Structural Issues in the Japanese Labor Market: An Era of Variety, Equity, and Efficiency or an Era of Bipolarization?

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This paper describes several structural changes in the Japanese labor market and related institutional factors with special emphasis on the labor supplies of part-time workers and discouraged workers. We also discuss necessary reforms in the labor market and some implications of such structural changes on the conduct of monetary policy.

Key words: Part-time worker; Discouraged worker; Japanese employment system; Unemployment

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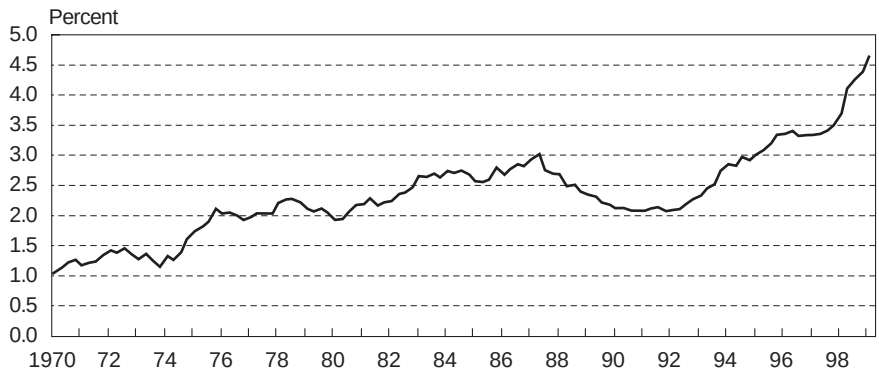
I. Introduction

The Japanese employment system has been considered a key factor in the good performance of Japanese economy, because the Japanese unemployment rate was very low and stable compared with those of the United States or most of the European countries in the 1970s and the 1980s. Taking a long view, however, we can recognize that there was a persistent rise in the Japanese unemployment rate (Figure 1). In particular, the unemployment rate surged in the 1990s, and along with the collapse of large financial companies in November 1997, the rate hit 4.9 percent in February 2000. The Japanese unemployment rate now exceeds that of the United States.

Figure 1 Japanese Unemployment Rate



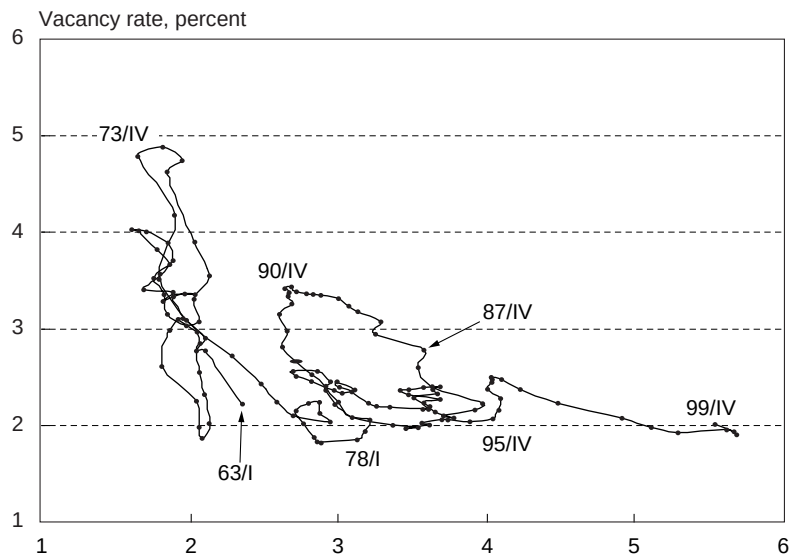
Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Labour Force Survey*.

In Figure 2, we have plotted the quarterly unemployment rate versus the job vacancy rate, using the sample period from 1963 to 1999. For the past 36 years, it seems that the Beveridge curve for Japan, that is, the negative correlation between the unemployment rate and the vacancy rate, has been shifting outward to higher rates of both unemployment and vacancies.

Why is the Japanese unemployment rate consistently rising? And why is the Beveridge curve shifting upward in Japan?[1] Following Bleakley and Fuhrer (1997), the outcomes for unemployment and vacancies that are summarized in the Beveridge curve can be explained by three major factors. Those are (1) increases or decreases in job-matching efficiency, (2) labor market reallocation caused by job creation and destruction,[2] and (3) inflows and outflows to and from the labor force. Let us look into each factor briefly.

1. It is often said that increasing geographical, age, or occupational dispersion of workers and job opportunities are causing the upward shift in the Beveridge curve. In order to examine this hypothesis, we calculated the mismatch index (see Layard, Nickell, and Jackman [1991]) following Sakurai and Tachibanaki (1992) for the past 25 years by region, age, and occupation. Table 1 shows the simple five-year average of the mismatch index. Although we can observe a slight increase in occupational mismatch in the 1990s, there is no evidence of increased mismatch by region or age.
2. Davis, Haltiwanger, and Schuh (1996) define job creation (job destruction) at time t equals employment gains (losses) summed over all plants that expand (contract) or startup (shutdown) between time $t-1$ and t.

Figure 2 Beveridge Curve



Note: $u = \frac{U}{(U+E)}$ and $v = \frac{JO - JM}{(JO - JM) + E}$, where u is employee-based unemployment rate, v is the vacancy rate, U stands for the number of unemployed, E is the number of employed persons, JO represents the number of active job openings, and JM is the number of job matches (the number of job openings filled by the job applicants). For details, see Footnote 11.

Sources: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Labour Force Survey*; Ministry of Labour, *Report on Employment Service*.

Table 1 Mismatch Index for Japan

	Regional groups (10 groups)	Age (8 groups)	Occupational (10 groups)
Late 1970s	17.39	20.09	—
Early 1980s	17.32	20.26	22.96
Late 1980s	16.16	20.72	22.81
Early 1990s	18.64	18.14	26.88
Late 1990s	17.92	19.86	24.14

Note: Mismatch index; $\frac{1}{2}\sum_i |u_i - v_i| \times 100$. $u_i = U_i/U$ and $v_i = V_i/V$, u_i is the relative unemployment rate, and v_i is the relative vacancy rate by region, age, and occupation (subscript i refers to a factor of mismatch, either by region, age, or occupation), U stands for the number of unemployment, V is the number of active job openings minus the number of job matches. Regarding the occupational mismatch, the number of new job applicants (for unemployment) and the number of new job openings minus the number of job matches (for vacancies) are used instead.

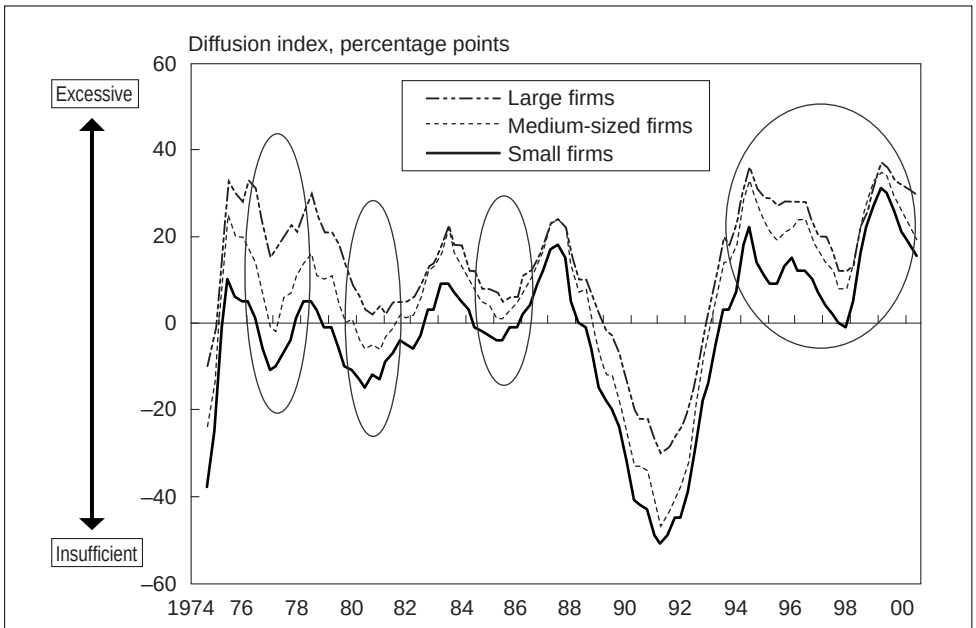
Sources: Same as those for Figure 2.

First, regarding the job-matching efficiency, the Japanese long-term employment system and the high investment in skills have made the Japanese spot labor market very "illiquid," and this may be causing inefficiency for both workers and firms

involved in the job-matching process when a large shock occurs. This is one of the possible explanations of the upward shifts in the Beveridge curve, since the shifts can be observed after every large negative shock in the past, such as the two oil shocks, the strong yen period in the early 1980s, and in the 1990s.

The traditional responses of Japanese firms to negative shocks include at least three factors (see Tachibanaki [1987, 1998], for example). First, a reduction in working hours and overtime payment for currently employed full-time workers.[3] Second, less employment of new graduates. Third, an increase in *shukko* (temporary transfers between firms) and *tenseki* (transfers to another company, or change of long-term employment), both of which effectively reallocate workers within the internal labor market.[4] Such traditional adjustment mechanisms used to prevent the unemployment of core workers in large firms, if the firms were able to reduce labor costs, and there was also an increase in *shukko* and *tenseki* in small businesses. Figure 3 shows data from the *Tankan* (Short-Term Economic Survey of Enterprises in Japan), which is the diffusion index of judgments on the excessiveness, adequacy, or shortage of the number of employees in the various sizes of firms interviewed. In the past, we can see from Figure 3 that small firms answered that they had labor shortages, even when

Figure 3 Judgment on the Excessiveness, Adequacy, or Shortage of the Number of Employees



Source: Bank of Japan, Research and Statistics Department, *Tankan* (Short-Term Economic Survey of Enterprises in Japan).

3. Shinotsuka and Ishihara (1977) is the first study to point out that Japanese firms manage to maintain long-term employment for most of their regular full-time workers during economic downturns by reducing total working hours flexibly.
4. See Sato (1999) for details of *shukko* and *tenseki* in the late 1990s.

large or medium-sized firms had found that they had surplus labor. In the 1990s, however, the financial sector crisis may have caused many of these small firms that were highly dependent on the full support of their main banks to collapse (see in Figure 3 that the diffusion index of small enterprises has been showing "excessive" since 1993). Therefore, the absence of this "buffer" might have exacerbated the shock to the Japanese employment system.

Second, because of the limitations in current Japanese statistics, unfortunately so far only a few studies on Japanese job creation and destruction are available. Among the few that exist, Genda's (1998) analysis suggests that job creation and destruction rates in the early 1990s were lower for regular, full-time, and male workers than for temporary, part-time, and female workers.[5] Considering the fact that the ratio of part-time workers to the total labor force has been increasing substantially in recent decades (more details in Chapter II.A), the increase in the proportion of the jobs with a higher rate of job creation and destruction may be another candidate to explain the outward shift of the Beveridge curve.

Third, let us take a look at the inflows into and outflows from the labor force. Until the early 1980s, women tended to leave the labor market either for marriage or childcare and many of them chose to stay out of the labor force as permanent homemakers. Although there were reentrants to the labor market, most of them worked as nonregular part-time workers after their children had grown up. Whenever recession occurred, however, it was quite common for them to withdraw from the labor market (for example, see Shinotsuka [1983], Higuchi, Seike, and Hayami [1987], and Tachibanaki and Sakurai [1991]). Such a pro-cyclical inflow into and outflow from the labor force could be explained by typical common practices among Japanese firms. They usually cut back new graduate recruitment and lay off part-time workers in order to hoard regular full-time employees. It had been said that such "discouraged workers" were another "buffer" of the Japanese labor market, which in the past pushed the official Japanese unemployment rate systematically lower. In the past 10 to 15 years, this typical woman's attitude to labor supply has tended to weaken. More women reenter the labor force after a short period of withdrawal for childcare, and they tend to remain in the labor market seeking jobs even during a recession. Indeed, women account for almost all of the growing number of part-time workers, and they have become a large component in the explanation of the dynamics of the Japanese labor market. In particular, as the downturn bit deeper into profits in 1990s, cheaper part-time workers replaced full-time regular workers. According to the *Report on the Special Survey of the Labour Force Survey* in February 2000, the number of regular full-time workers decreased by 580,000 from the previous year, while concurrently the number of part-time workers increased by 540,000.

It is possible that during a period of high unemployment in Japan more "core" (this is really an abuse of the word, as it is merely a Japanese way of saying "insiders"), i.e., full-time regular employees, even in large firms may become unemployed. Such

5. Tachibanaki and Morikawa (1999) report similar results by using microdata obtained from the *Census of Manufactures*. They point out that the job destruction in plants with a high-wage and high male-labor ratio tends to be small.

a view often presumes that more "peripheral workers" ("outsiders") may choose to stay out of the labor force during a period of high unemployment. The first effect, particularly the potential risk of unemployment among incumbent prime-aged workers, has attracted some concern.[6] Indeed, there are many studies regarding the sustainability of the so-called Japanese employment system based on the examination of various aspects of the Japanese labor market (see for example, Tachibanaki and Taki [2000] and Hattori and Maeda [2000]). However, we would like to show that from the viewpoint of the overall Japanese economy, the secondary effect upon peripheral workers seems to capture the dramatic changes which have been transforming the Japanese labor market.

The organization of the rest of this paper is as follows. Chapter II explains why considering the problem in the Japanese labor market from the viewpoint of peripheral workers is important. Our analysis includes consideration of whether or not the increase in the number of female part-time workers on low wages and with little job security could be related to the tax system and the social security systems which presume that "man is the breadwinner, woman the homemaker." The discouraged workers, who are believed to enjoy "luxury unemployment," are better considered as a potential labor supply in the Japanese labor market. We argue that the omission of those workers from the discussion of unemployment might understate current Japanese unemployment problems, and they may have important aggregate implications. For example, we consider the effects of the treatment of the discouraged workers on Okun's Law in the Japanese context. Chapter III examines the direction of several structural reforms in the labor market, based on the discussions in Chapter II, and Chapter IV concludes.

II. Structural Change in the Japanese Labor Market

In Chapter II, we examine the changes in the labor supply attitudes of part-time workers (especially female part-timers) and discouraged workers in these years. Put another way, this chapter will highlight an aspect of the conflict of interest between incumbent regular workers (mostly men) and nonregular workers (mostly women) or discouraged workers (out of the labor force).

Along with the establishment of the Japanese long-term employment system in the 1970s and the 1980s, the institutional factors that reinforced such an employment system tend to presume rigid gender roles in which men are breadwinners (regular full-time workers) and women homemakers. Such institutional factors, which were established in the old days as we see in more detail in the following sections, are now influencing peoples' labor supply unintentionally and may be causing nontrivial distortions in the Japanese labor market.

6. According to Lindbeck and Snower (1988), insiders are assumed to create a special, potentially important, variety of labor turnover cost by withdrawing cooperation from, and by harassing, entrants who attempt to underbid them. In the Japanese case, by precedent, it is generally very costly to fire regular full-time workers (see OECD [1999a]). Moreover, given the accumulation of firm-specific human capital, it is beneficial for both employers and employees to cope with adverse economic shocks through reductions in overtime work or overtime payments, rather than by firing workers, if the shocks are expected to be temporary.

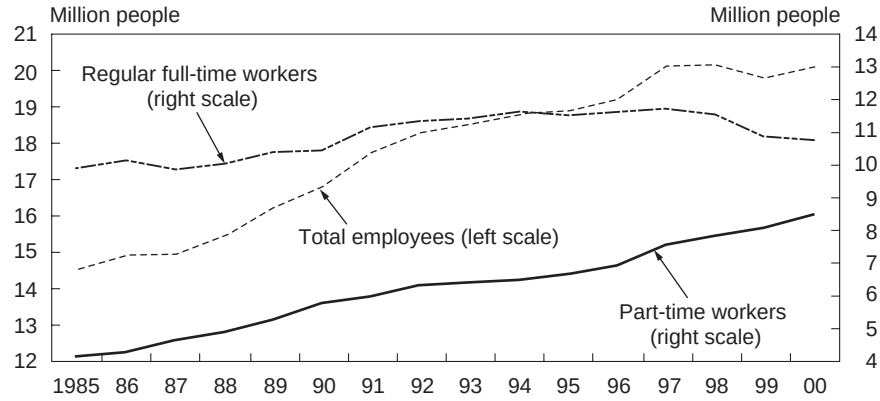
A. Part-Time Workers

In Japan, more than one-fifth of employees are now part-time workers (22 percent of total employees). The rate was only 12 percent in 1985. Such increase in the number of part-time workers in the past 15 years is attributed to a large growth in female part-time workers. In this section, we mainly focus on the changing attitudes of the female labor supply in these decades.

1. Increasing female part-time workers

In Japan, the number of females participating in the labor force has grown significantly in the past 15 years (Figure 4). The number of female employees has increased by about 5.6 million since 1986, while the number of male employees has increased by only 3.7 million. Among the extra 5.6 million female employees, about 4.3 million of the increase has been in the number of part-time workers,[7] accounting for three-quarters of total female employment growth. In 2000, the ratio of female part-time workers to total female employment reached 42 percent. This phenomenon of increases in females' labor force participation rate is common among industrial countries. It is interesting to find, however, that there are two types of trends in these countries. First, there are countries where simultaneous rises in females' participation rate and in the ratio of part-time to total employment are observed (Japan, France, and New Zealand,

Figure 4 The Number of Employed Persons, Female



Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Report on the Special Survey of the Labour Force Survey*.

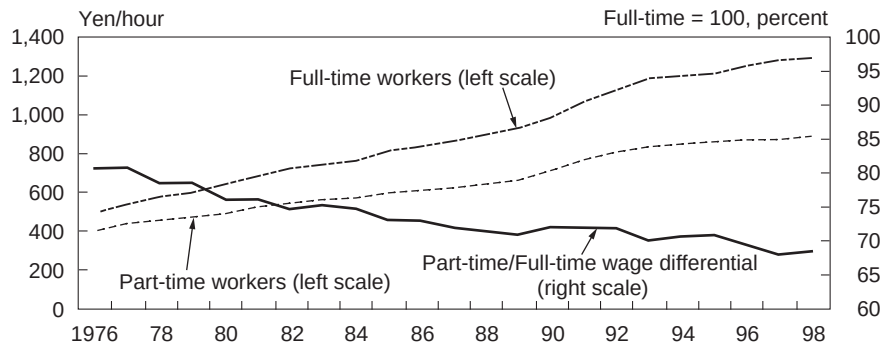
7. Definitions of "part-time workers" differ widely among countries. For differences in definitions, see OECD (1994) or OECD (1999b) for examples. The Japanese concept of part-time workers are those who are not "core" regular full-time workers. The employment conditions of typical core regular full-time workers include seniority-based wages, long-term employment, on-the-job training, and various forms of employment protection. Therefore, although the word "part-time" itself means "a part of full-time," a "part-time worker" in Japan does not necessarily work fewer hours than a full-time worker. According to the 1995 Ministry of Labour Report on the *General Survey on Part-Time Workers*, at least 16 percent of part-time workers reported that they worked the same number of working hours as regular workers. However, regarding data on Japanese part-time employment, definitions are not consistent among statistics. In the *Special Survey of the Labour Force Survey*, a part-time worker is defined as someone whose position is classified as part-time by his or her employer. This definition is close to actual "part-time workers" in Japan, and the discussion in this paper is basically based upon this statistics. Houseman and Osawa (1998) provide comprehensive explanations of differences in the concept of part-time worker between the United States and Japan.

for example). Second, there are countries where only the female participation rate is growing while the part-time ratio is not, which implies that the growing number of women who work as full-time workers is larger than that of women who work as part-time workers (such as in the United States and Norway).

2. Relative wages between full-time work and part-time work

In order to find a possible explanation of this rapid and steady increase in the number of Japanese part-time workers, let us first look at the wages of female regular full-time workers and those of female part-time workers. In Figure 5, we can see that average hourly earnings of full-time workers has increased more than 2.5 times in the past two decades, while that of part-time workers has merely doubled.[8] As a result, the wage differential between full-time workers and part-time workers has widened greatly, as shown in the downward thick solid line in Figure 5.[9] The finding that the relative wages are less than 100 throughout the sample period is not the result of failure to control differences in the following characteristics, such as firm size, age, and job experiences within the same firm (Figure 6).[10] Why are wage differentials between those two groups increasing? Is women's labor supply toward part-time work exceeding labor demand? Let us turn to the demand side.

Figure 5 Wages per Hour and Wage Differential, Female

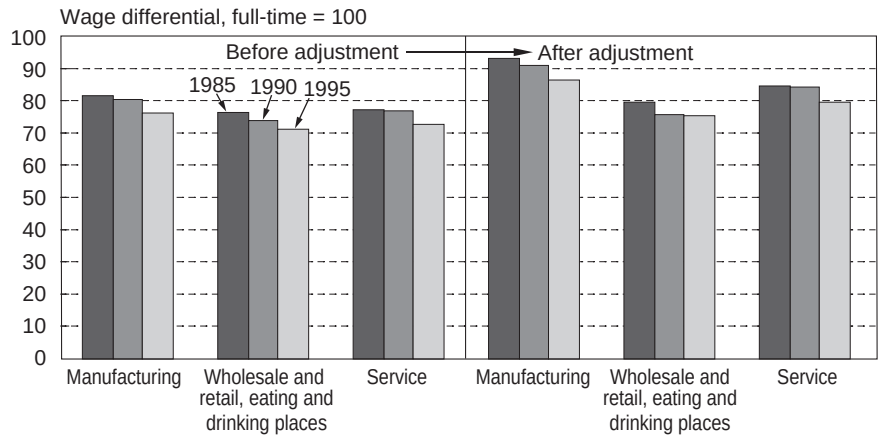


Note: Average wage of regular full-time workers = (scheduled cash earnings per month)/(the actual number of scheduled hours worked). Scheduled cash earnings: amount of contractual cash earnings, not including overtime allowances. The average wage of part-time workers is defined as hourly scheduled cash earnings.

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

8. Note that in the discussion of wage differentials in figures 5 and 6, only data in the *Basic Survey on Wage Structure* are available for part-time workers' wages, and that part-time workers are defined as those who work fewer hours per day or days per week than do regular workers.
9. The differential will widen even more when we add bonuses and other fringe benefits, including social security benefits, to earnings. Regarding non-wage labor costs, see also Footnote 13.
10. Some readers may think that the wage differential between the two jobs may simply reflect the differences in human capital, especially the differences in the levels of educational attainment. Since wages classified by education groups are not available for part-time workers, we can not verify this idea by controlling education in the wage equation à la Mincer. However, when we classify full-time and part-time workers by educational level, the ratio of part-time workers to total employees has been increasing constantly in every education group in the past 15 years. For example, the ratio for the university graduate level part-time workers to the total number of university graduate level workers increased from 16.6 percent in 1986 to 26 percent in 1999. For high school graduates, the ratio increased from 31 percent in 1986 to 47 percent in 1999. Based on those observations, we can at least assume that the difference in educational level is not the main factor in explaining the wage differential.

Figure 6 Wage Differentials by Controlling Individual Characteristics, Female



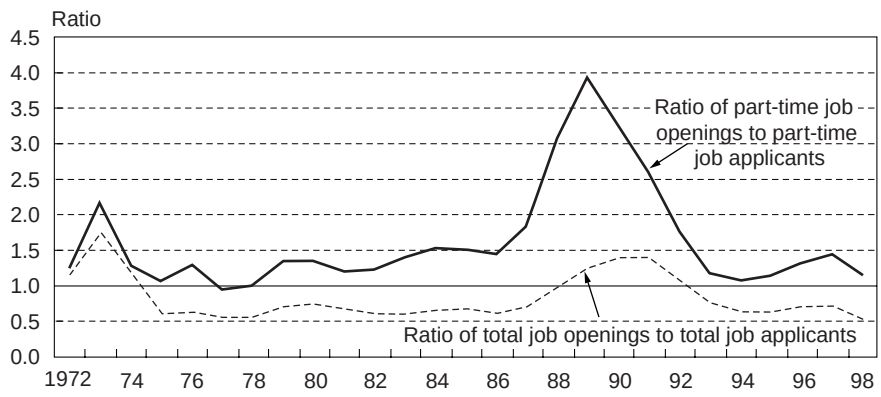
Note: Adjusted for firm size, age group, and length of working period in the same firm.

Source: Calculated by Ministry of Labour, in *1997 White Paper on Labour*.

3. Demand for part-time workers exceeds supply

Figure 7 shows the ratio of part-time job openings to part-time applicants.[11] According to the data shown in Figure 7, the demand for part-time workers increased

Figure 7 Ratio of Job Openings to Job Applicants



Source: Ministry of Labour, *Report on Employment Service*.

11. In Japan, the Employment Security Law of 1947 established a network of Public Employment Security Offices (referred to hereafter as PESOs), and the law allowed PESOs to obtain monopoly power in the employment placement service. The law had for a long time strictly regulated (fee-charging) private employment placement services. Therefore, vacant jobs are filled only through the PESOs. The data used for "job openings" in this paper are vacant jobs registered by job-offering firms at the PESOs. All of those who register at the PESOs are called "job applicants." The data on such people are collected on a monthly basis. We call cumulative total available job offers and seekers "active job openings" and "active job applicants." The ratio of job openings to job applicants used in Figure 7 is calculated by the number of registered active job openings divided by the number of registered active job applicants. "Job openings" has been used as a proxy variable for vacancies in Japanese studies, since these registered base data are only available in the form of time-series data.

throughout the 1980s. In addition, it should be recognized that even during the current severe recession, the number of employers who are seeking part-time workers exceeds the number of workers seeking part-time work, while the total number of job openings is well below the total number of job applicants.

Houseman and Osawa (1998) suggest two possible factors that may have resulted in the increase in demand for part-time workers in Japan from 1982 to 1992. One is the "between industries effect," that is, changes in industrial composition of employment have increased the employers' demand for part-time workers. If the employment share of industries with a high rate of part-time employment increases, the demand for part-time workers will increase, holding other conditions constant. The other possible factor is the "within industry effect," i.e., that employers have increased their demand for part-time workers because they face greater competition than in the past, and thus have come under greater pressure to lower labor costs. Their empirical analysis regarding the increase in part-time employment in Japan over the period 1982–92 shows that the second factor explained as much as 92 percent of total changes. We can provide supporting evidence that their finding also applies to the mid-1990s. According to the 1995 Ministry of Labour Report on *General Survey on Part-Time Workers* (hereafter, *GSPW*), among the reasons for hiring part-time workers, the most frequent answer given by 13,000 establishments was "to save labor costs" (38.3 percent).

If markets are perfectly competitive, such a unanimous increase in employer demand for part-time workers in all industries must drive up part-time workers' relative wage. Considering the fact that the wage differential has been continuously widening in the past, there must be some reason why the market adjustment mechanism has been distorted.

4. Some possible explanations for the differential between full-time and part-time wages

There has been much discussion regarding the explanations of the full-time and part-time wage differential in Japan, and this discussion has not yet reached a consensus. We here briefly review some of the points made in this discussion.

a. Institutional factors

Nagase (1997a) points out the possibility that the institutional system encourages women to work part-time for low wages.[12] For example, in 2000 in Japan, a worker whose earnings are less than ¥1.03 million (about US$10,300 at an exchange rate of ¥100 per U.S. dollar) per year is exempted from paying income tax. At the same time, when a worker's earnings exceed ¥0.7 million (US$7,000), the amount of her (his) spouse's tax relief starts to decline and tax relief ends when earnings exceed ¥1.4 million (US$14,000). In addition, since the 1986 public pension reform, a worker (1) whose working hours per day or week are less than three-quarters of those of regular workers and (2) who earns less than ¥1.3 million (about US$13,000) per year is regarded as having "dependent" status. Such workers are eligible for health insurance coverage under their spouse's plan and are entitled to receive a basic pension from the

12. Doudeijns (1998) discusses from an international perspective how the tax and benefits systems influence a second earner's incentive to work.

government. Such workers are exempted both from the government-mandated pension contribution and from health insurance payroll taxes.[13] In fact, in the *GSPW*, roughly 40 percent of female part-time workers reported that they limit their working hours in order to keep their earnings under the income tax threshold or to avoid paying health insurance and pension contributions.[14]

Nagase (1997a) states that the tax threshold did not become a binding constraint for the labor supply of part-time workers because both full-time and part-time wages were considerably lower than the threshold. However, the government has not changed the level of the tax thresholds by fully indexing the realized inflation rate. She points out that for most part-time workers, the local optimal choice of relatively low wages that maximize the after-tax income created below the tax threshold seems to be a reasonable choice, given the potential hours that they may be able to work and their husbands' income. Therefore, the paradox of an increase in demand for part-time workers and a decline in the relative wage of part-time workers is consistently explained by the existence of the tax threshold. If there is a considerable number of part-time workers who limit their working hours to avoid paying taxes, then raising the hourly wage of part-time workers is not a reasonable strategy for firms even when they have strong demand for those workers. This is because the higher they raise the wage of part-time workers, the higher the risk becomes that their part-time employees adjust their working hours whenever their earnings come close to the tax threshold. If the part-time workers do indeed reduce their working hours, firms have to employ additional part-time workers in accordance with their business conditions. Since hiring new part-time workers is costly, firms may ask part-time workers to work longer hours during busy business seasons. Part-time workers, who are afraid of being dismissed for refusing firms' offers, may choose lower wages in advance to keep their income below the tax threshold (Furugori [1997]).

Abe and Ohtake (1995) and Abe (2000) argue that although such institutional factors may affect part-time workers' labor supply, these factors themselves are not the major cause of a lowering of the level of part-time wages. Abe (2000) points out that a substantial decrease in part-time working hours was observed from the late 1980s to the 1990s, while part-time wages increased in the same period. This implies that many of part-time workers were able to shorten their working hours at the same time as their wages rose in order to keep their income below the tax threshold. Higuchi (1995) states that part-time workers who shorten their working hours in order to keep their income below the tax threshold tend to work for lower wages than those of part-time workers who do not adjust their working hours. He points out, however, that it is not yet clear whether such beneficial tax treatment is pushing wages lower for a given working time or shortening part-time workers' working hours for a given wage.

13. This also benefits firms. Since social security payroll taxes, including employment insurance contributions, must be shared equally by employers and employees, hiring part-time workers who do not have to pay such taxes saves a firm's labor costs.
14. Of course, this does not mean that every female part-time worker is not paying social security taxes. Abe (1999) finds that about 30 percent of married part-time workers work more than 30 hours a week, and more than 60 percent of them pay such taxes.

b. Compensated wage differential hypothesis

Nakamura and Chuma (1994) and Chuma (1995) analyze the part-time wage function by using a hedonic approach and show that in urban areas a job that allows workers to choose working days and hours more flexibly tends to be accepted at a lower wage. They also find that the length of commuting time from home to workplace significantly explains the level of part-time wage in urban areas.[15] They point out that, in general, not only the level of wages per hour but also the flexibility in working days or hours and the amenity of a job (such as job security, the length of commuting time, and days of paid leave) affect the acceptance of job offers by part-time workers. Since part-time workers are mostly homemakers and therefore responsible for household chores and childcare, they prefer to find jobs near where they live with low wages but which allow flexible working days and hours instead (Japanese women's job choices are discussed further in Section II.A.5). Therefore, some of the wage differential could be understood as compensating to some extent for this difference.

c. Faster growth rate of female full-time workers' wages

Osawa (1993) and Abe (2000) state that the widening wage differential between female full-time and part-time workers can be explained rather by the catchup in female full-time wages relative to the male full-time wages throughout the 1980s and the 1990s. Yashiro (1980) argues that the gender wage differential in Japan can be explained by the difference in training and the accumulation of firm-specific skills. It is often said that Japanese firms pay large costs to train full-time workers through both on- and off-the-job training. However, firms do not invest as much firm-specific training for female full-time workers as they do for male full-time workers, since they expect the quit rate of women to be higher than that of men. If the attitudes of such firms have partially improved following the 1986 Equal Treatment Opportunity Law, the upward revision in female full-time workers' wage could be another possible explanation for the widening wage differential between full-time and part-time workers.

d. Efficiency wage[16] for regular workers

Abraham (1990) argues that paying higher wages may be a sensible way of reducing supervision costs or turnover costs among the firm's "core" workforce, but that there is little obvious return from paying high wages to others performing less central tasks. She goes on to say, however, that establishments that pay high wages to workers in some tasks tend to pay higher average wages irrespective of the nature of tasks in order to maintain workplaces' "morale." Therefore, hiring part-time workers from the external market at (low) market wages allows firms to lower labor costs without losing incumbent (efficiency-wage-provided) regular workers' morale. Osawa

15. (Full-time) workers' long commuting times are quite common, especially in urban areas, in Japan. Furugori (1997) interviewed people who work in supermarkets in Tokyo and Cleveland, Ohio in 1992. She finds that the full-time workers' average commuting time in Tokyo's supermarkets is 42.2 minutes, while that of part-time workers is only 24.2 minutes. She points out that the commuting time for workers in Cleveland's supermarkets is not that different between full-time and part-time workers (the average time for full-time workers is 20.3 minutes while that of part-time workers is 14.8 minutes).
16. Regarding the efficiency wage hypothesis, see Akerlof and Yellen (1986), for example.

(1993) states that such behavior on the part of firms can be also seen in the Japanese labor market.

5. Women's labor supply: preference or fixed cost of childcare?

Even if there are such tax exemptions for relatively low earnings, one may think that women can choose full-time jobs with much higher earnings instead of working in low-waged part-time jobs. Why have women increasingly chosen part-time jobs? To investigate this question in detail, it is useful to look at the supply side.

a. Many women prefer time flexibility

According to the *GSPW*, among multiple answers, more than 50 percent of 30,000 part-time workers replied that they prefer part-time work because a part-time job allows them to choose working days and hours more flexibly. Another 27 percent replied that they chose part-time work because they wanted to shorten their working days or hours. Women who replied that they worked part-time just because they could not find regular full-time jobs totaled only 17 percent.

b. Are they willingly choosing part-time jobs?

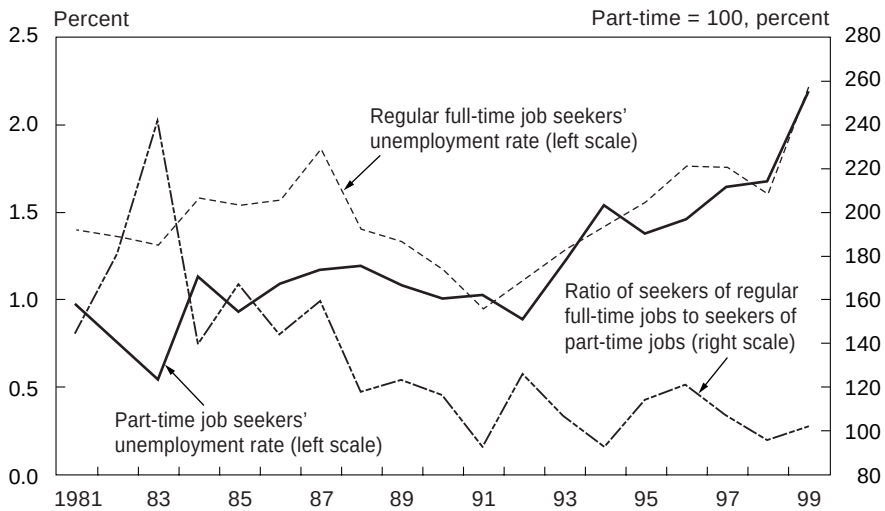
We should note that, however, the replies shown in the *GSPW* may not literally mean that the most of the part-time workers are willing to accept low-wage jobs. For example, Nagase (1997b), who empirically examined the occupational choices of married women in Japan, points out that the number of preschool children reduces the probability that a woman will participate in the labor market, especially as an employee of a firm. She also finds that the presence of a grandmother living in the same household who can take care of children increases the likelihood of a woman choosing full-time work. The findings suggest that if there are any arrangements to take care of their preschool children—for example, the presence of another family member—Japanese women might be able to choose full-time work even if they had preschool children. In addition, the Japanese employment and social systems, which do not provide an opportunity for a "return match" to restart one's career in full-time employment once one has withdrawn from the full-time regular employment market, also hinders reentrants, regardless of one's educational level, from working full-time.

We argue that young women in Japan face only "two corner solutions": (1) quitting full-time work and becoming a homemaker and later reentering the job market as a low-wage part-time worker, or (2) keeping her career as a regular full-time worker even at the sacrifice of the chance of marriage or having children. Moreover, according to Nagase (2000), the "two corner solutions" still apply to the young women in the 1990s despite the rise in women's higher education enrollment.[17, 18]

17. The more a woman is inclined to maintain her career as a regular full-time worker, the more she tends to give up becoming a wife or a mother. This fact is to some extent consistent with the calculation done by Chuo University (2000). The analysis shows that once a full-time working, college-educated woman withdraws from the labor market for five years, she will lose about ¥100 million (that is, about US$1 million at the rate of US$1=¥100) from her lifetime earnings.
18. This phenomenon is not observed in the United States. For example, Nagase (2000) states that only 27 percent of Japanese women who have their first child in their age group 30 to 34 keep their full-time regular jobs, while more than 60 percent of women in the United States who have a child less than one year old keep their full-time jobs.

As a result, many women who once withdrew from the labor market, regardless of their willingness, seek (low-wage) part-time jobs as reentrants. Figure 8 shows the number of unemployed women looking for either full-time or part time jobs divided by the total female labor force (left scale). The same figure also shows the ratio of women seeking regular full-time jobs to women seeking part-time jobs (dashed thick solid line, right scale). The figure demonstrates that the number of women looking for part-time jobs increased in the past two decades. In the 1990s, the number of women looking for part-time jobs has become almost the same as the number of women seeking regular full-time jobs.

Figure 8 Female Unemployment Rate by Type of Employment Desired



Note: The number of unemployed looking for either full-time or part-time jobs divided by the total labor force.

Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Labour Force Survey*.

c. Firms' view

In such an environment, it may be rational for firms to hire many low-wage part-time workers rather than keep full-time working mothers who may not be able to work as much as other male regular full-time workers or other female full-time workers with no children. In addition, women who reenter the labor market as part-time workers nowadays are mostly those who had work experience in some firm in the past. Some of those with a high educational level had to give up their career for the sake of childcare. Therefore, by hiring experienced part-time workers, firms can save basic training costs.

6. Policy implications

a. The wage-unemployment relationship

If such institutional factors—being set in the context of rigid gender roles where men are seen as the primary breadwinners and women as the homemakers—remain in the future, we have to be cautious about looking at the growth rate of the national

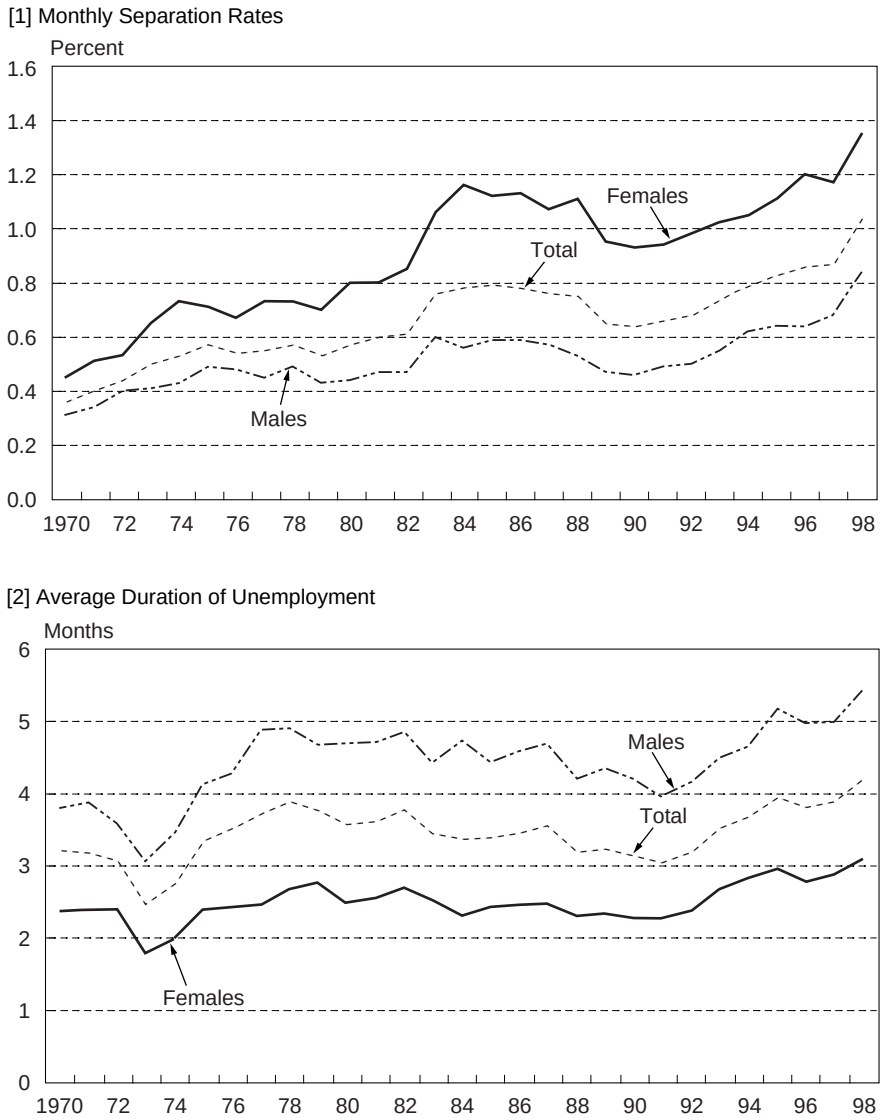
average wage. The bigger the increase in part-time workers in the total labor force, and the larger the wage differential between full-time and part-time workers, the more stable (and perhaps also low) the national average wage can be observed to be. However, if an upward revision of tax threshold were made during future booms, all of a sudden female part-time workers could start working longer hours and the competition among firms might gradually increase the relative wage of part-timers. Although the existence of a stable short-run Philips curve in Japan is still in dispute, in such a situation the knowledge of the *past* short-run Phillips curve is not so powerfully able to extrapolate the *future* relationship between unemployment and inflation.

b. The inflow rate and the duration of unemployment

In addition, under the current strong employment protection policy[19] (mainly applied to full-time workers) in Japan, to stop hiring part-time workers is much easier for firms than firing full-time regular workers. This means that hiring a new part-time worker is also easier than hiring a new regular worker. The existence of strict penalties for dismissing full-time workers is consistent with the observation that the job creation and destruction rates of part-time workers are much higher than those of regular full-time workers in Japan, as we stated in Chapter I. Therefore, one may well expect that the inflow (or outflow) rate of part-time workers who enter (or exit from) the unemployment pool must be much higher than that of regular full-time workers. To verify our conjecture, in Figure 9, we see the inflow rate and average unemployment duration for male and female workers, estimated by the Ministry of Labour (1999).[20] The figures show that there is an increasing trend in the inflow rate for both male and female workers, but that the female rate is much higher than the male rate. On the other hand, average male unemployment duration is much longer, and it seems to be increasing, but this trend cannot be observed in female workers. In sum, while the possibility of a female worker losing her job is much greater than that of a male worker, the male worker faces greater difficulty than the female worker in getting out of the unemployment pool once he loses his job.[21]

19. OECD (1999a) points out that Norway, Portugal, and Japan stand out as offering the highest employment protection on their summary indicator "difficulty in dismissal," with the United States and the United Kingdom at the opposite end of the spectrum. One may wonder if there is a set of outdated laws in Japan. Surprisingly, there is no statute in Japan requiring valid reasons for dismissal. However, the courts formulate strict requirements for dismissals in the form of case law. The requirements were established during the severe recession caused by the first oil shock in the early 1970s. They include the requirement "that every effort is made to avoid dismissal as a means of achieving necessary personal curtailment, i.e., the exhaustion of alternative means such as the reduction of overtime work, suspension of hiring new workers, relocation of workers" (Sugeno and Suwa [1997]). Blanchard and Portugal (1998) show that Portugal's high employment protection policy explains the longer unemployment duration in Portugal compared to that of the United States.
20. Note that this estimate is done for male and female workers, and not for full-time workers and part-time workers. However, since most of the male workers are working full-time and about 45 percent of female workers are working part-time, we consider this result as a proxy for full-time and part-time workers.
21. The unemployment insurance system in Japan may be another factor explaining the male's long unemployment duration. Under the current insurance system, the amount and the duration of benefit are positively linked to a worker's tenure and age (the 1999 employment insurance reform amended the system partially, though the linkage still remains). Since men tend to work longer years than women do and therefore are entitled to longer and greater benefits, it may be considered that an unemployed man is more likely to remain longer in the unemployed pool to obtain his full benefits than a woman (Tachibanaki [1984] reported that 70 to 80 percent of the unemployment insurance recipients received their full benefits). Note, however, that the ratio of the benefits recipients to the total unemployed was only 33 percent in 1999.

Figure 9 Trends in Rate of Job Separation and Duration of Unemployment



Note: Separation rate: the monthly flow out of employment to unemployment divided by the initial level of the labor force. Average duration: the average number of months of being unemployed.

Source: Calculated by Ministry of Labour, in the *1999 White Paper on Labour*.

The policy implication is that we must also be careful when we look at the average unemployment rate. Since the unemployment rate is a product of the inflow rate and the average duration, we should note that the nature of unemployment can be totally opposite between male and female even when the both unemployment rates appear on the surface to be moving in the same direction.

B. Discouraged Workers

Discouraged workers are defined as persons who are jobless and want work, but are not looking for work because they believe that they cannot find it. As we stated in Chapter I, the discouraged workers, mostly women, who used to withdraw from the labor force whenever recession occurred, used to be one of the major factors that could potentially explain the low official unemployment rate in Japan. These workers have also been considered as "luxury unemployment" and therefore, to the best of our knowledge, macroeconomists have not paid so much attention to them. However, the sum of unemployed and discouraged workers can be regarded as one of the indicators of potential labor supply. As Greenspan (1999), for example, says, looking at the fluctuation of this potential labor supply may provide another clue as to what has been happening in the labor market in the recent past.

Let us look at the number of discouraged workers[22] (Figure 10). In Figure 10, male discouraged workers seem to be experiencing an increasing trend along with an increase in the official number of unemployed, and such unemployment has surged to the highest level in the past 25 years. On the other hand, for women, although the number of discouraged workers is still remarkably high, its growth rate is not that rapid compared with that observed during the past recession period.

1. Observation 1: The Japanese potential unemployment rate is about 10 percent

In Figure 11, we calculated the discouraged workers adjusted-base unemployment rate.[23] "Discouraged workers adjusted-base (1)" in the figure refers to the official unemployment plus all the people both in and out of the labor force who answered that they would want to work but were not seeking employment opportunities because there was "no prospect of finding a job," divided by the total labor force (including discouraged workers). Among those discouraged workers, the people who answered that they either could not take up, or were undecided about taking up a job now when offered one, are excluded in the "Discouraged workers adjusted-base (2)." Therefore, the discouraged workers adjusted-base (2) can be regarded as those potential workers who are ready to flow into the labor market at any minute. As shown in the figure, the potential male unemployment rate is 6 to 7 percent, and for that of females around 12 to 14 percent in 1999. This makes the average national discouraged workers adjusted-base (1) and (2) unemployment rates 10.66 percent and 9.02 percent in 1999, respectively (implying that every one out of 10 people in Japan is potentially looking for a job). Bearing in mind that the Japanese official unemployment rate is about 5 percent, the discouraged workers are still a large component in the Japanese labor market.

The detailed composition of this category of workers, however, seems to be changing in several respects.

22. The figures for discouraged workers are calculated by the data from *Report on the Special Survey of the Labour Force Survey* collected in February every year. The series is only fully available from 1984 onward, since the questionnaire of the survey differs in various ways before 1983. Therefore, the figures reported in this section before 1983 have been adjusted by the authors.
23. The method of constructing this series is similar to the U.S. Bureau of Labor Statistics' U7. For details and international comparisons, see Sorrentino (1993, 1995).

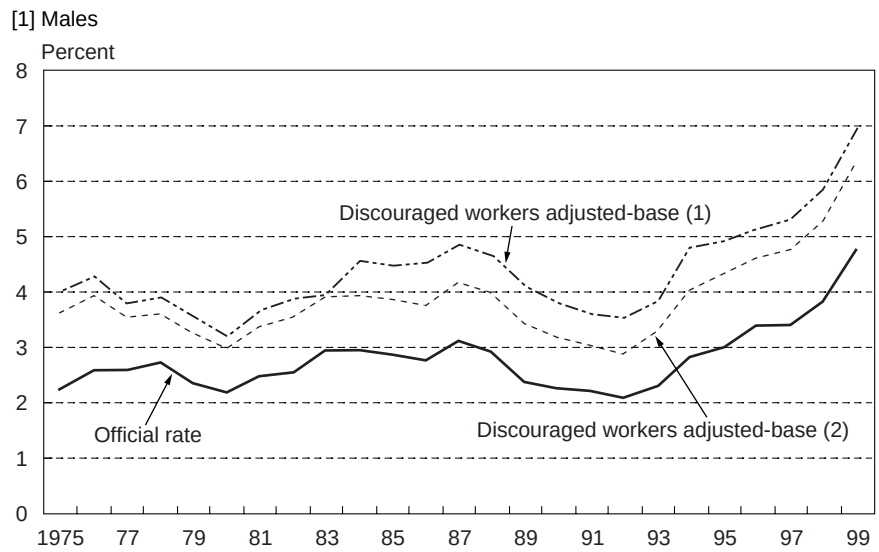
Figure 10 The Number of Discouraged Workers

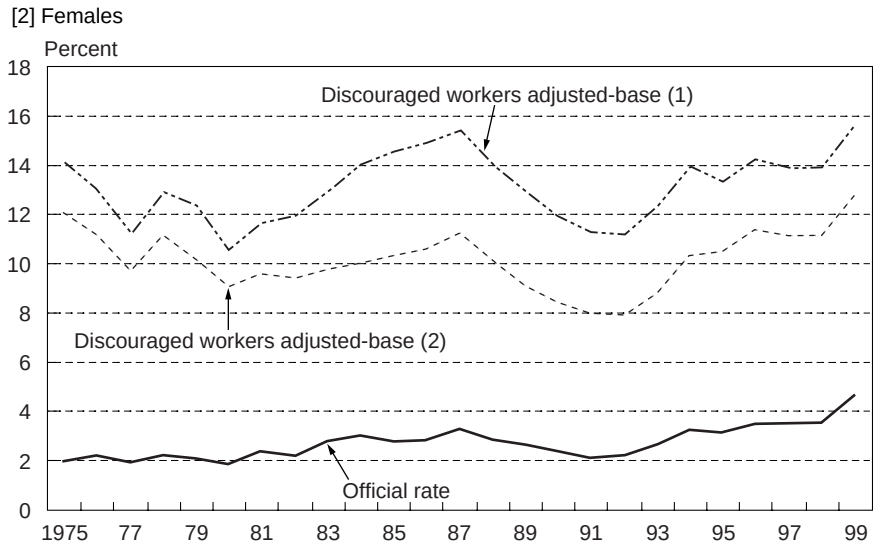
Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Report on the Special Survey of the Labour Force Survey*.

2. Observation 2: Women tend to remain in the labor force

First, in 1987, when the official unemployment was the highest in the 1980s, the female discouraged workers adjusted-base unemployment rate was 4.7 times higher than the official female unemployment rate. In 1999, the rate was just 3.4 times higher (for [2]-base, 3.5 times and 2.7 times in 1987 and 1999, respectively). The decrease in the gap between the potential unemployment rate and the official unemployment rate

Figure 11 Unemployment Rate, with Discouraged Workers Adjusted-Base





Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Report on the Special Survey of the Labour Force Survey.*

is to some degree consistent with the observation we saw in Section II.A that women tend to choose to remain in the labor force either working as part-time workers or searching for such jobs rather than withdraw from the labor market during recessions. However, there are still potentially 2.5 million women who are ready to flow into the labor market. This number is almost 60 percent of the increase in women's part-time employment in these 15 years, as we saw in Section II.A.

3. Observation 3: Newly discouraged workers are youths and older workers over 65

Second, if currently some of the formerly discouraged female workers are getting "undiscouraged," who is still discouraged? Table 2 shows the composition of the discouraged workers. For males, the numbers of both "head of household" and "other members of household" are increasing, but the ratio of the "head of the household" to the total seems to have been decreasing in the past 10 years, while the ratio of "other members of household" has been increasing. Looking at age composition, an increasing number can be seen to be in the young cohort under age 34 and the old cohort over age 65. Table 3 shows that older people between 55 and 64 are now less discouraged and are remaining in the labor force to find jobs, although male workers over the age of 65 who used to be in the "happily retired" group seem to be wanting jobs but are being discouraged. On the other hand, some youths who gave up searching and drifted out of the labor force have been steadily increasing in these 10 years.[24] These young discouraged male workers, not in school, now consist of 10 percent of the total.

4. Observation 4: Newly discouraged female workers are also youths and older workers

For females, the compositional shifts can also be seen in Table 2. Although "spouse" is still the largest component in female discouraged workers, the ratio to the total has been continuously declining in the past 10 years, while the ratio of "other members of household" is increasing. In addition, women aged 35 to 44 decreased substantially in the past decade; in the meantime, young women under age 34, many of whom are probably living with their parents, are increasing. An increasing number of female workers aged over 55 are probably the typical Japanese discouraged workers observed 15 or 20 years ago, those who had played the "buffer" role in the Japanese labor market.

5. Outlook

The recent changes in composition among discouraged workers imply that the conventional "buffer" for labor market adjustment is vanishing, and that the young cohort may instead be becoming the new buffer. Although a large number of discouraged workers still exists in the Japanese labor market, the qualitative nature of the potential labor force may be changing.

To this end, let us look at the answers of discouraged workers who were asked what type of job they were potentially seeking (Table 4). For both males and females, a substantial number of people replied that they wanted to work as part-time workers. This suggests that there is potentially a large number of people who will

24. Besides women, recent changes in the attitudes toward labor supply on the part of older workers and youths have also affected the Japanese labor market. Namely, many older workers, in their late 50s and in their 60s remain in the labor market searching for jobs. The serious unemployment situation facing older workers could be the reflection of a situation in which there is a mismatch between their productivity and their reservation wage based on the seniority-based wage system. The mismatch actually requires older workers to choose between low-wage jobs and unemployment. For young people, youth unemployment has increased more than 2.5 times from two decades ago, and now accounts for 40 percent of total unemployment. The unemployment of youths should not be worried about if they prefer leisure or if they are engaged in job searches, but incumbent employees might squeeze them out of traditional long-term employment opportunities. For further details regarding older workers and youths, see Tachibanaki, Fujiki, and Nakada (2000).

Table 2 Composition of Discouraged Workers by Family and Age

	Males				Females			
	Head of household	Spouse	Other members of household	Living alone	Head of household	Spouse	Other members of household	Living alone
1989	39 (60.00)	0 (0.00)	16 (24.62)	10 (15.38)	9 (3.17)	219 (77.11)	44 (15.49)	12 (4.23)
1990	32 (54.24)	0 (0.00)	20 (33.90)	7 (11.86)	9 (3.35)	204 (75.84)	40 (14.87)	16 (5.95)
1991	31 (56.36)	0 (0.00)	16 (29.09)	8 (14.55)	9 (3.44)	201 (76.72)	40 (15.27)	12 (4.58)
1992	29 (50.88)	0 (0.00)	15 (26.32)	13 (22.81)	9 (3.44)	200 (76.34)	40 (15.27)	13 (4.96)
1993	33 (53.23)	0 (0.00)	21 (33.87)	8 (12.90)	9 (3.17)	223 (78.52)	41 (14.44)	11 (3.87)
1994	41 (50.62)	0 (0.00)	25 (30.86)	15 (18.52)	9 (2.78)	242 (74.69)	55 (16.98)	18 (5.56)
1995	38 (48.72)	0 (0.00)	27 (34.62)	13 (16.67)	10 (3.25)	229 (74.35)	54 (17.53)	15 (4.87)
1996	37 (52.11)	0 (0.00)	23 (32.39)	11 (15.49)	10 (3.06)	244 (74.62)	54 (16.51)	19 (5.81)
1997	45 (56.96)	0 (0.00)	21 (26.58)	13 (16.46)	10 (3.11)	242 (75.16)	53 (16.46)	17 (5.28)
1998	46 (53.49)	0 (0.00)	27 (31.40)	13 (15.12)	10 (3.10)	238 (73.68)	57 (17.65)	18 (5.57)
1999	52 (54.74)	0 (0.00)	26 (27.37)	17 (17.89)	11 (3.16)	257 (73.85)	63 (18.10)	17 (4.89)

	Males							
	15–24 (total)	15–24 (in school)	15–24 (graduated)	25–34	35–44	45–54	55–64	Over 65
1989	19 (29.69)	18 (28.13)	1 (1.56)	1 (1.56)	1 (1.56)	1 (1.56)	21 (32.81)	21 (32.81)
1990	20 (33.33)	19 (31.67)	1 (1.67)	1 (1.67)	1 (1.67)	2 (3.33)	17 (28.33)	19 (31.67)
1991	17 (30.91)	15 (27.27)	2 (3.64)	2 (3.64)	0 (0.00)	1 (1.82)	16 (29.09)	19 (34.55)
1992	15 (26.32)	14 (24.56)	1 (1.75)	1 (1.75)	3 (5.26)	4 (7.02)	16 (28.07)	18 (31.58)
1993	23 (37.10)	21 (33.87)	2 (3.23)	1 (1.61)	1 (1.61)	1 (1.61)	15 (24.19)	21 (33.87)
1994	27 (32.93)	26 (31.71)	1 (1.22)	4 (4.88)	3 (3.66)	3 (3.66)	21 (25.61)	24 (29.27)
1995	30 (37.50)	27 (33.75)	3 (3.75)	4 (5.00)	3 (3.75)	2 (2.50)	18 (22.50)	23 (28.75)
1996	23 (31.94)	20 (27.78)	3 (4.17)	3 (4.17)	1 (1.39)	3 (4.17)	17 (23.61)	25 (34.72)
1997	24 (30.00)	21 (26.25)	3 (3.75)	2 (2.50)	1 (1.25)	2 (2.50)	22 (27.50)	29 (36.25)
1998	28 (32.94)	25 (29.41)	3 (3.53)	3 (3.53)	1 (1.18)	2 (2.35)	20 (23.53)	31 (36.47)
1999	30 (31.58)	26 (27.37)	4 (4.21)	5 (5.26)	1 (1.05)	2 (2.11)	21 (22.11)	36 (37.89)
	Females							
	15–24 (total)	15–24 (in school)	15–24 (graduated)	25–34	35–44	45–54	55–64	Over 65
1989	23 (8.10)	13 (4.58)	10 (3.52)	54 (19.01)	91 (32.04)	60 (21.13)	43 (15.14)	13 (4.58)
1990	23 (8.52)	15 (5.56)	8 (2.96)	49 (18.15)	81 (30.00)	55 (20.37)	47 (17.41)	15 (5.56)
1991	25 (9.51)	14 (5.32)	11 (4.18)	48 (18.25)	81 (30.80)	54 (20.53)	42 (15.97)	13 (4.94)
1992	21 (8.02)	13 (4.96)	8 (3.05)	52 (19.85)	80 (30.53)	53 (20.23)	43 (16.41)	13 (4.96)
1993	24 (8.45)	15 (5.28)	9 (3.17)	52 (18.31)	88 (30.99)	59 (20.77)	46 (16.20)	15 (5.28)
1994	35 (10.77)	22 (6.77)	13 (4.00)	63 (19.38)	87 (26.77)	69 (21.23)	57 (17.54)	14 (4.31)
1995	34 (11.04)	21 (6.82)	13 (4.22)	56 (18.18)	88 (28.57)	66 (21.43)	52 (16.88)	12 (3.90)
1996	35 (10.67)	24 (7.32)	11 (3.35)	63 (19.21)	84 (25.61)	74 (22.56)	55 (16.77)	17 (5.18)
1997	29 (9.01)	19 (5.90)	10 (3.11)	61 (18.94)	82 (25.47)	69 (21.43)	62 (19.25)	19 (5.90)
1998	35 (10.84)	24 (7.43)	11 (3.41)	60 (18.58)	80 (24.77)	69 (21.36)	60 (18.58)	19 (5.88)
1999	38 (10.92)	25 (7.18)	13 (3.74)	64 (18.39)	81 (23.28)	75 (21.55)	69 (19.83)	21 (6.03)

Note: Ten thousand people. The ratio to the total is shown in parentheses.
Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Report on the Special Survey of the Labour Force Survey*.

Table 3 Unemployed and Discouraged Workers among Those Aged 55 and Above

	Unemployed (10,000)				Unemployment rate (percent)			
	Official number		Discouraged workers		Official number		Discouraged workers adjusted-base	
	Males 55 to 64	Males 65 and over	Males 55 to 64	Males 65 and over	Males 55 to 64	Males 65 and over	Males 55 to 64	Males 65 and over
1989	21.3	3.2	21.0	21.0	3.8	1.5	7.2	10.6
1990	19.3	2.8	17.0	19.0	3.3	1.2	6.0	9.0
1991	18.0	3.7	16.0	19.0	3.0	1.5	5.4	8.7
1992	20.6	3.5	16.0	18.0	3.3	1.4	5.7	8.0
1993	25.3	4.3	15.0	21.0	4.0	1.6	6.3	8.9
1994	29.4	4.7	21.0	24.0	4.7	1.7	7.8	9.7
1995	30.5	5.8	18.0	23.0	4.8	2.1	7.4	9.6
1996	33.0	5.4	17.0	25.0	5.1	1.9	7.5	9.7
1997	35.1	6.3	22.0	29.0	5.3	2.1	8.3	10.7
1998	43.8	8.6	20.0	31.0	6.5	2.8	9.2	11.8
1999	46.0	9.0	21.0	36.0	6.7	2.9	9.5	13.0

Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Report on the Special Survey of the Labour Force Survey.*

Table 4 Employment Type Desired by Discouraged Workers

	Males (percent)				
	Full-time	Part-time	Self-employed	Piece-worker	Other
1996	18.87	53.77	5.66	2.83	18.87
1997	19.28	56.63	2.41	4.82	16.87
1998	18.18	60.23	3.41	4.55	13.64
1999	20.41	58.16	3.06	3.06	15.31
	Females (percent)				
	Full-time	Part-time	Self-employed	Piece-worker	Other
1996	12.47	64.72	2.92	13.00	6.90
1997	11.24	67.44	2.33	13.18	5.81
1998	10.04	69.11	1.54	13.51	5.79
1999	12.88	66.44	2.03	13.56	5.08

Source: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Report on the Special Survey of the Labour Force Survey*.

take part-time jobs if they are offered. If most of them start flowing into the labor force to seek low-wage part-time jobs, the macroeconomic consequence may be quite different from what we have expected based on past experience.

6. Aggregate implications

The role of discouraged workers and part-time workers is an important issue not only in Japan but also in the United States. For example, the United Auto Workers (1996) argue that a larger share of the labor force is working in part-time and temporary positions, hence the problem of structural unemployment may be more severe than is suggested by the official unemployment rate statistics. However, as Poole and Wall (2000) point out, after four years of continuous economic growth, not only have more people become employed, but also more people who had been choosing to stay

out of the labor force flew into the labor market and obtained jobs. The second factor is generally ignored, while it is also important to consider the transformation of the labor market.

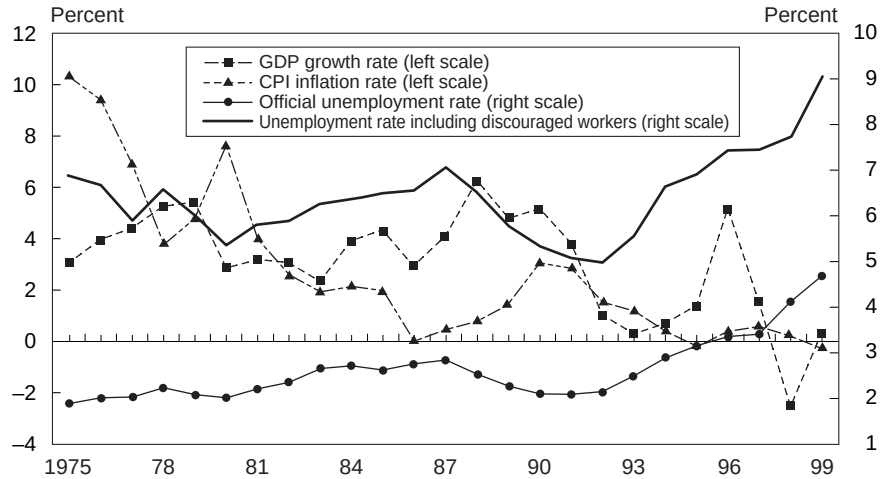
We see the recent change in the number of part-time female workers and discouraged workers in Japan in Section II.A and B. We may also safely suppose that, given the current institutional framework, most Japanese part-time female workers would not dare to work longer hours to increase their wage income at the sacrifice of their favorable tax treatment. What are the aggregate implications when we take these factors into account?

First, the fall and rise in the unemployment rate including discouraged workers (discouraged workers adjusted-base [2]) is faster compared with the official rate, especially during the late 1980s to the early 1990s (Figure 12). Therefore, the broader unemployment rate could be useful for understanding the trend of Japanese output, as Poole and Wall (2000) stressed.[25]

Second, regarding the statistical relationship between unemployment and aggregate output, once we take into account the effects of discouraged workers, given the technological progress, we would expect the Okun coefficients to be relatively small in size.

For example, the ordinary least square regression of the annual log employment rate computed from the official unemployment rate on a constant term, a time trend, and log GDP yields estimates of Okun coefficients ranging from 7.3 to 10.1 using

Figure 12 GDP, Inflation, and Unemployment in Japan



Sources: Management and Coordination Agency, Statistics Bureau and Statistics Center, *Labour Force Survey, Report on the Special Survey of the Labour Force Survey* and *Consumer Price Index*; Economic Planning Agency, *Annual Report on National Accounts*.

25. Unfortunately, the figures for discouraged workers are calculated by the data that are collected only once a year in February. Therefore, current statistics are not sufficient for the sake of the conduct of monetary policy for the immediate future.

the sample period of 1981–99, as can be seen in the second column in Table 5.[26] The ordinary least square regressions using the broader unemployment rate (discouraged workers adjusted-base [2]) as the independent variable yields estimates of Okun coefficients ranging from 4.2 to 5.8 using the sample period of 1981–99, as can be seen in the fourth column in Table 5. The example shows that the effects of the discouraged workers are important for judging the levels and the relevant variables for estimating the available labor supply and therefore potential output.[27]

Table 5 Japanese Okun Coefficients

Sample periods	Annual data, official rate	Quarterly data, official rate	Annual data with discouraged workers	Yoshikawa (2000)	Kurosaka (1999)	Kurosaka and Hamada (1982)	Hamada and Kurosaka (1984)
1953–65						15.24	18.00
1956–65	18.04+						
1965–73	42.35*	42.56				40.32	
1965–74	77.65*	66.18					32.00
1974–80	7.72	10.86*	n.a.			5.38	
1974–82	20.19	23.89	7.80				13.00
1981–95	**10.05**	10.12	**5.62**	10.50			
1980–98	**9.05**	9.13	**5.78**		10.50		
1981–99	**8.29**	8.45	**5.22**				
1986–99	**7.34**	7.59	**4.19**				

III. Structural Reforms

Chapter III examines the direction of several structural reforms in the labor market, based on the discussions in Chapter II. It is true that in the long run monetary policy cannot and should not be used as a substitute for necessary structural reforms in the labor market. However, central bankers must correctly address structural problems in the labor market, which could be obstacles in the achievement of price stability and financial stability (Yamaguchi [1999]). More specifically, we point out the necessity of transforming the regulations in the labor markets to meet the current situation of the labor market, the government job creation program, and work-sharing. We will also touch on the public pension system and corporate pension schemes.

26. Those results are consistent with the estimates obtained from the quarterly data shown in the third column, and the results of Yoshikawa (2000) and Kurosaka (1999).
27. The qualitative nature of our results is also consistent with the findings of Tachibanaki and Sakurai (1991). They use the sample period of 1963–86, and find that the Okun coefficient with discouraged workers takes the value of 31.3 while the Okun coefficient using official figures takes the value of 67.6, although Tachibanaki and Sakurai (1991) estimate the number of discouraged workers using different statistical methods. Readers might wonder if the difference between the Okun coefficients obtained from official figures and those obtained from the broader unemployment rate are statistically significant. Using the standard errors of the regression coefficients, the upper bound of the confidence interval of the former and the lower bound of the confidence interval of the latter are pretty close.

A. Deregulation in the Labor Market

As stated in Chapter I, the mismatch in labor allocation is probably one of the most crucial reasons for the high level of unemployment in Japan. One of the causes for the discrepancy arises from the fact that some regulations on the labor market and the industrial relations system restrict the degree of labor mobility that minimizes the mismatch. For example, there are regulations governing how private firms conduct job advertising, job opening, or job allocation. Various kinds of regulations and some other institutional factors prohibit employers and workers from having efficient labor allocation and mobility. Although a deregulation process is currently under way, it is desirable to strengthen it further in order to secure greater mobility of labor.

B. Job Creation

One of the most obvious differences between Japan and the United States regarding the working of the labor market is the lower rate of job creation and job destruction in the former than in the latter, as shown by Genda (1999) in the spirit of Davis, Haltiwanger, and Schuh (1996). There are various reasons why Japan shows such a lower rate, besides the strict employment protection policy stated in Section II.A.6. One is inefficient access to the capital market, and the other is the lack of entrepreneurship. It is certainly desirable to have a situation such that the Japanese economy creates more firms, and thus more jobs. It is said that there are plenty of business opportunities in the fields of care services, health, information technology, finance, and so on. Stronger entrepreneurship and easy access to capital are highly desirable.

C. Efficient Skills Training

Firms have been responsible for providing employees with job training to raise their skill levels and their productivity. Japanese firms are no longer able to provide all the kinds of training they used to provide for the following two reasons. First, they do not have sufficient funds because of the recent serious recession. Second, there is no strong motivation for firms to commit themselves to training their employees, partly because job training provided by employers and skills accumulated there may become rapidly obsolete during a period in which technology is changing drastically, and partly because there is a fear that trained employees may leave their firms in the future.

The public sector must play an important role in providing job seekers or the unemployed with job training in these circumstances. There are various institutions, such as professional training schools or centers and universities, which can organize the preparation of job training. Employees and job seekers who desire to receive such training have to share the training costs with the contribution from public funds.

D. Employment Insurance

The Japanese employment insurance system has until recently provided only a small amount of unemployment benefits while accumulating a huge quantity of contributions. However, the recent increase in the number of unemployed eligible to obtain unemployment benefits led the employment insurance system into severe financial difficulties, particularly after 1994. More specifically, the current Japanese employment insurance system bears some relationship to the public pension system, because

some of the conditions determining the payment of employment benefits are related to the age of the workers concerned. In addition, the Japanese employment insurance system does not cover most female part-time workers, and those who have short work experience, such as those of the younger generation. Under such circumstances, Tachibanaki (1999) suggests the following reforms.

First, more workers should join the employment insurance system. For some reason, at most 30 percent of unemployed people receive unemployment benefits. Perhaps some of those who do not receive benefits must be female part-time workers, whose working experience is less than one year or who work less than 30 hours a week. Second, the levels and the terms of benefits could be more benevolent, if social agreement on this could be established. This is because unemployment benefits constitute the major proportion of earnings for unemployed people, together with savings.

Nonetheless, under the current system, more benevolent unemployment benefits require higher contributions from both firms and workers. Some firms find it too costly to hire full-time workers given the higher contributions for unemployment benefits; therefore the introduction of a more benevolent unemployment system could increase the number of unemployed, or induce firms to hire more part-time workers. Moreover, the moral hazard of unemployment could be serious under a benevolent unemployment benefit system.

We need to have further discussion regarding the optimal mechanism design of sustainable and efficient Japanese employment insurance.

E. Work-Sharing and/or Wage-Sharing

One of the most useful policies that prevents the rate of unemployment from increasing is the introduction of a strategy of work-sharing and/or wage sharing, as the Netherlands[28] has successfully used to lower the rate of unemployment. Decreasing total working hours per employee is likely to raise the demand for employment, and thus is effective in lowering the rate of unemployment. This policy can be derived by implication from the insider-outsider theory à la Lindbeck and Snower (1988) in the sense that the insider helps the outsider.[29]

One delicate issue is the adoption of a policy that lowers the per-hour wage rate at the same time as increasing the demand for labor. This wage-sharing requires the consensus of all concerned agents such as employers, employees (both union members and non-union members), and possibly the government. This policy may

28. In the Netherlands, more than half of the total employed are part-time workers. The growth of part-time jobs in the Netherlands has a lot to do with the country's employment program, which has encouraged work-sharing among workers. The program, which successfully reduced unemployment there, is a combination of welfare reform and fiscal conservatism with job creation and maintenance of overall social security, according to Visser and Hemerijk (1997). Among those reforms, regarding the job creation for part-time workers, Dutch people agree on equal treatment of part-time workers regarding wages per hour, the social security system, legal safeguards, and period of employment. In the case of Japan, so far there is no such agreement regarding equal treatment of part-time workers and full-time workers. Therefore, the increase in the number of part-time workers in Japan should not be compared without qualification to what has happened in the Netherlands.
29. During an economic boom following the implementation of work-sharing, shorter working hours, if taken for granted, might put upward pressure on nominal wages. Therefore, work-sharing should be encouraged with broad efforts to improve the flexibility of the labor market in general. We owe this insight to Mr. Job Swank.

be contradictory to the implication of the efficiency wage hypothesis in terms of Akerlof and Yellen (1986) in the sense that regular full-time workers have to sacrifice their relatively higher wages. Although it is not so easy to reach such an agreement on wage-sharing partly because the wage-setting framework is currently fairly decentralized in Japan and partly because skilled workers may refuse a decrease in their wages, there are signs of hope among these concerned agents.

F. Public Pension System[30]

The current Japanese pay-as-you-go defined benefit public pension system faces severe financial difficulty due to slower economic growth with a declining and aging population. In the long run, the Japanese public pension system must be reformed in a consistent manner with age-free, gender-free safety nets in the labor market, which will help individuals to smooth their lifetime consumption schedules intertemporally. As we have documented in Section II.A, the current Japanese public pension system possesses some features that might have reduced working hours for homemakers. In addition, young Japanese are very skeptical about the sustainability of a national pension system.

On March 28, 2000, the 1999 pension reform plan was approved by the Diet. The major features are as follows. First, earnings-related benefits are to be reduced by 5 percent. Second, both the flat-rate basic benefits and the earnings-related pension benefits once paid are to be CPI-indexed after age 65 from fiscal 2000. Third, the normal pensionable age for earnings-related old-age benefits is to be increased step by step from age 60 to 65 for men from fiscal 2013 to 2025. According to Takayama (1999), the above programs specified in this law would reduce aggregate pension benefits by 20 percent by 2025 (see Takayama [1999] for the details for the 1999 pension reform plan). However, the question of the exemption from the government-mandated pension for typical homemakers with relatively small incomes has not been resolved by this reform. Moreover, there is still no consensus on how to fund the additional government expenditures needed to provide the basic benefits of the Japanese public pension by fiscal 2004.[31] Hence, this could be one of the potential risks regarding lifetime income for Japanese workers.

G. Corporate Pension Schemes[32]

The Japanese pension scheme is managed on the basis of a defined benefit plan rather than a defined contribution plan. Moreover, the expected deferral interest rate for employee pension funds was regulated at 5.5 percent until 1996. Therefore, in the era of low nominal interest rates in the late 1990s, many employee pension funds

30. This section is based on Takayama (1999).
31. In December 1998, the Japanese government decided to keep social security contribution rates for pensions constant from fiscal 1999, because the increase in the contribution rate for social security became very difficult politically. This government decision presumed that the Japanese general account should cover 50 percent (currently 33 percent) of basic benefits of the Japanese public pension by fiscal 2004. According to Takayama (1999), if increased general revenue is to be financed by the earmarked consumption-based tax, a 0.8 percentage point increase in the consumption tax rate (currently 5 percent) will be necessary.
32. This section is based on Tachibanaki and Taiten (1997), Kawamura (1999), and Japan Institute of Labour (1999).

were forced to cut their payments, or even worse, were dissolved since they could not accumulate enough funds to meet the expected deferral interest rate. There must have been serious deficiencies in their reserves, although firms are not required to report deficiencies in reserves.

However, a change in accounting standards from March 2001 requires firms not only to report their total liability for pension and lump-sum retirement payments but also to correct any shortfall in their reserve funds within 15 years. The shortfall in such reserves of listed companies now totals several tens of trillions of yen, and companies will need to respond urgently to this problem (Japan Institute of Labour [1999]).

As we stated before, given the fact that even large Japanese firms are not free from bankruptcy, many employees feel that their lump-sum retirement payment may not be risk free. Moreover, there are many independent systems of employee pension funds, which lack the portability of pension programs.

Therefore, portability between different corporate pension funds and a shift from defined benefit plans to defined contribution plans might be necessary for the sake of employees to be able to hedge their risks regarding earnings, losses, or changes in their workplace. Moreover, a division of labor between the public pension system and the corporate pension scheme should be reconsidered. In this context, the development of a Japanese version of the 401(k) plan should be observed carefully.

IV. Conclusion and Directions for Future Research

In this paper, we have considered some structural issues regarding the Japanese labor market from the viewpoint of the part-time workers (especially women) and the discouraged workers. The opinions and evaluations regarding those structural issues may differ depending on one's gender, age, occupation, and family background.

From the viewpoint of the core Japanese workers, typically full-time male workers who have accumulated firm-specific skills through on-the-job training, their relatively favorable employment opportunities may not be sustained during the current recession, and once they lose their position they must stay in the secondary labor market forever. Such workers would consider that the Japanese employment environment is now heading for an era of bipolarization. From the viewpoint of other Japanese workers, however, styles of jobs such as part-time work, temporary work, and even work-sharing could be very flexible and attractive employment opportunities for all Japanese workers, including "core" workers. A variety of job opportunities could be consistent with the efficient division of labor and equity of working environment, if skills training, the unemployment insurance system, tax systems, and various safety nets such as the social security systems are not specific to workplace, gender, or age. The long-term goals of labor market reform to prepare for an era of low birthrate and small workforce should produce a variety of employment opportunities with some agreed sense of equity and efficiency irrespective of one's gender, age, and occupation.

Although both labor economists and central bankers cannot identify the structural changes in the labor market on a real-time basis, they should try to address the nature of structural changes in the labor market and their policy implications as best as they can. From the central banker's view, it will be useful to think about whether to reconsider the general consensus regarding the unemployment and inflation trade-off in Japan that "the Japanese Phillips curve was very steep," at least by the year 1990. As we saw in chapters I and II, factors such as low matching efficiency, high job reallocation, and changes in peoples' labor supplies may have shifted the Japanese Beveridge curve upward recently. If our interpretation is correct, the natural rate of unemployment has itself shifted upward, and there is no stable short-run Phillips curve. More effort is needed to address the structural issues that could affect the conduct of monetary policy.

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Comment

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This was a very interesting paper, which I greatly enjoyed reading. It contains a wealth of detail about structural changes in the Japanese labor market, along with some analysis of the possible implications for monetary policy. The paper concludes with some suggestions for structural reform in the labor market.

The first part of the paper is primarily descriptive, highlighting trends affecting non-core workers, mainly female part-time workers. The recent behavior of these groups has contributed to an overall structural shift in the labor market. The real strength of the paper is the way in which it draws connections among these changes

and weaves them into a pattern with potentially significant implications for labor market behavior.

The main point is that these changes suggest a shift away from lifetime employment to a more flexible system. This is in some ways a good thing, as a more flexible labor market may be better suited for a rapidly changing world. However, it also has a downside in the form of low-wage, low-security jobs for women and difficulties for laid-off workers in finding new jobs. The structural shifts are also likely to result in a higher equilibrium unemployment rate.

One criticism of the paper is that it does not make clear how important these structural shifts are in a quantitative sense. We know that much of the recent rise in unemployment is cyclical. Although the paper suggests that some is also structural, it does not attempt to quantify how much.

An Okun's Law equation was estimated with both the official unemployment rate and a broader unemployment rate that includes discouraged workers. Since many of the changes described in the earlier part of the paper involve movements between the official labor force and the pool of discouraged workers, the broader series might offer both a more consistent time series as well as a potentially more accurate measure of current labor market pressures. The coefficient estimated using the broader measure does appear more plausible, ranging from 4 to 6 in the various specifications, compared with estimates of 7 to 10 derived using the official measure. However, it is not clear that this is not just a scaling effect, as a chart of the two series shows that they move closely together over the cycle. The broader measure is more cyclical, but shows similar timing in terms of upturns and downturns. The fact that there is a difference in amplitude over the cycle does not necessarily mean that the broader series contains more information. In any case, in order to translate information on unemployment into an estimate of the output gap, it is necessary to have an estimate of the equilibrium unemployment rate. It might thus have been useful for the authors to have used their broader unemployment rate to estimate a NAIRU.

The final part of the paper, on structural reform, was a very comprehensive review of measures needed, some of which are currently underway. Some reforms that seem to be of particular importance are changes to improve projections for the financial status of the public pension system as well as portability of corporate pensions.

In summary, the paper contains a great deal of valuable information and analysis, although it would probably be enhanced by an attempt to estimate a Japanese NAIRU using the broader measure of unemployment. I must admit, though, that I was a little disappointed to find that the answer to the question posed in the title is that we need to wait 10 to 15 years to know.

Comment

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This paper is a good analysis of current problems in the Japanese labor market, which are often overlooked by observers since the unemployment rate is still low by international standards. Before looking at the paper, I would like to place it more fully in the context of this conference, which is monetary policy under low inflation and subject to deflationary shocks.

Concern with labor markets under these conditions usually focuses on presumed rigidities of nominal wages, which might in turn lead to rising real wages as the price level falls and to an unfavorable output/price split. However, at very low inflation rates nominal wage rigidity could well decline over time. In Japan, though, this basic assumption might be misplaced. In the OECD area, Japan has the highest level of nominal wage flexibility (the second being Austria, which is also characterized by a steep age/wage profile), and indeed it is this flexibility that is contributing to the current recovery of profits and of investment. With such nominal wage flexibility, a deflationary shock could thus at first lead to a greater movement in prices than in output, which, under some conditions, could lead to a deflationary spiral and to an amplification of the shock. Under these conditions—and also a floating exchange rate—it is even more important for monetary policy to provide the nominal anchor for the economy in the event of a deflationary shock. In operational terms, this would mean boosting the money supply and acknowledging that the interest rate may be an unreliable indicator at low levels of inflation.

Turning to the paper itself, I fully support the analysis by the authors of the impact of the tax and social security mechanism on labor supply. Indeed, while inflation often reduces the impact on labor supply of benefit ceilings (which introduce high marginal effective tax rates on labor activity), deflation may make them even more binding. The authors make a good case that the potential labor supply in Japan is much greater than the labor force participation and current unemployment rate statistics would indicate. This is important, since it implies that some estimates of potential growth might be too pessimistic. On the other hand, the current output gap would also be greater, which would need to be taken into account in formulating monetary policy at any time—and not just at times of low inflation.

In addition, the authors point out that the structure of the labor market might well have other impacts on the information content of important statistics, such as the wage rate. This warning needs to be kept in mind following the experience of the Bank of England in using an index of earnings, which proved to be severely distorted. However, the Bank of Japan faces even greater data problems than this, given the state of quarterly GDP estimates while price indices are also subject to perhaps even greater errors than wage data.

The presentation of the labor market as dominated by insiders and increasingly bipolar I find convincing, but what does this mean for monetary policy? The authors argue that the extended measure of unemployment is a better predictor of inflation

than more conventional measures, but here I am less convinced and would like to see more econometric work on the NAIRU. In passing, I would add that normal methods of estimating the NAIRU in Japan yield mixed results. If they are right, then their result would imply that outsiders do in fact have a lot of market power, which would be hard to reconcile with the evident importance of insiders. The wider measure of unemployment could, however, merely be a better indicator of shocks other than included variables and, as noted above, insiders do respond to such shocks in order to protect their lifetime positions.

Clearly, the monetary authorities and other policy advising institutions should remain aware of the changing nature of the labor market and be prepared to incorporate these findings into their judgments about potential growth, the output gap, and the assumptions about the NAIRU.

General Discussion

Toshiaki Tachibanaki agreed with Jane T. Haltmaier on the desirability of distinguishing cyclical factors from structural factors in evaluating the movement of the unemployment rate including discouraged workers. Hiroshi Fujiki and Sachiko K. Nakada both commented that research on the relationship between the labor market and monetary policy has only just begun in Japan and expressed interest in measuring the natural unemployment rate and NAIRU as prime items on the agenda for future study. In relation to this, Charles Collyns stressed the importance of capturing the magnitude of labor hoarding as information for conducting proper monetary policy. Shin-ichi Fukuda, however, pointed out that while the Japanese unemployment rate had experienced only very small fluctuations in the past and its correlation to business cycles was weak, fluctuations in the unemployment rate appeared to have become large in the 1990s and reflected more sensitively the degree of cyclical tightness of the supply-demand balance in the labor market. On John B. Taylor's question about the relationship between nominal wage elasticity and the *shunto* (spring wage offensive), Tachibanaki responded that while there was a close relationship between wage elasticity and the *shunto*, the role of the latter was gradually waning.

On the importance of government skills training raised in the paper, Jean Hilgers doubted whether there would be room for such programs given Japan's enormous fiscal deficits. Fujiki said that it was important as a measure of the reform of fiscal spending that the content of fiscal outlays be reviewed in order to pave the way to a more effective use of taxpayers' money. Job Swank presented the Netherlands' experience and maintained that work sharing could be an effective program when the unemployment rate is high; however, as the economy begins to recover and labor markets become tighter, it would be hard to return from shortened working hours to normal hours, and wages would tend to rise. He encouraged participants to be aware of these side effects, and of the need to promote structural reforms that would give more flexibility to the labor market.