Impediments to the Productive Employment of Labor in Japan

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Abstract

We examine a number of personnel practices, laws and regulations that lower the supply of labor in the Japanese economy. Broadly speaking, there are two kinds of impediments, those that restrict the movement of labor between firms, and those that discourage women from participating to a greater extent. Using other OECD countries and especially the United States as a benchmark, we estimate that removal of these barriers would increase the productive labor supply in Japan by some 13 to 18 percent and thus could raise the potential growth rate of the Japanese economy by roughly 1% per annum over a ten-year period.

Keywords: labor mobility, gender
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1. Introduction

Japanese labor market institutions, especially the personnel management system have been given a fair share of the credit for Japan's enviable growth performance after the Second World War. The stable employment system with strong job protection, enterprise-based unionism and intensive on-the-job training (OJT) that promoted greater productivity are seen as one of the factors that allowed Japan to import foreign technology from other advanced countries so rapidly. High levels of training along with group-oriented activities have also been linked to the high quality of the Japanese goods that reached export markets in the 1970s and 1980s. Indeed many Japanese workplace practices such as quality-control circles have been adopted to good effect in the United States and Europe. On the macroeconomic side, the coordinated but decentralized bargaining system is seen as providing for the wage flexibility that allowed Japan to adjust to supply shocks such as the two oil crises more rapidly than most other OECD economies. Finally, the egalitarian nature of the compensation system has also been credited with providing widespread prosperity that underlies the domestic demand for the products of the workplace.

The prolonged slowdown of the 1990s has led many economists to question whether the institutions that were appropriate for the past are as wholesome for the health of the contemporary economy. The aging of the workforce makes it difficult to maintain a system where rewards are delayed and provided through promotion rather than cash compensation. The poor development of the external labor market has also impeded the movement of experienced and knowledgeable employees to companies where they might be more valuable. The rise in the unemployment rate since 1998 from around 3% to almost 6% has also changed views about the macroeconomic role played by the labor market. The coordinated bargaining system under conditions of weak demand now makes it difficult for employees to increase their incomes and thereby may reduce domestic demand. Wage restraint is also contributing to the deflation that is currently making difficulties for the effective use of monetary policy to revive economic growth. Strong job protection makes it difficult for companies to restructure their activities effectively in response to the changing external environment. The difficulty and cost of firing workers means that struggling companies are less likely to improve their balance sheets. The government, lacking confidence in the external labor market to absorb the unemployed may have been reluctant to push for more drastic resolution of the bad debt problem that hampers the financial system.

In this paper we more narrowly address impediments to growth on the labor supply side that are affecting the market. The first of these are the barriers to inter-firm mobility for Japanese career employees, especially older men. A second impediment is the difficulty that Japanese women face in developing meaningful careers after taking time off for raising young children. This depresses the labor force participation of women, especially the middle-aged who have high educational attainment. Both of these issues are closely tied to the Japanese personnel management system and the legal framework that supports it. A final impediment to growth on the labor supply side is the reluctance to accept large numbers of immigrants to Japan. The population faces certain decline over the next fifty years without immigration and this serves to lower expectations of growth in GDP and investment demand, although the implications for GNP may be less certain (Dekle, 2000). We do not analyze the reluctance to accept immigrants in this paper, but take it as a given. Although the situation may change in the future, the outlook for the short-medium run is that Japan will continue with its existing policies. One other aspect of labor supply that we do not address in this paper is the way in which the unemployment benefit system may induce individuals to remain unemployed. We also do not examine the way in which retirement benefits in Japan may encourage earlier retirement. The reason for this (other than shortage of space) is that with respect to the

unemployment rate and the rates of participation of those over the age of 60, Japan is doing as well, if not better at using potential labor resources than other countries in the OECD.

In the next section of the paper we provide a brief outline of the state of Japanese labor in the year 2001, focusing on the extent to which institutions long seen as characteristic of the Japanese labor market have been changing. Section 3 then looks at the impediments to mobility of career employees (primarily men) in Japan that may be affecting growth. Section 4 examines the reasons why female labor force participation may be lower than the levels seen in the United States. Section 5 attempts to give a quantitative perspective to the problems examined in Sections 3 and 4 and this is followed by a concluding section.

2. The Japanese employment system in 2000

Japanese labor markets and institutions have been affected by the slump in growth of the 1990s, but many of the main features remain intact. Widely noted aspects of the "Japanese Model" such as enterprise-based unionism, low inter-firm mobility, low unemployment, compensation within gender groups that is highly determined by age and seniority, large gender gaps in pay and promotions and widespread use of mandatory retirement systems have not dissolved in the face of the slowdown, despite press reports. Evidence that the system has only seen minor change includes the following:

1. Unions remain enterprise based although union density has fallen steadily from around 35% at the time of the first oil shock to 21% today.
2. Job tenure for full-time regular employees remains high (Chuma, 1997) and may even be increasing for some age groups.
3. Inter-firm mobility rates remain virtually unchanged (Rebick, 2000) although the number of employees forced to move because of bankruptcies has risen since the Asian economic crisis of 1998.
4. The unemployment rate, while high by Japanese standards remains lower than the OECD average (5.4% and 6.9% respectively in November 2001, OECD standardized rates).
5. Although performance- and results-related pay are becoming more important components of the compensation arrangements in Japanese firms, there is still a close relationship between age (and to a lesser extent seniority) and pay. Japanese age-wage profiles are steep mainly because blue-collar workers as well as white-collar workers see large increases in pay with age and seniority. With the exception of the managerial class of employees (see below), the variance of pay within different age groups remains stable (Genda and Rebick, 2000). All of this is testimony to the continuing presence of enterprise unions and the influence of the large, unionized firms on wage-setting practices outside the organized sector.
6. The gender pay gap has narrowed for full-time employees (especially the young), but the gap in hourly pay between part-time female workers and male full-time employees remains large. Since some 40% of women work part-time, the overall gender gap remains large and gender remains the single most important determinant of earnings (Tachibanaki 1998). Tachibanaki (1998) in a survey of eight OECD countries including Korea finds that only in Japan is gender, rather than occupation, age, or industry the single most important determinant of wages.
7. Japan has relatively few women in senior management or director positions compared with the US or UK.

Despite these observations, there are a number of ways in which the Japanese labor market is changing, and some of these changes may gradually change our view of the "Japanese model". Furthermore, most of these changes appear to be permanent, rather than temporary accommodations to economic conditions or the need for restructuring.

1. The proportion of individuals working as part-time or contract workers is increasing. In particular the percentage of employees working part-time has been rising steadily since the 1960s, reaching highs of 39% of women and 13% of men in 1999 (OECD, 2001). The number of temporary agency workers remains low at about 1% of the workforce, but has been increasing rapidly with liberalization of the laws regulating agency work.
2. There has been a decline in the family-based enterprise sector. Some of the women who in the past would have been family workers, or men who in the past would have become self-employed after mandatory retirement are now part of the part-time employee labor force. Although some of this trend may be due to small businesses suffering during the 1990s, much of it is due to fundamental restructuring of the Japanese economy that is taking place.
3. Managerial compensation is becoming much more sensitive to various measures of performance than in the past. This is not only shown by surveys across companies but also by the fact that the variance of pay of middle-aged men with higher education degrees has been increasing over the past 15 years (Genda and Rebick).
4. Attitudes are changing, especially among young people. Although the rates of separation for young workers have not increased that much, most young employees say that they expect to change jobs in the future before mandatory retirement. Young workers are actually quitting their jobs at an increasing rate despite the poor state of the economy. In 1999, 32 % of university graduates, and 47 percent of high-school graduates quit their first jobs within three years, an increase since 1996 (MOL 1999).
5. In a related development, there is an increasing level of part-time work among the young. These workers, often referred to as freeters may be finding it difficult to find desirable full-time jobs in the current economic climate (Genda, 2001). They may also feel less pressured into taking jobs that they don't really want because of greater affluence.

3. Barriers to mobility between firms in Japan:

There are many barriers to mobility in the Japanese labor market including the difficulties companies have in firing workers and problems workers have in finding jobs to move to. Table 1 gives some evidence from a survey by Recruit of individuals who would like to change jobs but are finding it difficult to do so.

TABLE 1 Principal reasons why workers who want to change jobs are unable to do so

Reasons	%
I exceed the age limit of the job postings	40.8
My work experience is not transferable to the general society	23.4
Returns to seniority will be lost and I will suffer wage loss	21.8
I do not know how to look for jobs	19.1
I will lose personal contacts established through my work	14.1
I will suffer loss in pensions	13.5

[SOURCE: Recruit 2000]

This list only gives a one-sided view of the problems in the labor market, however, as there are additional problems on the employer side and we begin with one of these.

a) Worker protection

The most obvious problem facing companies burdened with redundant workers is the difficulty in firing workers. There is a long-standing agreement between management and labor in Japan that allows management to move workers around in the company (or even to loan workers to other companies) in return for the guarantee of employment until the age of

mandatory retirement (Gordon, 1985,1998) This guarantee has recently been altered in the sense that employees may be sent out to other companies prior to mandatory retirement provided that the guarantee of employment still holds. The original company in this case will in most cases supplement the salary of the employee to make sure that there are no financial losses to the employee from the move (Rebick, 1993). Although this is seen as a commitment by management to labor, which might be upheld in order to maintain the reputation of the employer (and industrial peace), it is also backed up by Japanese case law.[1] Japanese labor law does not, in itself, provide guarantees to employees, except that employers must give 30 days notice of dismissals. The Japanese constitution, however, enshrines the individuals right to work (article 27) and the right to a minimum standard of "wholesome and cultured living" (article 25). On this basis, Japanese courts have interpreted the law to impose four main standards on employers that want to fire workers (Chuma, 1998). The burden is on employers to show that:

(1) the firm is under severe duress such as facing possible bankruptcy and redundancies are unavoidable
(2) they have made efforts to avoid redundancies by taking measures such as cutting overtime, hiring freezes, transfers, seconding workers to other companies or seeking voluntary retirements
(3) they have consulted with the labor unions and employees
(4) they have a rational selection procedure for selecting those who are to be fired

Historically, this case law developed in the 1950s in reaction to the widespread dismissals that followed implementation of the disinflationary Dodge Line and the numerous industrial disputes that followed. The courts were concerned about dismissals being used as a way of undermining labor union strength by management, and the four conditions were aimed primarily at preventing this kind of unfair labor practice in accordance with the newly established labor law. In addition to these conditions the courts have also established that the redress for violation of these principles is not only that the fired worker must be compensated, but also that the worker must be reinstated with back pay. This again was to act as a deterrent to unfair labor practices. The late 1970s was a period when the effect of this legislation was tested and Chuma points out that in 1975 at the peak of dismissals, the proportion of separations that were "at the employer's will" stood only at 10% compared with 21% in 1954 and in general, firms took every action to avoid dismissals through the late 1970s. In the 1970s and after, the protection of workers from dismissals was extended also to temporary or fixed-contract workers who had been repeatedly rehired after their contract expired.

Although arguments can be made for worker protection from the viewpoint of economic efficiency, there is little rationale for imposing a penalty whereby workers must be reinstated with back pay. Chuma (1998) argues that it would be better to simply impose a cash penalty that employers should pay workers who have been dismissed in violation of the conditions above. He also recognizes that courts may not be in the best position to evaluate the financial concerns of the company and that if condition (1) is imposed too stringently it may compromise the survival of the firm over the long run.[2] Yashiro (1999) also points out that there are negative externalities arising from this legal principle in the labor market. We deal with one of the most serious of these in section (e) below: the lack of a well-developed external labor market and the information problems that result. One other effect that such a legal principle has is that it encourages companies to seek government help in the form of subsidies, protection from competition, and protection from creditors. Although the labor case law was not responsible for this action, it is part of a general approach that provides

[1] The remainder of this section leans heavily on Chuma (1998).
[2] Since 1999 there have been a number of court rulings that have relaxed and even in one or two cases dispensed with the framework of the four conditions, but it is still too early to know what overall effect these rulings will have (Yamakawa and Araki, 2001).

economic security through employers rather than directly from the state or private insurance provision (Noguchi 1995). This may come at the expense of growth in total factor productivity. For example, Hayashi and Prescott (2001) note that TFP growth was exceptionally low at 0.8% per annum during the period of 1978-1983 when the Japanese government took action to subsidize and otherwise support industries that were in need of restructuring and firms endeavored to avoid dismissals.

b) The importance of seniority in the pay structure

The second barrier to mobility that we examine is the existence of the tenure effect on earnings in the Japanese workplace. The work of Koike (1988), Hashimoto and Raisian (1985) and Mincer and Higuchi (1988) drew attention to the importance of on-the-job training and the development of firm-specific human capital for Japanese men. Along with the case studies and direct surveys of Koike, the latter two papers highlighted the apparently large increase in earnings with tenure (seniority) in Japan compared with the United States. More recent work by Ohtake (1998) and others using cross-section microdata have modified this view substantially. First, Ohtake finds that the return to tenure was smaller than had earlier been reported, even in the past. Second, he shows that the returns to tenure fell between 1980 and 1992 (while they rose in the United States). As a result, the cross-sectional data suggest that the increase in earnings attributable to tenure is 1-2% per year in Japan, still somewhat higher than in the US. This is mainly, but not entirely due to the fact that seniority has a much larger effect on the earnings of Japanese blue-collar workers than their American counterparts. Japanese tenure is higher than that of most other OECD countries for all age categories, Italy being a notable exception. As a result, middle-aged Japanese employees stand to lose more by leaving their firm than their counterparts in most other countries. This is particularly important for the higher paid employees of large Japanese firms who have almost double the median tenure of those in smaller firms (Ohtake, 1998,Table 4.7)

The work of Ohtake (1998) suggests that the loss in earnings of a male employee with 30 years of tenure would be approximately 30% of his earnings.[3] This estimate is based on cross-sectional comparisons between different workers with different work histories, but it is not inconsistent with anecdotal evidence and the evidence from other government surveys. This should not be confused with the loss in the value of specific capital, however. If the technologies involved become obsolete or if the product can no longer be produced competitively by the firm then the human capital may already have lost its value whatever the firm is paying the employee. The benefits of worker protection may be quickly outweighed by the costs when there is a widespread drop in the value of some kinds of firm-specific human-capital.

The losses in earnings experienced by workers who leave firms after many years have an effect on mobility because they will increase resistance to the employer from unions or workers who know that they have the support of the legal system. Although there may well be an explanation in terms of firm-specific human capital to support the high returns to tenure in Japan, there are other views of this pattern that suggest that it may be a compensation policy developed in the past both to motivate workers and to provide for basic needs. In this view, the returns to seniority can be reduced through managerial reform without having any adverse effect on productivity, if pay-for-performance systems are introduced. This seems to be what is taking place in Japan, albeit at a slow pace (Rebick, 2001). If the returns to

[3] I calculate this by taking the values of 40% earnings growth due to tenure computed by Ohtake (1998) in Tables 4.10 and 4.11 for an individual with 30 years tenure. This means that a worker with no tenure but the 30 years experience would have around 70% of the earnings of someone with 30 years tenure.

seniority were further reduced, this should naturally raise the rate of mobility and also lessen the motivation of the courts to maintain such high standards of legal protection.[4]

c) Lack of portability of firm-based pensions Closely related to the problem of seniority-based pay is the lack of portability of private, firm-based pensions in the Japanese system. Japan has only recently implemented the equivalent of the US 401k type of defined-contribution plans in October 2001. Prior to this, there were no tax advantages to saving outside of the defined-benefit plans offered by Japanese firms. Japanese firm-based pensions take a number of different forms and can make lump-sum payments or provide annuities after retirement, but they share the characteristics of offering benefits based on years of service and final base salary. The recipient with 35 years tenure typically gets two to four years of base pay (not including the semi-annual bonus) with the higher rates going to the better-educated employees of large firms (MOL, 2000b). The problem with portability arises because the payouts are often reduced more than proportionately if the employee leaves before the age of mandatory retirement. At the same time, individuals with low tenure at the age of mandatory retirement (due to switching firms) may also suffer from a more than proportional reduction in their benefit. The likely losses in earnings from a move will also lead to additional losses in pensions.

Ichinose (2001) uses pension tables to compute the pension losses that would be experienced by individuals who leave a large firm with more than 1000 employees and move to a smaller firm at lower pay (the most common pattern). The losses are computed assuming that the individual is paid the average for the firm size and according to tenure. Pension losses can amount to between 10-20 million yen from an average pension of 35 million yen, depending on the age of separation. The younger the age of separation, the greater the loss. For this reason, firms, especially large firms offer additional lump-sum payments to individuals who leave under early retirement plans. The additional lump-sum payments amounting to between 5 and 10 million yen cover some, but not all of the losses in pension value. In comparison with the overall losses of up to 100 million yen that may be realized by workers who lose their jobs at large firms at age 40, these are not large quantities, but as suggested by the last response in Table 1, have some influence on behavior.

d) Firm-size differentials, egalitarian pay norms and mobility

One important stylized fact about mobility in Japan is that employees tend to move to smaller firms. If we restrict ourselves to looking at employees who have switched firms in 1997, there were a total of 1,670,000 separations and (by definition) the same number of accessions (Employment Trends Survey, 1998, Table 10). If we restrict our attention to large firms with more than 1000 employees, however, there were 192,000 separations involving inter-firm moves, but only 172,000 accessions. The main source of this "mobility deficit" for large firms is found in the age groups of those who are 50 and over.

One reason why we observe this tendency is that there is a preference for egalitarian pay systems in Japan. Baron (1988) emphasizes the role of peer groups and normative comparisons in shaping workers' assessments of fairness, and explains that workers' perceptions of fairness concerning output and rewards are governed more by social comparison when there is greater homogeneity among workers. He explains that workforce homogeneity "facilitates identification with peers and co-workers,… and that such homogeneity (is noted to be) greater in Japanese than U.S. facilities" (p.516). Under a system where wages and promotion are determined primarily by age and seniority, careful measures are taken to ensure that workers are promoted in accordance with seniority, and that

[4] Some of the arguments used by the courts have made reference to the need for worker protection given the nature of the Japanese employment system, including the pay accorded to seniority (Chuma, 1998).

deviations from the main career track are minimized. Empirically, Japan-U.S. comparisons have consistently shown that the variance in wages among Japanese organizations are smaller than their US counterparts (see for example, Kalleberg and Lincoln 1988). More interestingly, Ishida, Su, and Spilerman (2000) examine promotion differences between a Japanese and US company and find that promotion in the US firm occurs immediately after firm-entry, but promotion in the Japanese company was non-existent for the first twelve years. In other words, there was no differentiation in rank as if all workers were treated alike for the first twelve years. Hence, bringing in older workers into the workforce disrupts the seniority structure, and hence the wage structure, because the employment system presumes entry from below.

This is one of the factors why the introduction of pay-for-performance systems that really deliver high variance in outcomes has been so slow. The preference for egalitarian pay in the presence of pay systems where there is strong age-consciousness means that firms often feel that it is necessary to pay mid-career hires as if they had similar seniority to those of the same age in the firm. For example, a recent survey of 13,000 establishments by the government (MOL, 2000a) indicates that in the majority of firms surveyed, new employees are *in principle* paid the same approximate level of pay as existing employees of the same age and occupation. Only 15% indicated that they would pay these hires less than their age cohort, presumably because they lacked the firm-specific experience. Smaller firms in Japan pay substantially lower wages, even after differences in worker attributes are taken into account (Tachibanaki and Ohta 1994, Rebick, 1992). For this reason it is more likely that a worker moving between firms will be able to find work in a smaller firm, which is able to pay him less, given the loss in firm-specific skill. Of course, exceptionally able or skilled employees will be able to stay in the large firm sector or move up to larger firms, but on average, employees will tend to move down the firm-size hierarchy.

The reasons for the firm-size differentials are not completely understood (Tachibanaki and Ohta, 1994) but it is unlikely that the underlying causes, many of which are rooted in Japan's industrial organization will change over the short- or medium- term. What we wish to emphasize here is that it is the combination of seniority/age related pay, preference for egalitarian pay for similar age groups, and the firm-size differential that distort the pattern of inter-firm mobility in Japan. In particular, this means that the kinds of jobs that are available to older men in Japan will be severely restricted. This in turn makes it more difficult for larger firms to dismiss their employees.

(e) Information problems

A long-standing problem in the Japanese labor market concerns the lack of employment information available. Commonly, workers do not know exactly (in terms of quality as well as quantity) what skills they have, and employers are unclear about the skills they need. Hence it is not only a problem of asymmetric information which afflicts this market. A major problem in Japan has been the symmetric lack of information, and this is almost certainly due to the poor development of the external labor market in an economy with overall low mobility. "Better information for job seekers" has been a recurrent slogan from job seekers in a situation where job postings tend to be ambiguous and crucial information such as job description and required skills are lacking (JIL 1998).

Employment information can be categorized into extensive information which consists of information available to all job-seekers such as firm size and wages, and intensive information which is more likely to be insider-information in nature, such as the work norms or work atmosphere of the employer (Rees 1966). Access to intensive information is a benefit insofar as it improves the quality of the job match, and subsequently leads to higher rewards and better job satisfaction (Granovetter 1974). Watanabe (1992) explains that workers are more likely to obtain intensive information through acquaintances or former

employers. According to the Recruit survey, 41 percent of job seekers gathered employment information through "contacts with friends, family and former employers,"[5] and 30 percent (or 72 percent of job-seekers who used these contacts) found jobs through this channel. A labor market which favors informal job-search methods disfavors job-seekers who are not endowed with network ties, who must seek re-employment through formal means. Workers who seek employment through direct applications or through employment agencies experience considerable hardship, e.g. longer duration of job-search, and a poor quality of match (JIL 1998).[6]

In a society where a market for job-changers is only just evolving, it is not surprising that human resource firms that specialize in headhunting and re-employment services are rapidly growing and this may lead to improvement in the future. One of the top responses for barriers to job changes in Japan is that many workers simply "do not know how to look for jobs" (Recruit 2001). The HR firms succeeded by focusing specifically on the information mismatch problem between the buyers and sellers of labor. Their services include helping employers grasp which skills are needed, and helping job-seekers identify what types of skills they have and the options available to them. The potential growth of employment services such as the ones provided by this HR firm remains promising for the foreseeable future. The government is also gradually deregulating the market for private employment services including temporary employment agencies through revision of the Dispatched Employees Law.

Access to privileged information vis-à-vis social networks may not be limited to employment information. The quantity and quality of social resources are not only determined by the breadth and depth of the individual's network of acquaintances, but also by virtue of his belonging to a particular organization. Establishing important connections with business partners, and gaining trust and reputation within the firm are important forms of social resources that workers acquire through their jobs. However, in most cases, such resources will be lost if the worker relocates to a different establishment. Social resources acquired through business can be a benefit that facilitates workers' upward mobility within firms, but it can also be an impediment to inter-firm mobility as workers feat that they "will lose personal contacts established through work" (Table 1).

Finally, a related problem which seems to be of increasing concern in Japan today is that of skills mismatch in the labor market. Nickell et al (2001) in a survey of OECD economies report that the Beveridge curve has been shifting outward in Japan since the 1970s and this trend has clearly accelerated in the late 1990s (Genda and Rebick, 2000). This implies that for any given unemployment rate there are more vacancies available, suggesting that there may be an increasing problem of mismatch of skills in the labor market. A joint survey of businesses and job seekers done by METI and Recruit more clearly shows that although the level of vacancies and applicants across 60 occupational categories was approximately equal at 690,000 and 740,000 respectively, there were wide variations within occupation categories with the ratio of vacancies to applicants running from 9.95 to 0.05 (METI-Recruit, 2001) A major problem highlighted in the same study is the lack of necessary qualifications of job applicants, especially in some of the more specialized occupations such as IT-related work. Although public support for re-training is offered both to companies and to individuals and there are proposals to increase the levels of this support, it is also clear that the flow of information must be improved so that individuals (or outplacement departments) may improve the quality of the skill training provided in order to resolve the mismatch problem (METI-Recruit, 2001).

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[5] The comparable estimate in Granovetter (1974)'s study of male white-collars in Boston was 56 percent.

[6] This, of course, is not a problem peculiar to Japan.

(f) Problems specific to middle-aged and older workers

One of the consequences of the legacy of long-term employment and the seniority system is that Japanese firms impose age limits in their recruiting and hiring. This problem, specifically that the workers exceed the age limit of the jobs posted, continues to be the most common reason for workers not changing jobs in the Japanese labor market, confirmed not only in the Recruit survey, but also in government reports and statistics (JIL 2001c). According to a recent report, over 90 percent of Japanese firms impose age restrictions ranging from under the ages of 35 to 40 on their job openings with little variation across industry, firm size and city size (JIL 2001a). There are many reasons why firms impose age limits, but they primarily concern how older workers do not fit into the firm's current employment system (Table 2).

TABLE 2 Reasons why Japanese firms impose age restrictions in recruitment

Reasons	%
Older workers lack physical endurance	33.8
Older workers require higher wages	26.9
Occupational skills of older workers do not match firm's expectations	24.9
Desire to maintain a young workforce	23.8
To restrict number of job applicants	20.2
Older workers do not mix well with younger workers	14.9
Older workers are hard to handle	12.9
Older workers do not adapt well to corporate culture	9.9
To avoid exceeding the age structure of previous hires	8.8
Older workers lack motivation	6.7
Relative ease of hiring young workers	5.7
We have no posts for older workers and cannot accommodate them	4.8
Because other firms impose age limits	3.0

[SOURCE: Japan Institute of Labour 2001]

These reasons make sense in light of the previous discussions. Because of the prevailing norm of long-term employment, there is still a stigma attached to older or mid-career job seekers and firms often view them as "hard to handle" or as "unable to adapt well into the corporate culture." It is also likely that many individuals who have lost jobs in other companies are simply not as able, and that the new employers' views that they don't adapt well may have applied equally well in their former company. As discussed in the previous section, the hesitation for Japanese firms to hire mid-career workers is partly rooted in the notion of equity. Indeed, from Table 2 we can infer that the reason why Japanese firms impose age restrictions is less because of the "relative ease of hiring young workers," but more because "older workers do not mix well with younger workers," or "to avoid exceeding the age structure of previous hires."

Owing to recent pressures of employment reform, "guidelines" to abolish the age limits in recruiting and hiring were introduced in October 2001 as part of the revised Employment Measures Law. However, the guidelines specify ten cases or exceptions where imposing age limits are acceptable. Most notably, one of the exceptions is phrased almost specifically to prevent disruptions in the seniority system, and reads as follows:

> (4) Cases where recruiting or hiring is intended for workers under a certain age in situations where in order to make wage payments regardless of age to new employees, companies will be required to revise present regulations determining wages mainly in accordance with age. (JIL 2001c)

As it stands, the guideline is viewed mainly as a cosmetic gesture; it simply states that employers should make efforts to abolish age limits. Unlike the legal sanctions that are enforced in certain countries in violation of age discrimination legislations, the Japanese guideline does not impose any penalty for violations. A cursory glance at job postings after the guideline was put into effect confirms that a majority, if not all job postings continue to require age limits[7]. It is thus questionable whether the guideline will have any effective results in the foreseeable future. Even if the law was imposed with greater force, the experience of the US and other countries where older workers have greater difficulty in the labor market suggests that the problem will not go away. As mentioned earlier, the high levels of tenure held by Japanese workers, especially in large companies mean that their losses of both earnings and specific capital are likely to be present them with even greater problems than their counterparts elsewhere.

g) Regulations concerning fixed period labor contracts

One problem with the level of job protection provided by dismissal case law has been the reluctance of employers to take on employees that they are not sure they wish to keep indefinitely. Up until quite recently, the Labour Standards Law only allowed fixed-term contracts of up to one year in length[8]. After revision in 1998, the law now allows for contracts of up to three years, but only in the case where the employee is over 60 or is in a specialized occupation or other restricted circumstances determined by the Ministry of Health, Labour and Welfare (hereafter MHLW). Furthermore, such a contract is not renewable (except for one year) (Yamakawa 1998). This is a considerable restriction, and has been heavily criticized (Ohtake, 2001; Yashiro 1999).

4. Barriers to increasing women's labor force participation

Table 3 shows women's labor force participation rates and the rates of part-time work for women in Japan and elsewhere in the OECD. It is clear that Japanese women, while not having the lowest rate of overall participation in the OECD, are far from having the highest rate and are substantially below the US in this respect. There is therefore room for Japan to increase its labor inputs from this source. Secondly, Japanese women are more likely to work part-time (defined here as less than 35 hours per week) than most of their counterparts elsewhere. There are a number of reasons why this situation exists.

TABLE 3 Labor Force Participation Rates and Rates of Part-time Employment for Women, Selected OECD Countries/Regions, 2000

	Labor Force Participation Rate[1] (%)	Rate of Part-time Employment[2] (%)
Japan	59.6	39.4
US	70.8	30.0
UK	68.9	18.2
Germany	63.2	33.9
France	61.7	24.3
Italy	46.2	23.4
Sweden	76.4	21.4

[1]Ages 15-64 [2] Part-time employment/all employment
Source: OECD Employment Outlook, 2001

[7] See for example, job postings on Yahoo! Japan at http://employment.yahoo.co.jp/ (in Japanese).
[8] This was originally intended to force employers to offer indefinite period contracts to their employees and avoid exploitation. It might be thought that one could still informally agree to keep workers for more than one year by renewal, but as mentioned above, Japanese case law has extended protection against dismissal to those employees who work for one-year contracts that have been repeatedly renewed.

First, women are more likely to exit the labor force for childrearing and family responsibilities, then return to the labor force in later stages of the lifecycle. This pattern of exit and re-entry results in the so-called M-curve pattern of labor force participation rates (LFPR). The M-curve has flattened out in recent years, but as Figure 1 shows, the mass exit of women in their thirties continues to be a pronounced pattern in international comparisons. However, it is also the case that the proportion of women who want to work but cannot is also highest among this age group. When this proportion is included in the actual LFPR, we obtain an LFPR curve which resembles that of their Western counterparts. This LFPR curve, known as the potential LFPR curve, has received considerable attention in policy circles that focus on Japanese women's requirements to reconcile work and family life. Though optimistic, the potential LFPR constitutes an upper bound of the number of women who could be employed under conditions where various institutional barriers have been removed[9].

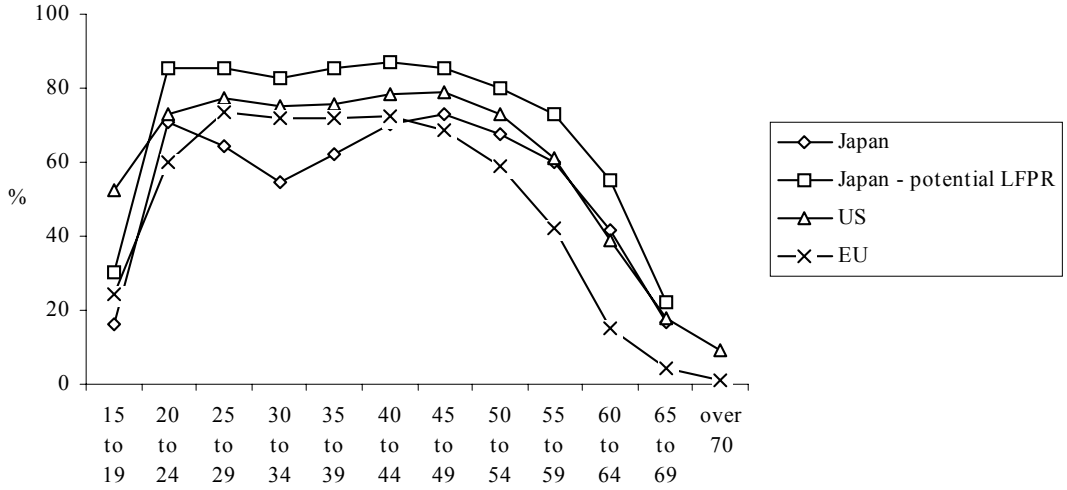

Figure 1 Labor force participation rates by age cohort for selected countries
[SOURCE: International Labor Organization 1999, data for Japan taken from Ministry of Labor 1999]

Another feature concerns the growth in part-time employment. As Figure 2 shows, the proportion of women in regular employment has changed little since 1965. However, there has been a remarkable transition from the informal sector (self-employed and family workers) to part-time employment, attributable mainly to changes in Japan's industrial structure – a decline in the agricultural sector employment and family-run work, and a rise in work opportunities in firms (Nagase 1997), and a relative improvement of female wages (Shimada and Higuchi 1985).

[9] For example, Osawa (1998), citing results from the 1992 National Survey on Lifestyle Preferences, explains that the actual LFPR will resemble the potential LFPR if the proportion of women who would work under conditions of reliable childcare facilities are included.

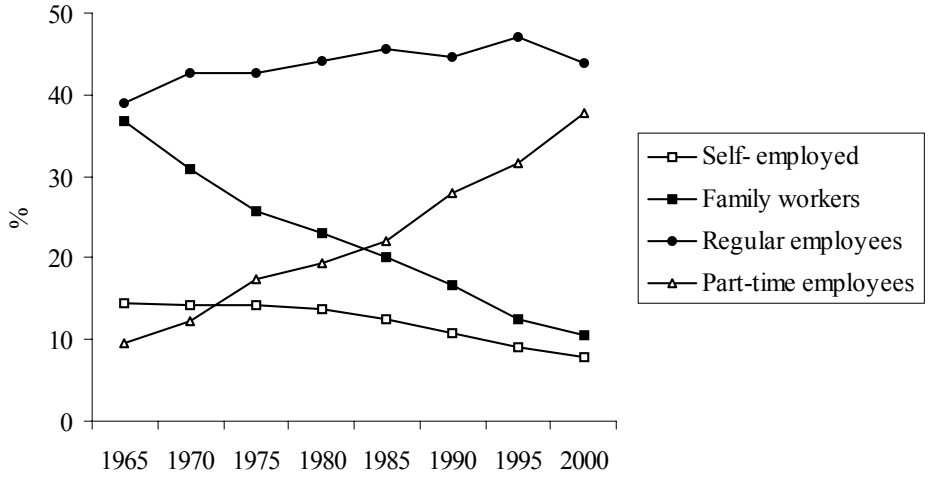

Figure 2 Composition of female labor force by work categories
* Part-time employees refer to workers with less than 35 working hours per week.

Why does the M-curve remain pronounced, and why has there not been an increase in the proportion of women in regular employment in Japan? As will be discussed in the following sections, Japanese women's working patterns are better understood by accounting for their non-market activities. Although expectations and attitudes concerning traditional gender division of labor are declining, Japanese women still face pressure to remain as full-time mothers for children under school age, and must maintain flexible work patterns to accommodate their responsibilities. The Japanese government is attempting to improve this situation through measures such as the New Angel Plan that include expansion of the provision of childcare (MHLW, 2001, 248-51). Compounding these supply-side problems are demand-side impediments such as the difficulty women face in being hired into the internal labor market, and disincentives stemming from the unintended consequences in the tax and benefit system.

(a) Exclusion from the internal labor market (ILM)

The extensive training that takes place within Japanese firms presumes a long-term relationship between workers and employers. Employers seek workers who plan to remain with the firm over a long period, such that the costs of their investments will not be lost. Because women are more likely to exit the labor force for reasons of marriage or childrearing, they face statistical discrimination (Brinton 1989): Employers resist hiring women into their permanent workforce because they judge from past experience that women are more likely to quit and that investment in women's training is therefore riskier than investment in men's. Brinton argues that "the pervasiveness of the internal labor market structure and accompanying firm-specific training constitutes an institutional barrier to women" (p.553). Japanese women may enter large firms at equal proportions as men, but a very small proportion of these women enter career-track positions in these firms.

High-status positions in the seniority system are awarded to workers with long-standing tenure, but as with the problems faced by men detailed earlier, there are problems if one changes firms or drops out of the labor market for a period. The common route for women is to re-enter the labor force as part-time workers. Women who reenter the market also tend to find employment in smaller firms. In fact, Saso (1990) explains that older Japanese women are much more concentrated than young women in small firms and unskilled blue-collar occupations. As we discuss below, better educated married women with children are more likely to remain non-participants, other things equal. One reason for this, beyond the financial reasons may be that the quality of the jobs and the interest in the work available

is not attractive to better-educated women who may prefer to develop non-market (leisure) activities.

Using the census data for Japan and the US, Brinton and Ngo (1993) estimate the index of sex segregation for the two countries among two occupational categories – managers and administrators, and unskilled blue-collars. They find that sex segregation among managers and administrators is greater in Japan than in the US, and that sex segregation is greater among older age groups in Japan while it remains stable across all age groups in the US. Among unskilled blue-collar occupations however, sex segregation is greater in the US than in Japan, and a reverse trend is confirmed across age groups; sex segregation decreases with age in Japan, while it increases with age in the US. These findings are consistent with the M-curve pattern of labor force participation among Japanese women. The likelihood of their placement into the internal labor market at the port of entry is lower than men's, but their attrition rate is even greater as large numbers of women must exit the labor force for family duties. When they re-enter, they do so into unskilled occupations. This pattern of labor mobility results in higher sex segregation among management occupations and lower sex segregation among unskilled occupations for older workers.

(b) Government tax and benefit systems

The barrier to entry into the internal labor market, and the need to maintain flexible work patterns to reconcile work and family life are the primary reasons for the large proportion of Japanese women's entry into part-time employment. But there is also sufficient evidence suggesting that the current structure of tax and benefit schemes distorts the labor supply behavior of married women in part-time employment. For example, the husband is able to claim tax exemption for his wife's income only up to a certain point (usually around one million yen per year)[10]. But if the wife's income exceeds the tax exempt limit, the after-tax income of some households may actually decline as the wife's income increases.
In general, such schemes were originally introduced to protect married women from the downfall in household income for their transition from market work to household work. However, because they rest on the implicit assumption that married women should remain as full-time housewives, the unintended consequences of such "policies to protect full-time housewives" (Higuchi 1995) have come under severe scrutiny amidst increasingly diversifying patterns of women's employment.

As a good basis for discussion, we present data from two surveys that examine how employment patterns of married women in part-time positions are affected by various tax and benefit schemes (Table 4). According to these surveys, 36 percent of respondents in 1990 and 49 percent of respondents in 2001 adjusted their employment in response to these policies. Moreover, 70 percent of the wives of salaried workers responded that they will increase their work hours if these regulations were removed[11]. Thus, the proportion of women who withhold their supply of labor as a consequence of such policies is not negligible. The following discussion focuses on three schemes – the tax exempt status for spouses, fringe benefits provided by employers, and social security programs – and examines how they may constitute disincentives to married women's employment.

[10] The tax exempt status and pension benefits for spouses are not gender specific, i.e. they can be applied to husbands or wives depending on who is the dependent. However, because a majority of the cases concern wives, past research has been conducted under the assumption that such schemes affect the behaviour of women more than men. The current discussion assumes this is the case.

[11] Based on the 1997 National Survey on Lifestyle Preferences, cited in Nagase (2001). This proportion is reported to be 53.7 percent among the sample of married women in part-time employment in the Non-standard Employment Survey 2001 conducted by Recruit.

TABLE 4 Reasons for adjusting employment among married women in part-time positions

Reason	General Survey on Part-time Workers Condition 1990[*1]	Non-standard Employment Survey 2001[*2]
For whatever reason	35.7	49.1
I adjust my annual income to avoid paying income tax	30.0	27.8
I adjust my annual income to avoid exceeding the tax exempt and special tax exempt status for spouses	23.5	32.6
I adjust my annual income so that I can receive fringe benefits provided by my spouse's employer	12.0	15.7
I adjust my annual income so that my health insurance and pension can be covered by my spouse	11.5	30.5
I adjust my annual income to avoid paying unemployment insurance	2.0	7.5
I adjust my annual income so that my spouse's employer will not find out that I am working	0.8	1.4
I plan in advance so that my annual income will not exceed one million yen	16.2	-
I adjust my work patterns throughout the year so that my annual income will not exceed one million yen	13.8	-

[*1] Reprinted from Higuchi (1995)
[*2] Source: Recruit Works Institute

The income tax code in Japan has undergone several revisions in the post-war period. The 1950 revision introduced a system that placed the tax burden on individual income instead of household income. However, because the disposable income of households declines according to the number of dependents, the new system also introduced exemptions depending on the income of their spouses. Under the latest version of this tax exemption scheme introduced in 1988, spouse's income was tax exempt up to an annual income of 700,000 yen, after which a 50,000 yen increase in annual income is accompanied by a 50,000 yen decrease in tax exemption, such that the exemption becomes zero at an annual income of 1.4 million yen. The scheme is an improvement in comparison to its predecessor because it eliminates kinks or discontinuities in the (after-tax) household budget.

But even with the revisions, income taxes at the household level are regressive within certain ranges, and there is ample evidence that non-convexities in the household budget distort the labor supply of women[12]. For example, Abe and Ohtake (1997) explain that the marginal tax rate for households will be higher when the spouse's income is between one-million and 1.35 million yen, than when it is over 1.35 million yen. Using the General Survey on Part-time Workers Conditions, they examine the labor force participation rates of married women in part-time positions as a function of their annual earnings and show that the distribution is concentrated around the one-million yen mark, with a significant drop in participation for earnings over one-million yen[13]. Further, they show that the distribution of work-hours becomes a bimodal distribution when adjusted for hourly wages, with spikes concentrated around the hours where the budget constraints are discontinuous or non-convex. An increase in wages implies that workers reach the ceiling more quickly, so the consequence is that workers work less hours. Put another way, there is no incentive for married women to increase their supply of labor under the current system (Osawa 1993).

Problematic features of the social security system have also been criticized for causing distortions in the labor supply of women. Under the current system, contributions to health insurance and public pensions are exempt for spouses provided that their employment

[12] See Higuchi (1995) and Osawa (1993) for theoretical discussion of the impact of tax exemption schemes on women's labour supply, before and after the revision of 1988.
[13] Nagase (2001) shows similar results using monthly income (and not annual income).

hours do not exceed a certain level[14], and annual income does not exceed 1.3 million yen. Similarly, contributions to unemployment insurance are exempt for spouses whose annual income does not exceed 900,000 yen[15]. Despite their good-intentions to ensure a sense of equity between households with working wives versus housewives, these exemptions discourage married women from working as they are forced to adjust their employment hours and annual income from exceeding the critical level (Horioka 1999). Hatta and Kimura (1993) argue that the current pension system clearly favors households with full-time housewives, and that the removal of such "artificial barriers" to women's employment will encourage more women into regular full-time employment. The rise in regular employment will increase the base of pension payments and subsequently alleviate the current imbalance between payments and receipts in the pension system.

And finally, the labor supply of married women is further constrained by the fringe benefits provided by their husband's companies. Higuchi (1995) reports that over eighty percent of Japanese companies provide fringe benefits for their dependents (such as special benefits for families and children) averaging 9,300 yen per month in 1992, but that sixty percent of the companies will terminate these benefits if the spouse's income exceeds a certain level, usually around an annual income of one-million yen. Although the amount of the benefit may not be a substantial sum, it affects the employment of 12 to 16 percent of married women in Japan (Table 4).

A noteworthy pattern which is observed across the three cases discussed here is that the adjustments in labor supply are more pronounced among educated women (Abe and Ohtake 1997, Higuchi 1995). There are several explanations for this: (i) Education is positively correlated with wages, so higher-educated women reach the critical level of earnings quicker than lower-educated women; (ii) Higher educated women have better knowledge of the lower and upper bounds of various exemptions and respond more sensitively; and (iii) Wives' education is positively correlated with husbands' education (hence higher husbands' earnings), such that they may have less incentive to work. Whatever the reasons, such an incentive structure depresses the rate of return to education for women, and discourages the younger generation of women to pursue higher education.

In sum, there are numerous problems inherent in the current system of taxes and benefits that discourage the labor supply of married women in Japan. Non-convexities in the household budget vis-à-vis regressive taxation and discontinuities in social benefits cause married women to withhold or adjust their employment patterns in order to avoid exceeding the ceilings imposed by these policies. Despite the revisions undertaken in the post-war period, further modifications are necessary in order to facilitate the diversifying patterns of employment and work attitudes between men and women.

(d) Policies to reconcile work and family life: Public and private initiatives

Under the Childcare Leave and Family Care Leave Law, childcare leave became mandatory for enterprises with more than 30 employees, and family care leave became mandatory for all enterprises. Employees receive 25 percent of their wages while on leave. Despite this legal system, merely 0.6 percent of male workers took childcare leave following the birth of a child (MOL, 1997), and the situation remains that the majority, if not all workers who take leaves are women. In addition, some 70 percent of women do not take maternity leaves offered by their employers and choose to quit instead, citing reasons such as "it was not the right climate at work."[16] Companies that have re-employment schemes, where former employees are hired back into the same companies, now receive subsidies to facilitate the re-employment of women. The system is beneficial to both workers and employers

[14] Employment hours per day or per week must be less than 75 percent of hours worked by regular full-time workers, and annual income must not exceed 1.3 million yen, except for the physically challenged and workers over the age of 60 in which cases the allowance is extended to 1.8 million yen.
[15] Employment hours must not exceed 20 hours per week.
[16] From the 1996 National Survey on Family Planning cited in Breslin (1997).

insofar as it allows them to recover previous investments undertaken by the employers (Imada 1998). However, the proportion of companies that have installed the system stands at 21 percent as of 1996, and the system is subject to numerous terms and conditions, e.g. only 14 percent of these firms will re-employ their returnees as regular employees. As it stands, the current system does not offer a promising alternative for women who seek re-employment.The presence of small children dramatically reduces Japanese women's labor supply (Hill 1989; Nagase 1997; Ogawa and Ermisch 1996), to a degree beyond that witnessed in Western societies[17]. However, studies have also shown that maternity leave policies and access to childcare facilities improve women's job continuity (with the same employer) or re-entry into the labor force (Nakamura and Ueda 1998). In particular, Higuchi, Abe and Waldfogel (1997) show that childcare leave had a positive and significant effect on married women's job continuity in Japan, US and UK, but the marginal effect was found to be largest in Japan. Although the number of women who take advantage of childcare leave may be small, the authors argue that their findings are encouraging. They conclude that what is required is not only for companies to install childcare policies, but to ensure a working environment that allow workers to take advantage of such policies.

In response to growing worker demands, some Japanese companies have introduced "family-friendly" policies, or measures that help employees reconcile the claims of work and family life (Sato 2000). Flexible working schedules, subsidies for costs on family care, and installation of childcare facilities in the workplace are common forms of family-friendly policies. The family-friendly policy is a private initiative, but the MHLW has set up a system of "awards for family-friendly firms" to encourage the further installation of such policies.

The need to install family-friendly policies is a high priority issue in light of the changing values among Japanese workers. Recent survey results show that the proportion of men and women who support the traditional gender division of labor is rapidly decreasing, while the proportion of men and women who desire a balance between family and work is increasing[18]. However, the implementation of family-friendly policies in Japanese firms remains limited. A Ministry of Labour survey of Japanese firms conducted in 1997 used a point scheme to tabulate the total number of points out of 24 family-friendly schemes installed by the employer. The results indicate that 51 percent of Japanese firms had zero points, i.e. more than half of the firms had no family-friendly policies apart from the legal requirements. The survey also finds great variation over firm size and industry with large firms, not surprisingly, doing the most.[19]

A common way for Japanese families to reconcile work and family life is to depend on their extended family, i.e. their grandparents (Morgan and Hirosima 1983). Empirical studies have found that co-residence with grandparents greatly improves the probability of women's entry into regular employment (Nagase 1997), and increases their employment hours (Tsuya, Bumpass, and Choe 2000). However, it should be noted that the proportion of elderly in need of care is also increasing, and the burden of care will likely fall on the women (Ogawa and Ermisch 1996). Osawa (1990) warns that "women already have difficulty reconciling their roles as wives, mothers, and workers and now face the daunting prospect of adding nursing to their responsibilities" (p.8). Hence, a one-way reliance on grandparents to support women's worklives cannot be a long-term solution.

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[17] For example, Tusya, Bumpass and Choe (2000) show that the percentage of wives employed among households with preschool age children is 37 percent in Japan versus 58 percent in the US.

[18] From the 1999 NHK (Japan Broadcasting Corporation) survey, cited in Sato (2000).

[19] Close to 100 percent of establishments greater than 500 employees had installed some form of family-friendly policy averaging 11.7 points versus 44 percent and 3 points respectively among establishments with less than 30 employees, and over 95 percent of firms in "finance and insurance" had installed family-friendly policies averaging 7.8 points versus 40 percent and 1.5 points respectively in the construction industry (from the 1996 Survey on Women Workers' Employment Management, Women's Bureau, the Ministry of Labour, cited in Sato 2000).

5. Estimating the extent to which Japan could raise its rate of growth through changes in the labor market

Our approach to understanding the extent to which problems in the labor market are affecting economic growth is based on simple growth accounting and looks at the medium term. We look for unutilized (or under-utilized) labor assets and assume that they can be moved into production evenly over a given period. This lets us know how much the *potential* growth of the labor input could be altered if the impediments to the supply of this labor were removed. The resulting figure can then be multiplied by labor's share of national output (roughly .7 in the Japanese case) to yield a potential increase in output to the economy. This contribution is a "one-time" increase to economic output, but spread over a number of years this can represent an increase in the potential growth rate for a fixed period. The calculation is necessarily crude, and will depend a lot on the assumptions behind the estimates of the amount of labor that is not being utilized. Nevertheless, this is a useful exercise to gain some idea of the scale of the losses experienced by the economy from labor market supply problems.

a) We attribute losses here to i) excess labor being carried by firms that are avoiding firing workers and ii)factors that may be increasing the extent of mismatch in the economy and thereby raising the natural rate of unemployment.

i) It is difficult to know the extent to which firms are carrying excess labor. The Japanese MHLW in its quarterly Survey of the Labour Economy (*Rodo Keizai Doko Chosa*) reports the percentage of establishments surveyed that report that have surplus workers as well as the percentage with labor shortages for different industries and occupations. While these are useful for understanding cyclical conditions and how they differentially impact different parts of the labor market, they give no real sense of the size of the problem. Japanese firms do carry some employees on their payrolls who are nevertheless sent home for spells, often on a rotating basis, during downturns. There are government subsidies in some cases to encourage firms to do this rather than fire workers (Dore, 1986) These individuals are picked up in the Labor Force Survey under a special category (*kyugyosha*) that includes all workers who are not at work on the survey day including for illness or absenteeism. Hashimoto (1993) notes that the number of *kyugyosha* moves countercyclically and that adjustment in their numbers is generally less important than hours and inventory adjustment in company reactions to the business cycle. The number of *kyugyosha* did rise by some 20-25% over the period 1989 to 2000, not nearly as great a response as the doubling of the number of unemployed (Statistics Bureau, various years). This increase in the numbers of *kyugyosha* since the bubble period represents some 200,000 employees or 0.3% of total employment. This seems like a reasonable lower bound for the number of surplus workers in Japanese firms.

A second approach for setting an upper bound to the contribution of excess or hoarded labor in Japan is to look at figures for total factor productivity growth and argue that slower TFP growth is due to labor hoarding during downturns. The 1990s were undoubtedly a period of slower TFP growth as was the period following the first oil shock (Hayashi and Prescott, 2001). Hayashi and Prescott (2001) calculate, after taking account of working hours, that TFP grew at 3.7% between 1983 and 1991 and then only at the rate of 0.5% between 1991 and 2000. If all of this drop could be attributed to excess labor being held in firms, we could see a loss of 3.2% in the potential growth rate, assuming that this surplus labor could be reemployed productively elsewhere.[20] This is unlikely as it would imply that almost a quarter

[20] Hayashi and Prescott calculate that capital deepening actually increased during the 1990s from the 1980s, so it is unlikely that any drop in TFP growth could be attributed to a drop in the rate of investment.

of the labor force was surplus to firms' needs by the end of the decade. Nevertheless, if we assume that if firms were able to fire workers more easily that the economy could reach the OECD average for TFP growth per annum during 1979-1997 of 1.1%, then surplus labor kept in firms lowers TFP growth by up to 1.1-0.5 or 0.6% per year.[21] This would also imply that the quantity of surplus labor in Japan today would be around 5% of the employed, comparable to the number of unemployed.[22] We take this as our upper bound for the number of redundant workers in Japanese firms.

ii) The problem of skills mismatch and the outward shift of the Beveridge curve was discussed earlier. The Labour Ministry in its White Paper for 2000, uses time series of the unemployment rate and the vacancy rate to estimate that the natural rate of unemployment has risen from just over 2% to 3.5% since 1993 (MOL, 2000c). This is mainly attributed to the extent of structural change taking place in Japan, particularly the decline in manufacturing, although ageing of the workforce is undoubtedly also part of the explanation. Using the result of the Labor Ministry we attribute a loss of 1.5% in overall labor input to the mismatch problem in the labor market.

b) We attribute losses from barriers to the supply of women's labor to two main sources: i)Factors that induce women to restrict their hours of work to part-time work, including restricted hours of child-care and disincentives in the tax system for married women to work full-time. ii)Factors that induce women to be non-participants. There are a number of factors operating here including the need for more flexible personnel management systems that allow women to have and rear children without losing the opportunity to have a career with meaningful work after they return to the labor market. In this sense, the difficulty that women have in finding attractive job opportunities in their 30s or 40s is similar to the problems experienced by their male counterparts. In their case, however, it also includes factors such as disincentives in the tax system.

<u>i – Increasing the labor input of part-time workers</u>

Table 3 indicates that around 40% of employed Japanese women work part-time. As a result, Japanese women only put in around 136 hours per month compared to men who work 165 hours per month. If employed Japanese women all worked as many hours as the men they would increase their labor input by 21%. This is a grossly unrealistic expectation, but it does serve as an upper bound for the effects of those impediments that restrict hours of work.[23] A plausible lower bound for the effect of disincentives to working full-time starts by taking the calculation of Higuchi (1995) who estimates that married women who constrain their hours deliberately because of the tax and benefits system in Japan lower the overall labor input of Japanese women by 1.4%. For the purposes of our overall estimate of the contribution of impediments that encourage part-time work we look at what would happen if the rate at which women aged 25-64 in Japan worked part-time was at the U.S. level of 20% rather than 42%.[24] These women work about half as many hours as their full-time counterparts. If half of them were now to work full-time, this would increase the female labor input by roughly .5 x .4 x .5 or 10%.

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[21] In practice the effect would be smaller since the reallocated labour would lose much of its job-related human capital.

[22] This is the number that is often quoted in press accounts although it is unclear where the reporters get their figures.

[23] Among the reasons why this is unrealistic is the fact that some of these women are young and attending school, many would prefer to stay home with small children even if child care is available and many have household duties including caring for elderly relatives that take up much of their available time.

[24] We exclude women younger than 25 as many of them are still in school. Women over 64 are more likely to wish to work part-time regardless of impediments to working full-time.

ii- Increasing the labor force participation rate of women

Again, we use the US as a benchmark to estimate the extent to which Japanese labor market institutions affect female labor market input. We assume that Japan is able, by removing impediments to female labor supply to raise the labor force participation rate of women from its level of 67% to the US level of 77%. In this case, there is an increase of about 15% in the female labor force input.

Adding effects i and ii together (and compounding), we arrive at a total increase in the labor input of women of 26.5% that would result if the Japanese women had participation and part-time employment rates comparable to that of the US. In terms of the overall labor force this represents an increase of .265 x .41 or around 11%.[25]

6. Overall Implications for Economic Growth

Table 5 below summarizes the results of the calculations given so far. The results are clearly not intended to be accurate estimates, but rather to give us some idea of how much of an impediment to economic growth the factors that we have mentioned so far might contribute. According to our calculations, the overall effect of eliminating the problems that we have detailed could raise output by between 9 and 12 percent. This is approximately equal to a 1% increase in the potential growth rate of the economy over a ten-year period. This is, of course, only a one-time benefit that the Japanese economy could exploit, but it is hardly a negligible one.

TABLE 5 How Much Could Output Increase with Improvements in the Functioning of the Labor Market? (%)

Problem	Labor Input	Output[2]
Excess labor held by firms	0.3-5	0.2-3.5
Mismatch unemployment	1.5	1.1
Women's hours reductions	4.1	2.9
Women's labor force participation	6.2	4.3
Total[3]	12.8-17.5	9.0-12.2

[1]For the women's inputs, the levels are computed after multiplying the figures in the text by the proportion of women in the labor force = .41.
[2]The effect on economic output = increase in labor x labor's share (.7)
[3]The effect of the two contributions concerned with women are compounded in calculating the total.

7. Conclusions

This paper has examined a number of personnel practices, laws and regulations that lower the supply of labor in the Japanese economy. Broadly speaking, there are two kinds of impediments, those that restrict the movement of labor between firms, and those that discourage women from participating to a greater extent. Using other OECD countries and especially the United States as a benchmark, we estimate that removal of these barriers would increase the productive labor supply in Japan by some 13 to 18 percent and thus could raise the potential growth rate of the Japanese economy by roughly 1% per annum over a ten-year period.

We would like to end the paper with a note of caution. While the changes that would be required to overcome some of the barriers such as the poor provision of information in the

[25] This figure might be slightly smaller if the growth in the women's labor input was adjusted for being of lower quality than male labor input.

labor market are already being promoted by government and business leaders, many of the other changes will require broader changes in the Japanese economy. As Noguchi (1995) has pointed out, Japanese economic policy is still based to a large extent on the premise that much of the security and welfare of individuals in the economy will be provided through their employers. Japanese labor law (as developed through case law), industrial policy, and financial regulation has been based on this assumption. Policy makers and regulators in areas other than labor will need to change their approach for the full benefits of any change in labor regulations to be realized. The large-scale restructuring that is required if Japan is to continue to shift away from manufacturing and reduce the size of its construction industry will also require a shift towards increasing provision of security through private or state-provided insurance. This in turn may well have the effect of introducing a different set of inefficiencies, including an increased rate of unemployment and earlier retirement. Policies will need to be designed carefully if this kind of outcome is to be avoided.

References

Abe, Yukiko and Fumio Ohtake. 1997. "The Effects of Income Tax and Social Security on the Part-time Labor Supply in Japan." *Review of Social Policy* 6:45-64.

Baron, James N. 1988. "The Employment Relation as a Social Relation." *Journal of the Japanese and International Economies* 2:492-525.

Breslin, M. 1997. "Japanese Women Want More Children than Their Total Fertility Rate Suggests." *Family Planning Perspectives* 29: 291-292.

Brinton, Mary C. 1989. "Gender Stratification in Contemporary Japan." *American Sociological Review* 54:549-564.

_____ and Hang-Yue Ngo. 1993. "Age and Sex in the Occupational Structure: A United States-Japan Comparison." *Sociological Forum* 8:93-111.

Chuma, Hiroyuki. 1997. "Keizai kankyō no henka to chūkō nensō no chōkinzokuka," (The changing economic environment and the lengthening of seniority) in H. Chuma and T.Suruga (eds) *Koyō Kankō no Henka to Josei Rōdō (Changing Employment Customs and Women's Labor)*, Tokyo, Tokyo Daigaku Shuppankai, 47-114.

_____. 1998. "Kaikoken Ranyō Hōri no Keizaigaku" (The economics of the legal principle of abuse of the right to dismissal) in Yoshio Miwa, Hideki Kanda and Noriyuki Yanagawa, (eds) *Kaishahō no Keizaigaku* (The Economics of Company Law) Tokyo: Tokyo University Press.

Dekle, Robert. 2000. "Demographic density, per-capita consumption, and the Japanese saving-investment balance." *Oxford Review of Economic Policy*, 16:2, 46-60.

Dore, Ronald. 1986. *Flexible Rigidities: Industrial Policy and Structural Adjustment in the Japanese Economy, 1970-1980*. Stanford: Stanford University Press.

Genda, Yuji. 2001. *Shigoto no naka no aimai no fuan: yureru wakamono no genzai* (Vague anxiety amidst work – the shaking world of youth today) Tokyo: Chūōkōron Shinsha.

_____ and Rebick, Marcus. 2000. "Japanese labour in the 1990s: Stagnation and stability," *Oxford Review of Economic Policy*, 16:2, 85-102.

Gordon, Andrew. 1985. *The Evolution of Labor Relations in Japan: Heavy Industry, 1853-1955.* Cambridge, USA: Harvard University Press.

_____. 1998. *The Wages of Affluence: Labor and Management in Postwar Japan,* Cambridge, USA: Harvard University Press.

Granovetter, Mark S. 1974. *Getting a Job: A Study of Contracts and Careers*. Cambridge: Harvard University Press.

Hashimoto, Masanori. 1993. "Aspects of labor market adjustments in Japan," *Journal of Labor Economics,* 11:1 Part 1, 136-161.

_____ and Raisian, John. 1985. "Employment Tenure and Earnings Profiles in Japan and the United States," *American Economic Review*, 75, September, 721-35.

Hatta, Tatsuo and Yoko Kimura. 1993. "Kōteki nenkin wa sengyō shufu setai wo yūgū shiteiru" (The Japanese Public Pension System Favors Household with Full-time Housewives). *Kikan Shakai Hoshō Kenkyū* (Quarterly of Social Security Research) 29: 210-221.

Hayashi, Fumio and Prescott, Edward. 2001. "The 1990s in Japan: A lost decade," *Review of Economic Dynamics*, 5, 206-235.

Higuchi, Yoshio. 1995. "Sengyō shufu hogo seisaku no keizai-teki kiketsu" (The Economic Consequences of Policies to Protect Full-time Housewives). In *Jakusha hogo seisaku no keizai bunseki*. Edited by Tatsuo Hatta and Naohiro Yashiro. Pp.185-219. Tokyo. Nihon Keizai Shinbunsha.

_____, Masahiro Abe and Jane Waldfogel. 1997. "Nichi-bei-ou ni okeru ikujj kyūgyō shussan kyūgyō seido to josei shugyō" (Childcare and Maternity Leave Policies and Women's Employment in Japan, US and UK). *Jinkō Mondai Kenkyū* (Journal of Population Problems) 53: 49-66.

Hill, M. Anne. 1989. "Female Labor Supply in Japan." *Journal of Human Resources* 24: 143-161.

Horioka, Charles Yuji. 1999. "Japan's Public Pension System: What's Wrong with It and How to Fix It." *Japan and the World Economy* 11:293-303.

Ichinose, Tomohiro. 2001. "Tenshoku ni yoru shōgai chingin no genshō to sōki taishoku yūgū seido" (Early Retirement Plans and the Decline in Lifetime Income Resulting from Job Changes). *Rōsei Jihō.* No. 3484: 27-34.

Imada, Sachiko. 1998. "Re-employing Japanese Women: Female Labor and Sustained Support." *Japan Labor Bulletin* 37 (June 1998).

Institute of Labor Administration. 2001. "Sōki taishoku yūgū to kibō taishoku seido" (Early Retirement and Voluntary Retirement Programs). *Rōsei Jihō.* No. 3484: 2-26.

Ishida, Hiroshi, Kuo-Hsien Su, and Seymour Spilerman. 2000. "Path Dependency in Career Advancement in Japanese and U.S. Firms." Paper presented at the International Sociological Association (Research Committee on Social Stratification), Libourne, France, May 11-14, 2000.

Japan Institute of Labour. 1998. "Chūkōnensha no tenshoku jittai to koyō shokugyō tenbō" (Employment Outlook and State of Job-changes among Middle-age and Older Workers). *Japan Institute of Labour Report.* No. 111.

_____. 2000. "2000 Survey on Employment Management: Managing of Retiring Older Workers." *Japan Labor Bulletin* (October 2000).

_____. 2001a. "Kōzō mondai no kenkyū" (Structure of Unemployment). *Japan Institute of Labour Report.* No. 142.

_____. 2001b. "Reorganization of Businesses and Employment Adjustment Aimed at Middle-aged and Older Workers." *Japan Labor Bulletin* (May 2001).

_____. 2001c. "Guidelines to Abolish Age Limits in the Revised Employment Measures Law." *Japan Labor Bulletin* (November 2001).

Kalleberg, Arne L. and James R. Lincoln. 1988. "The Structure of Earnings Inequality in the United States and Japan." *American Journal of Sociology* 94:S121-S153.

Koike, Kazuo. 1988 *Understanding Industrial Relations in Modern Japan*, London, Macmillan Press.

METI-Recruit. 2001, "Koyō no misumattchi no jittai bunseki," (Empirical analysis of mismatch in employment), Published jointly by the Ministry of Economics, Trade and Industry and Recruit Works Research Center, Tokyo; available at: http://www.meti.go.jp/kohosys/press/0001722.remove597167316452/0/010719koyou.pdf

MHLW (Ministry of Health, Labour and Welfare). 2001. *Kōsei Rōdō Hakusho* (White Paper on Welfare and Labor), Tokyo: Gyōsei.

Mincer, Jacob and Higuchi, Yoshio. 1988 "Wage structures and labor turnover in the United States and Japan," *Journal of the Japanese and International Economies*, 2: 97-133.

MOL (Ministry of Labour). 2000a. *Tenshokusha no Jittai (Heisei 10 Nen Chōsa)* (The Current Situtation of Job-Changers – 1998 Survey) Tokyo: Ministry of Finance.

_____. 2000b. *Taishokukin Seido no Genjō to Kadai*, (The current situation and problems in the company pension system) Tokyo: Rōmu Gyōsei Kenkyusho.

_____. 2000c. *Rōdō Hakusho* (White Paper on Labor) Tokyo: Japan Institute of Labour.

Morgan, S. Philip and Kiyosi Hirosima. 1983. "The Persistence of Extended Family Residence in Japan: Anachronism or Alternative Strategy?" *American Sociological Review* 48:269-281.

Nagase, Nobuko. 1997. "Wage Differentials and Labour Supply of Married Women in Japan: Part-time and Informal Sector Work Opportunities." *Japanese Economic Review* 48:29-42.

_____. 2001. "Part no chingin ni 103 man en no kabe wa jūyoka" (Is the Upper Limit of 1.03 Million Yen Significant in Determining a Wage Rate for Part-Timers?). *The Japanese Journal of Labour Studies*, No.489: 60-61.

Nakamura, Jiro and Atsuko Ueda. 1999. "On the Determinants of Career Interruption by Childbirth among Married Women in Japan." *Journal the Japanese and International Economies* 13: 73-89.

Nickell, Stephen J., L. Nunziata, W. Ochel, G. Quintini. 2001, "The Beveridge Curve, Unemployment and Wages in the OECD." CEP, LSE Discussion Paper 502, forthcoming in M. Woodford (ed.): "Knowledge, Information and Expectations in Modern Macroeconomics: Papers in Honor of Edmund S. Phelps", Princeton University Press, 2002.

Noguchi, Yukio. 1995. *1940 Nen Taisei: Saraba "Senji Keizai"*, (The 1940 System: Japan Under the Wartime Economy) Tokyo: Tōyō Keizai Shinpōsha.

Ogawa, Naohiro and John F. Ermisch. 1996. "Family Structure, Home Time Demands, and the Employment Patterns of Japanese Married Women." *Journal of Labor Economics* 14: 677-702.

Ohtake, Fumio. 1998 "The United States," in Toshiaki Tachibanaki (ed) *Wage Differentials: an International Comparison*, London: Macmillan.

_____. 2001. *Koyō mondai wo kangaeru* (Employment-related problems in Japan). Osaka: Osaka University Press.

Osawa, Machiko. 1990. "Women's Response to Economic Changes." *Japan Labor Bulletin* 29: 5-8.

_____. 1993. *Keizai henka to joshi rōdō* (Economic Change and Women's Labor). Tokyo: Nihon keizai hyōronsha.

_____. 1998. *Atarashii kazoku no tame no keizaigaku* (Economics for New Family). Tokyo: Chūō Kōron.

Rebick, Marcus. 1992. "The persistence of firm-size earnings differentials and labor market segmentation in Japan," *Journal of the Japanese and International Economies*, 7: 132-56.

_____. 1993. "The Japanese approach to finding jobs for older workers," in Olivia Mitchell (ed.) *As the Workforce Ages: Costs Benefits and Policy Challenges*, Ithaca: ILR Press.

_____. 2001. "Japanese labor markets: can we expect significant change" in Magnus Blomström, Byron Gagnes and Sumner La Croix (eds) *Japan's New Economy: Continuity and Change in the Twenty-First Century*, Oxford: Oxford University Press.

Rees, Albert. 1966. "Information Networks in Labor Markets." *American Economic Review* 56:559-566.

Saso, Mary. 1990. *Women in the Japanese Workplace*. London: H. Shipman.

Sato, Hiroki. 2000. "The Current Situation of 'Family-friendly' Policies in Japan." *Japan Labor Bulletin* 39 (February 2000): 5-10.

Shimada, Haruo and Yoshio Higuchi. 1985. "An Analysis of Trends in Female Labor Force Participation in Japan." *Journal of Labor Economics* 3: S355-S374.

Statistics Bureau, Ministry of Public Management, Home Affairs and Posts and Telecommunications. (Formerly Management and Coordination Agency) Various years. *Labour Force Survey Annual Report*.

Tachibanaki, Toshiaki. 1998. "Introduction to Wage Differentials: An international comparison," in Toshiaki Tachibanaki (ed) *Wage Differentials: an International Comparison*, London: Macmillan.

_____ and Ohta, Souchi. 1994. "Wage differentials by industry and the size of firms, and the labour market in Japan," in Toshiaki Tachibanaki (ed) *Labour Market and Economic Performance: Europe, Japan and the US.* London: Macmillan.

Tsuya, Noriko O., Larry L. Bumpass, and Minja Kim Choe. 2000. "Gender, Employment, and Housework in Japan, South Korea, and the United States." *Review of Population and Social Policy* :195-220.

Yamakawa, Ryuichi. 1998. "Overhaul After 50 Years: The Amendment of the Labour Standards Law," *Japan Labor Bulletin*, 37:11.

_____ and Araki, Takashi. 2001. "Rōdō Hanrei kono 1 nen no sōten" (Labor Law Precedents 1999-2000: The Issues Involved), Nihon Rōdō Kenkyū Zasshi, 43:11,2-37.

Yashiro, Naohiro. 1999. *Koyō Kaikaku no Jidai: Hatarakikata wa dō Kawaru ka?* (The Age of Employment Reform: How Will our Ways of Work Change?). Tokyo: Chūkōshinsho.