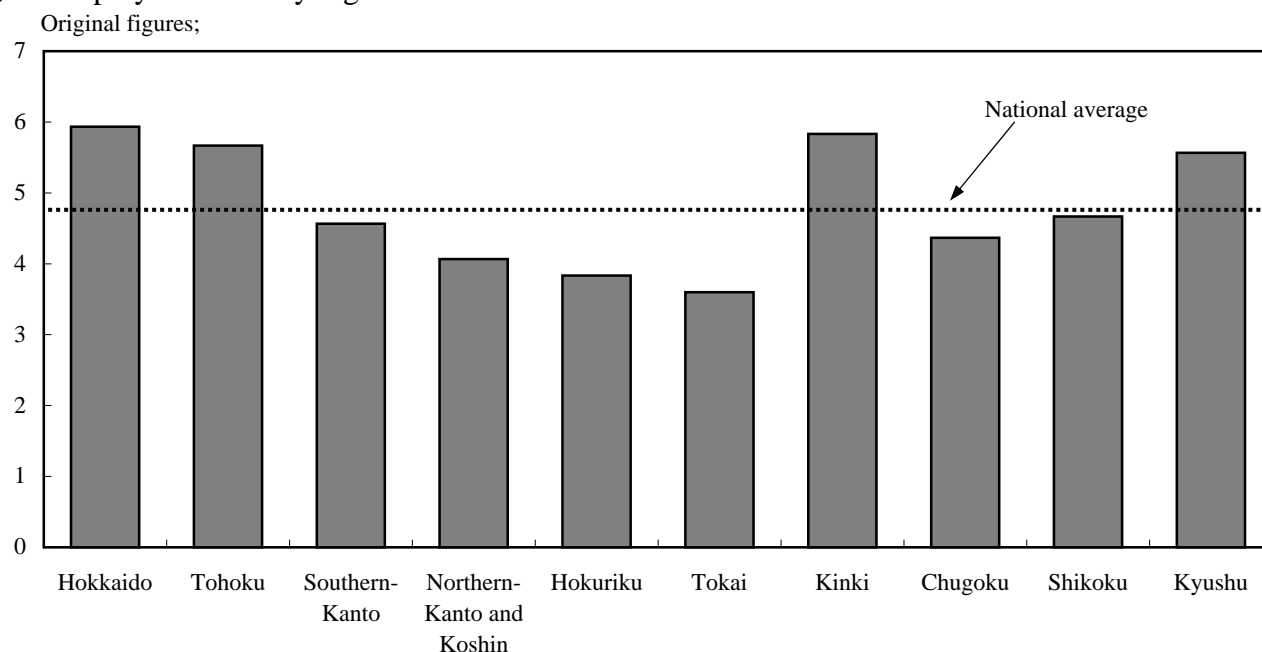
(2) Rate of increase/decrease in the number of employees by region

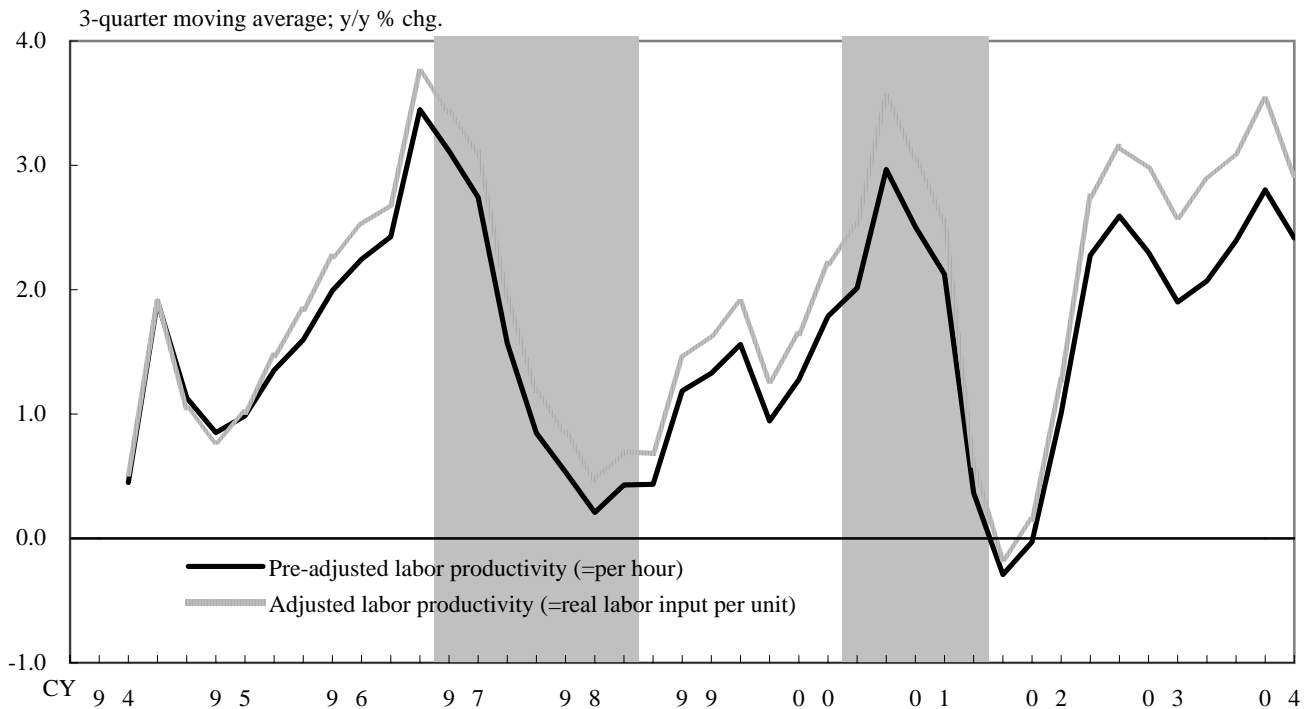Rate of increase/decrease compared to 2002; %
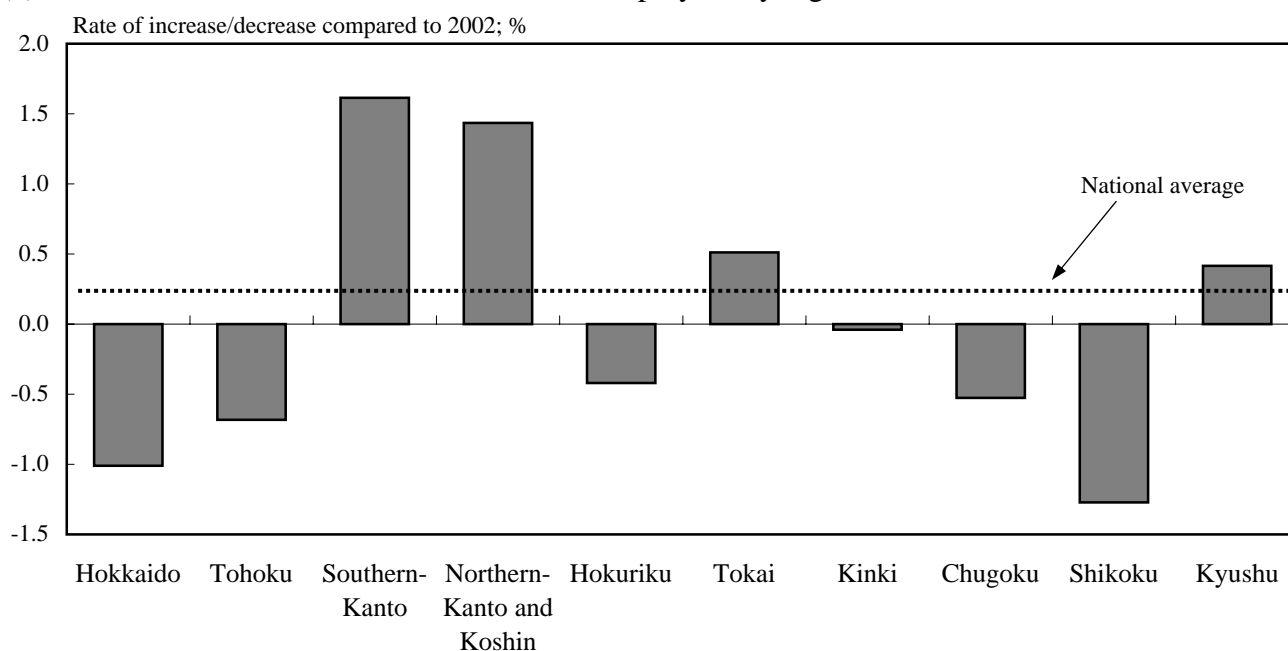
Notes: 1. Each region consists of the following prefectures: "Hokkaido: Hokkaido"; "Tohoku: Aomori, Iwate, Miyagi, Akita, Yamagata, and Fukushima"; "Southern-Kanto: Saitama, Chiba, Tokyo, and Kanagawa"; "Northern-Kanto and Koshin: Ibaraki, Tochigi, Gunma, Yamanashi, and Nagano"; "Hokuriku: Niigata, Toyama, Ishikawa, and Fukui"; "Tokai: Gifu, Shizuoka, Aichi, and Mie"; "Kinki: Shiga, Kyoto, Osaka, Hyogo, Nara, and Wakayama"; "Chugoku: Tottori, Shimane, Okayama, Hiroshima, and Yamaguchi"; "Shikoku: Tokushima, Kagawa, Ehime, and Kochi"; "Kyushu: Fukuoka, Saga, Nagasaki, Kumamoto, Oita, Miyazaki, Kagoshima, and Okinawa."
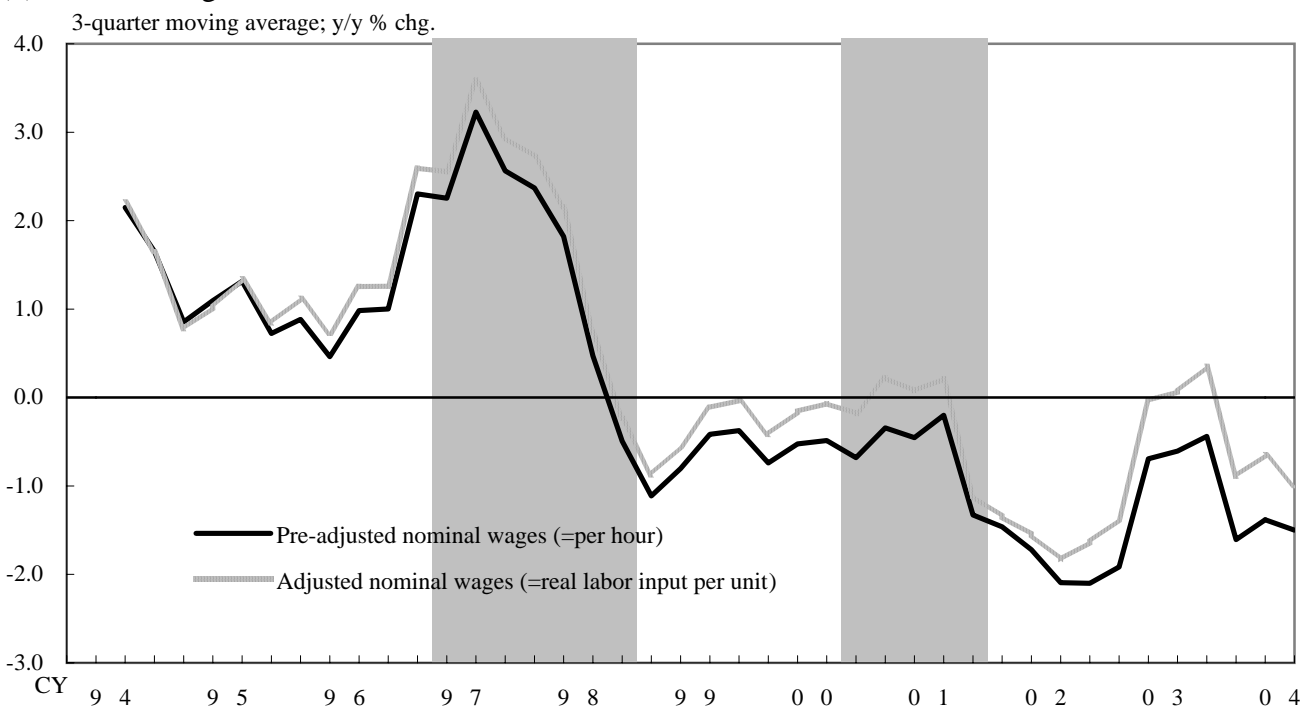
2. Data for (1) are averages of 04/1Q - 3Q, and those of (2) show the rates of increase/decrease of 04/1Q - 3Q compared to 02/1Q - 3Q.

Source: Ministry of Internal Affairs and Communications, "Labour Force Survey."

(1) Labor productivity

3-quarter moving average; y/y % chg.

Pre-adjusted labor productivity (=per hour)

Adjusted labor productivity (=real labor input per unit)

CY 9 4   9 5   9 6   9 7   9 8   9 9   0 0   0 1   0 2   0 3   0 4

(2) Nominal wages

3-quarter moving average; y/y % chg.

Pre-adjusted nominal wages (=per hour)

Adjusted nominal wages (=real labor input per unit)

CY 9 4   9 5   9 6   9 7   9 8   9 9   0 0   0 1   0 2   0 3   0 4

Notes: 1. Pre-adjusted labor productivity = real GDP/labor input (no. of regular employees*total hours worked);
　　　　　Pre-adjusted nominal wages = total cash earnings/labor input (same as above).
　　　2. "Real labor input" is used instead of "labor input" in 1. for both adjusted labor productivity and nominal wages.
　　　　　Real labor input = labor input of regular workers + labor input of part-time workers* (wages of part-time workers
　　　　　per hour/wages of regular workers per hour).
　　　3. Here, the *Monthly Labour Survey* is used since data for regular workers and part-time workers can be obtained
　　　　　separately. Hence, the pre-adjusted labor productivity also differs slightly from that in Chart 5.
　　　4. Data are for establishments with at least 5 employees.

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