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# Occupational Sex Segregation and the Japanese Employment Model: Case Studies of the Railway and Automobile Industries

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The aim of this paper is to illustrate empirically, through the use of prominent examples, the degree of occupational sex segregation in Japan and the impact that the decline in such segregation has had on Japanese industrial relations.

The employment model of Japan is characterized by a flexible labor structure featuring broadly-skilled workers who are supported by a seniority-based pay system and demonstrate a high level of labor productivity. However, this Japanese pattern of employment is only the norm for male workers and does not necessarily apply to female workers. Women are generally employed in different occupations, and even when they do perform the same work as men, in most instances they are placed on different career tracks. This occupational and career differentiation is termed as “occupational sex segregation,” and this division by sex has long underpinned Japan’s employment model.

However, recent years have chipped away at the wall of separation, and since the 1990s women have begun to enter occupations previously exclusive to men. This paper will present six case studies and analyze this new phenomenon focusing on the automobile and railway industries, seen as strongholds of Japanese industrial relations.

## I. Introduction

### 1. The Japanese Industrial Relations Model

The Japanese industrial relations model has been commonly characterized by “three pillars,” which consist of lifetime employment, seniority pay systems, and enterprise unionism (OECD 1973). In Japan, employers commonly promise lifetime employment in order to bolster worker morale, and the phenomenon of lifetime employment is generally understood to eventually lead to higher worker productivity and enterprise loyalty. Thus, employees under a lifetime employment system work for the same firm from the start of their working lives to their retirement. Stable employment enables employers to invest in their employees from a long-term perspective, where managers can expect to recoup the consequent higher cost of employee training and resultant wage scales. Such firms offer employees long-term, enterprise-based job training, and so employees are able to muster a broader range of knowledge and skills than many of their counterparts in other industrialized nations. The high level of worker skills and promise of long-term employment also makes Japanese employees amenable to job duty flexibility, a necessary prerequisite to the lifetime employment system. For employees, job security and a regular income are considerable reassurance that they will be able to live a stable life, even without the assurance that they will perform one particular job for the duration of their employment with the company.

In return for lifetime employment, workers make a considerable commitment to the

firm, of which the best evidence is the long hours on the job that most Japanese employees commonly devote to their work. Wage and promotion systems in Japan are also strongly tied to the lifetime employment system. Employees are promoted internally, and their wages rise based on a seniority scale that measures the length of their service within the same firm. It is commonly thought by management and employees alike that seniority reflects job knowledge and skills. Nevertheless, pay is not strictly based on seniority (though seniority is an especially strong element in compensatory evaluation for non-executive workers), but also to some degree on merit.

In addition, many companies have also expanded the private welfare benefits they provide for employees in order to strengthen their commitment to the firm. Large-sized firms usually offer ample welfare benefits to employees such as pension plus retirement benefits, as well as a good accommodation system. This is known as “welfare corporatism” (Dore 1973). Importantly, worker benefits are offered not only for white-collar but also for blue-collar workers. As the latter improve their abilities, blue-collar workers also tend to agree to job flexibility and seniority based wages: a scheme generally known in Japan as the “white-collarization of blue-collar workers” (Koike 1996).

## 2. Occupational Sex Segregation

The lesser-known reality is that this employment model, while significant, is the norm only for men. Women workers in Japan are marked by short-term employment and fewer job skills; moreover, Japan has the largest gender wage gap of all the developed countries. Indeed, there is a tremendous amount of “occupational sex segregation” in the workplace. Although such employment patterns were made illegal by the Equal Employment Opportunity Act (EEOA) in 1985, occupational sex segregation continues to be the norm today.

What is meant here by “occupational sex segregation” is a combination of “job segregation” and “career segregation.”<sup>1</sup> The type of work performed by men and women tends to be defined by their sex. According to government data, more than 50% of all occupations consist mostly of one sex or the other (Management and Coordination Agency 2000).

Even when male and female employees are working on the same job, there are generally different career tracks for men and women. In Europe and the United States, career segregation is observed when women working at the same job as men are rarely promoted (Wirth 2001). This is known as the “glass ceiling.” Although Japan shares the phenomenon, this is not the main issue for the kind of sex segregation experienced by women. Instead, it is very common for there to be several career courses within each occupation. One path for a particular career usually involves employees experiencing a variety of jobs as part of their

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<sup>1</sup> Occupational sex segregation is generally characterized by the phenomenon of “horizontal segregation” and “vertical segregation” (Hakim 1992). Occupational segregation in Japan, however, is not fully explained by these characteristics, as the Japanese workforce has a unique occupational structure best understood by its “institutional division of career tracks.” Hence, this paper defines occupational sex segregation as both “job segregation” and “career segregation.”

promotion track training programs, whereas another career path involves a very limited amount of the kinds of job training experiences that in the majority of cases lead to promotion. While the former type of career is almost always populated by men, the latter is, in practice, reserved for women.

For example, there are both men and women working as clerks in all offices; however, many male workers are usually promoted to upper-managerial status while many female workers remain in their clerical jobs until retirement. According to one government report of 2001, in companies that had introduced several career courses, 98% of clerical workers on an executive career track were male (Ministry of Health, Labour and Welfare 2001). It is generally well known that Japanese firms do not recruit employees for a particular job but rather for a career, and employees work toward that career, not any particular job. Therefore, in Japan, career segregation has two implications; one is that career segregation is tantamount to the creation of a “glass ceiling” for women, and the other is the implicit difference in career tracks. The latter is the more critical issue, one which leads to a severe gender gap in job skills and wage scales.

The Japanese employment model is based on precisely this division of labor. Indeed, occupational sex segregation is co-dependent with the Japanese model. While men are generally trained for a broader range of skills, women do mostly auxiliary work. Men generally commit themselves fully to the firm, while women are usually expected to make primary their domestic roles as “housewives.” Lower wages for women enables higher wages for men. Private welfare, generally provided by the employers, is based on a so-called breadwinner family model where firms grant generous allowances for (male) employees with dependent family members. Labor unions also contribute to this system, and call for wages for men that are enough to support a wife and children. Indeed, “welfare corporatism” is built on this kind of “familialism” (Esping-Andersen 1990).

### 3. Subject, Theories and Hypothesis

The proclivity toward gender segregation in the Japanese workplace has recently begun to change. In the 1990s, female workers began to enter into occupations that were previously only held by males. This trend is best observed in industries that form the lynchpin of the Japanese Employment Model. If gender segregation were an indispensable factor to the continuation of the Japanese Model, a decline in workplace gender segregation would have strong implications for the Japanese Employment Model. Therefore, this article addresses the issue whether the model for Japanese employment needs to be reconfigured to conform with other models, or whether it is possible to maintain the principle elements of the Japanese Model in the increasingly likelihood of an end to gender segregation in the workplace. This study is constructed around three questions:

- a. Why have women sought work in industries previously dominated by men?
- b. How is it that occupational sex segregation has decreased?
- c. How do these changes affect our understanding of the Japanese Employment Model?

These research questions were addressed through a variety of case studies carried out in Japan, and the author is especially concerned here with cases of the railway and automobile industries. Employees in both industries are exemplary of the effects of the Japanese Model for being uniquely multi-skilled and flexible workers. Moreover, these industries have in the past wholly consisted of men; however, from the early 1990s the number of women working in both industries has been on the rise.

It must be noted that until the recent past, women had not been allowed to take up particular occupations in Japan. Indeed, until 1999 the Labor Standards Act in Japan even prohibited women from working at night. While the EEOA was enacted in 1985, companies still continued to not recruit women in places that required night duties, and until the change in the Labor Standards Act in 1999, women did not have an equal chance in the workplace.

In addition to legal discrimination, men are generally considered physically stronger than women. Indeed, on average a woman's bicep strength is only 50-60% of that of a man's (Ministry of Education, Culture, Sports, Science and Technology 2002). According to government data, one quarter of companies in the manufacturing sector only allocate certain jobs to women, or they do not even recruit women, based on the government finding that "women do not have enough muscular strength to do certain jobs" (Ministry of Labour 1998). This thinking might appear to be from the Stone Age, and needless to say, muscular strength does differ between individuals; however, muscle mass does not have an effect on the recruitment process in other developed countries. Yet in Japan it is generally believed that women could not possibly take on heavy physical jobs, and this bias is used as an obstacle in the employment of women. Both factors impede equal opportunities and create job segregation in Japan.

Moreover, the main characteristic of employment for males is lifetime employment, which is implemented by continuous training and retraining of workers throughout their career. Companies usually exclude women from the training process, as managers believe it would be difficult for the company to recoup their investment costs in a female employee who is customarily expected to make her domestic duties primary. This is explained by the statistical discrimination theory (Phelps 1972). Since Japan has a longer term training system for male workers compared with other countries, career segregation is a correspondingly more significant factor for Japanese women.

At the same time, this theory tends to not just exclude but also necessitate the participation of female workers. Japanese managers prefer that not all employees stay with the company long-term on the grounds that they must consider the negative effect on employees who cannot be promoted, and the increase in personnel costs based on seniority basic wages. As a result, rather than just hiring long-term employees, managers occasionally prefer to hire a small percentage of short-term employees who perform duties similar to long-term employees but without the associated long-term costs. Such labor management policies form the core of occupational sex segregation in Japan. According to previous research, Japan's job segregation is surprisingly lower than in other developed countries de-

spite the large gap in wages between men and women (Anker 1998; Blau, Ferber, and Winkler 1998; Hakim 1992; Nishikawa 1997; OECD 1985, 1988; Roos 1985). The contradiction is the result of greater career segregation, and as a result occupational sex segregation in Japan is characterized by a lower rate of job segregation and higher rate of career segregation.

The analysis of occupational sex segregation in this study is framed by three hypotheses: Regulations Restricting Night Shifts for Women, Differences in Physical and Muscular Strength, Theory of Statistical Discrimination.

## II. The Railway Industry

The author considered six case studies in which women in recent years have increasingly been employed in traditionally male jobs, e.g. train drivers, conductors, and automobile assemblers. These case studies consist of interviews with managers, labor union leaders, supervisors, and workers themselves. The interviews principally focus on the railway (company A, B and C) and automobile (company D, E and F) shop floor as typical of the Japanese model. The author analyzes the way each subject overcame gender segregation, and how some work rules were changed with the integration of women onto the shop floor.

### 1. Entrance of Female Workers

The typical shop floor within the railway industry is reserved for full-time, male high school graduates. Generally thought to have lifetime employment, on average, these workers keep their jobs longer than their counterparts in other industries. There are three primary types of job duties: station attendants, conductors, and drivers. Railway employees are usually recruited as “transportation workers,” and are generally expected to undertake all three job categories over the course of their careers. Their general promotion system is as follows: new recruits spend between 2 to 3 years on station duty, then 7 to 8 years as train conductors and after their tenth year or later they are promoted to be drivers. Job relocation within the railway system leads to an increase in wages, and the speed of promotion differs from person to person; theoretically though, almost every employee could eventually be promoted to driver. There are additional rare cases of promotions up to the level of station master, but it is nevertheless typical of the Japanese model to promote an employee based on their having performed a wide variety of job duties during different stages of the employees career with the company.

In 1985, company A built a new type of train targeting tourists, and first began hiring women to serve as on-board crew members.<sup>2</sup> Then in 1992, several firms began to recruit

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<sup>2</sup> Serve-on-board crew members do all the work that male conductors do, but they do not handle train door controls. It is generally believed that these female employees are obviously different from male conductors; that they are on board only to perform passenger services and not for the operation of trains. Consequently, working conditions and job prospects, such as the wage and career system, are completely different for the two positions. Needless to say, the former job is meant only for

women as drivers. Company B built the newest airport express train in 1994, and started employing women as conductors. Likewise, company C established “clerical work” within its categorized station duties, and began hiring women as well. Since the late 1980s, all three companies had been discussing how to address an anticipated labor shortage. Under this situation managers thought to begin employing women, which they also considered would generate good publicity for the company’s new line of trains.<sup>3</sup> The integration of women into the workforce, however, was strongly opposed by their male employees, who gave voice to their opposition through their representative labor unions.

Women were employed in the same jobs as those offered to men, but companies made special accommodations for women in terms of work schedule, job training, and promotion. New work shifts without night duty were created and reserved for women, as it was thought that the rate of female employees was limited to approximately 10%. Women’s job duties were very restricted: their job training and skills were limited and new women employees had little experience in related fields. In company A for instance, from the outset women were groomed as drivers. Yet, it took men at least 10 years of station and conductors’ duties before they could be promoted to the position of “driver.” The company, however, applied a system in which women workers would take on driving duties after only 2 years experience, as it was thought that women were likely to quit sooner than men.<sup>4</sup> Nevertheless, managers expected women drivers to remain in the firm for at least 10 years on the grounds that they needed to return their investment cost and gain the public trust. Likewise, in company B, women conductors were promoted sooner than men, and with earlier job transfers, women began receiving comparatively higher wages under the extant wage system. Therefore, in company B, women conductors received 10 to 20% higher wages than the male conductors of the same age, and 30% higher than women of the same age holding clerical jobs.

Most women in integrated jobs remained in the same firm, and therefore managers made sure that women could stay with their jobs for at least the minimum length of time expected. In 1999, protective legislation restricting employment for women was revised, which included the abolition of the legal proscription against late-shift night work for women. After revision of the law, companies passed many jobs usually reserved for men on to women, and newly hired men and women were both employed for “transportation work.” Indeed, companies generated an entirely new policy of introducing all new hires, male and female, to the same promotion system. To the present day, companies B and C have been

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women and latter job is strictly reserved for men.

<sup>3</sup> These companies then recruited women from junior colleges and men from high schools. Due to the overwhelming disproportionate numbers of women attending junior colleges, recruiting junior college graduates meant recruiting women. In fact, 88% of junior college graduates are women (Ministry of Education, Culture, Sports, Science and Technology 2003). In effect, it was easier to strengthen sex segregation in the workplace by implementing academic qualifications.

<sup>4</sup> Indeed, men would remain for almost 20 years in their duties as conductors, drivers and operators in order to work their way up from the regular trains to express trains. For greater publicity, women were assigned to ride on express trains from the very beginning.

hiring between 20 to 40% of women for transportation work, and presently the rate is still on the increase. Company A, on the other hand, has stopped recruiting women entirely, the occurrence of which will subsequently be examined in a later study.

## 2. Three Factor Changes in the Railway Industry

Occupational sex segregation in the railway industry has progressed to a period of occupational integration for both men and women. Three factors that historically contributed to sex-segregated occupations have changed: legal and corporate systems, attitudes towards physical strength as a job prerequisite, and statistical conditions that contribute to occupational segregation.

After the legal review imposed by the EEOA, two out of three companies chose to implement systems requiring the same duties and careers be assigned to both sexes, and the number of women in the workplace subsequently increased. The legal prohibition of night duties for women had created not only a sex-based working shift differential in both industries, but was fundamental to the divisions in hiring by gender, training, and promotion.

Thanks to technological improvements, sex-difference in physical strength is no longer a significant factor in an employee's ability to perform regular job duties. The majority of technological changes came with electrification in the 1970s, but the systematic sex-segregation that had developed in the previous decades remained as a matter of customary employment practice. When women were first recruited, managers did not feel comfortable with their assessment of the physical strength of women employees. Managers, union leaders, and shop foremen discussed women's job capabilities (i.e. whether they could easily manipulate train controls in an emergency, how fast they could react in case of accidents, etc.) when railway managers introduced the so-called "special care" for women, and managers required lengthier training for women than for men. However, once women took regular duties in the 1990s, managers and employees both recognized that gender did not affect job duties when augmented by technological improvements. Recently, women employees themselves, union leaders, managers, and shop foremen have come to realize that there are no duties that only men are physically capable of accomplishing, and the employment of women has led to a reassessment of women's job capabilities.

When the subject companies began employing women, each introduced specific career courses that would be reserved for women. Managers thought it would be sufficient that women took on single jobs, while men would continue to be trained as multi-skilled workers. Case studies show that this type of career segregation was premised on the considerable difference in the human capital invested in men, who were expected to devote their entire working lives to the company, and women who were expected to quit much sooner. While women were put on a "fast-track" promotion system in the 1990s, women's career limitations nevertheless remained.

At the same time, these cases are obviously different from traditional career segregation for the following reasons:

- (i) Women in integrated jobs gain higher skills and wages than women in segregated jobs.
- (ii) Women's length of service is on the increase in integrated jobs.
- (iii) Career integration has progressed since the legal review imposed by the EEOA.

#### (1) Women's Higher Skills and Wages

The first point is exemplified when women in integrated jobs were required to work much longer terms than in women segregated jobs. Women's employment at that stage differed from male long-term employment, in which it is presumed that managerial work is the employee's next step; however, it was never the same for the short-term employment occupation in which women were generally employed, and it was assumed that skill development would soon be interrupted or terminated. The fast track became a certain level in human investment that allowed women to improve their skills. This article refers to this style of employment as "medium-term employment," in the sense of hitting the ceiling for promotions at a certain level (Figure 1). Medium-term employment thus refers not only to the number of years of employment, but also to the skill building and wage structures associated with it. In other words, the character of women's employment has transcended from traditional career segregation, which consisted of long-term male employment and short-term female employment, to long-term male employment and medium-term female employment.

#### (2) Lengthening Years of Service

The turnover rate for women is clearly lower in integrated than in segregated jobs. In company A and C for instance, women drivers keep on working between 7 and 8 years. Moreover, in company B there is no gap of the length of service between women and men in integrated jobs. In these companies there is a clear difference in the length of service despite the fact that women have the same academic background as their male counterparts.<sup>5</sup> While there is the possibility that job assignments and skill development will affect the length of service, it is estimated that there are three factors supporting women so as to keep them working: higher wages, *esprit de corps* (job pride), and work schedule. The latter being that in the railway industry, the shop floor has little overtime work as long as trains run on time, while on the other hand, office workers often have unexpected overtime that women find objectionable and consequently causes them to leave the firm. It appears that owing to shift work, transportation workers find it much harder to manage work and family life than clerical workers, which is in fact not the case. The main issue for women to voluntarily separate from their employment is the issue of overtime work rather than their actual work shift schedule. Consequently, medium-term employment functioned more successfully.

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<sup>5</sup> Most women in segregated jobs, for example, quit in their third or fourth year with the company.



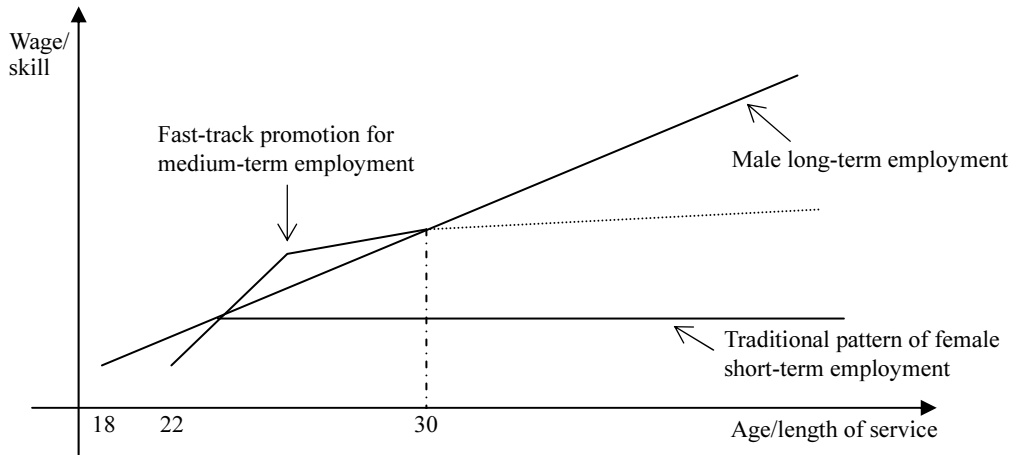


Figure 1. Wage Curve and Training for Fast-Track Promotion in Medium-Term Employment

### (3) Reviewing Lifetime Employment and Integrating Careers

The principle reason was that managers for Company A wanted to avoid hiring women after the EEOA review. Company A had streamlined its management since 1999, and by 2001 a quarter of its employees had accepted “voluntary retirement.” Under such conditions, the company realized that it could not afford to employ workers who needed special terms such as lifetime employment.

In contrast, financial conditions in companies B and C remained quite stable and their management teams willingly continued to recruit women. However, these companies began reforming their career and wage systems, thus becoming more flexible in their ability to promote and dismiss their employees. Company B for instance, introduced a new system in 2000. In its previous system, transportation workers at company B had promoted job rotations from station duties to conductors and drivers in turn. In the new system, these duties became equal at all levels. Wages based on merit and post were reinforced, and instances of wages based on seniority declined. The basic pay scale on average became rather flat. Nevertheless, total lifetime earnings did not make any difference because of the union’s bargaining.<sup>6</sup> Briefly, they still keep multi-skilled training and promotion systems, but managers have introduced flexibility in career and merit based wages. The cause in statistical discrimination weakened, if the training based on long-term and seniority payment were to be diminished. In medium-term employment, women had no career prospects even after a substantial time of employment. Companies B and C reduced the barriers to integrate the ca-

<sup>6</sup> In the new wage system, employees receive 15% higher wages in their thirties and 15% lower wages in their late forties compared with the previous wage system, which was based on minimum basic wages without any increase in pay except the regular rise. So, the total wage gains and losses were offset. Moreover, employees between 40 and 50 are guaranteed their previous wages.

reer system by reviewing terms of long-term employment. The integration between men and women has continued to progress.

### **III. The Automobile Industry**

#### **1. Entrance of Female Workers**

Previously the assembly line of the automobile industry, like the railway industry, was an all-male workplace. The automobile industry, however, had male contract employees who were used to being adjusted at employment levels. In general, the rate of non-regular workers was from 20 to 30%, and generally only full-time employees were trained as multi-skilled workers. Consequently, a hierarchical male labor structure formed out of regular and non-regular employees.

According to Koike, Chuma, and Ota (2001), assembler's skills are categorized into four levels:

- Level 1: Workers are on a specific job. This is for non-regular workers.
- Level 2: Workers gradually given all (approx. 15) jobs on the line, which can also be focused on 3 to 5 jobs as well as detecting and adjusting for their failures. These are usually young, regular workers.
- Level 3: Workers on this level take on all jobs and investigate the cause of their failures. These workers are considered the backbone of the company.
- Level 4: Workers who could be instructors at overseas factories and participate in redesigning job allocations.

These levels are for non-executive workers only. Such skill development is thought to be one of the features of Japanese workers, and the reason for their high labor productivity.

The automobile industry started to hire women in the early 1990s. As the labor market tightened during the good years of the late 1980s, companies believed they must hire women to make up for what they expected to become a shortage of young workers sometime in the near future.

Company D started business in 1992 as the experimental subsidiary of company F, and from inception management had planned to bring in female workers. To do so, the company made many technological changes to its manufacturing process, so as to create an assembly line that eliminated the need to move heavy objects and thus create a work environment by technological innovation where men and women could perform the same duties. At company E, which primarily made trucks, women began to be hired for the assembly line in 1992. At major manufacturer F, the results of female employment at its subsidiary D had a good affect; in 1998, the year before the abolition of the protective regulations for women, it also began hiring women.

Both companies started employing women as full-time workers and gave them the same jobs and career courses as men. Each worked under the same working conditions with the exception of differences in working patterns. Employees worked two shifts, and the

second shift included some night duties. On the night shift, women would come to work two hours earlier and stop work at 22:30, about two hours before the end of the shift. After women workers stopped work, the male squad leaders and leaders responsible for out-of-line labor would substitute for them. Therefore, in terms of labor organization the proportion of women could not exceed that of squad leaders, and stayed at about 5%.

After the April 1999 elimination of the protective regulations for women, male and female work patterns became exactly the same, and the percentage of women rose rapidly. For instance, in 1999 company D hired 42 men and 56 women, and in 2000 it hired 25 men and 26 women.

## 2. Factors Contributing to the Maintenance of Sex-Segregation of Occupations

Like the railway industry, the EEOA eliminated one factor for sex-segregated occupations in the automobile industry; however, differences in the two other factors remain. There is a limit on the work that many women can actually do. Even at company D, where the latest equipment is installed, women are only able to do on average about 80% of the tasks appointed to them. Therefore, it is considered difficult for a station chief to treat women entirely equal to men, and this factor impedes the continued development of women's job skills.

Another point that should be considered here is that many tasks generally require muscular strength, and socially perceived notions of differences impede an objective assessment of an employee's strength. In these case studies, when women were first hired they were presented with standards that limited their activities; however, once the company had experienced mixed workplaces the socially perceived differences in physical strength eventually died out.

Women's attrition rates are higher in the automobile industry. In company D for instance, women's length of service is on average between 3 and 4 years. Although some women continue working after 5 years, even those women quit their jobs when they get married. In other words, the turnover rate is not significantly different from that of women who in the past engaged only in short-term employment. Many women blame physical limitations (muscle strength) for their decision to quit, and one can suppose that the influence of perceived as well as real differences in muscular strength, which had been eliminated in the railway industry, have not been eliminated in the automobile industry—a fact which is reflected in employment attrition rates.

Nevertheless, in all case studies, many companies are aggressively recruiting women employees, and it is apparent that the workplace has not refrained from training people who might quit. In fact, women's turnover rate has not affected their access to educational training or skill building, which indicates the other side of statistical discrimination. Managers seem to prefer that women leave their companies sooner rather than later. In the automobile industry, some male workers quit faster than women, but recently the male length of service has increased due to the economic recession. Therefore, there is a possibility that automobile companies have adjusted to the decreased rate of male resignations by using short-term

women employees.

Consequently, the gap of the skill level between men and women still exists. The skill level of most women is in level 1, with the exception of some in level 2, based on the definition of Koike, Chuma, and Ota (2001). Nevertheless, there is a notable quality difference from customary gender segregation. Women are provided with the same career courses as men, and they are also trained as multi-skilled workers. In this context, continuous female employment is practically assured. Compared with the simple single-skill work that was typical of women's employment in the past, women are receiving much more training than previously.

## **IV. Conclusion**

### **1. The Incentive for Employing Women**

There were two factors necessary for managers to initiate hiring women in the early 1990s. First was the labor market. This was by no means due to a shortage of labor during a time of transient economic change. Instead, the move signified a general preparation for future shortages that stemmed from the low birth rate. Second, the change was a final result of the EEOA enacted in 1985. While the EEOA had, to date, not actually been enforced (because it only required employers to "make an effort"), by the 1990s companies were obliged to make some institutional moves against sex discrimination in the workplace. Similarly, several companies were of the idea that employing women would be good for public relations. Indeed, the hiring of women as train conductors and drivers was greatly celebrated by the Japanese media.

Union leaders followed the lead of managers by also recruiting women. In the workplace, female workers were not always welcomed, and managers and union leaders received strong complaints from some male workers: "This job is definitely not for women" was a common refrain. The reason of this resistance was to protect their territory, plus strongly held beliefs regarding women's abilities and the social need to protect their reproductive health. However, men's opposition dwindled with the gradual increase in the number of women. Recently, labor unions have also begun to recruit as many women as men.

### **2. The Three Factors Which Formed the Occupational Sex Segregation**

#### **(1) Revision of the Law**

The legal prohibition of night work for women was eliminated after the Labor Standard Act was reviewed in 1999. Thereafter, the number of newly recruited female workers multiplied rapidly in many firms. A number of published case studies improved the situation, and this legal review had a significant impact on the decline in workplace segregation.

The new legal framework, however, did not necessarily improve or change the actual work rules found in a variety of companies. A few case studies, which have not been mentioned due to space constraints, indicate that some companies have maintained work rules

that encourage sex segregation. In most cases, the maintenance of sex-biased work rules was the result of demands by the labor unions aiming to protect women. Whether the representative unions emphasize protection or equality, the differences are reflected in the union's particular history of organizing women. Unions that have historically organized women and men tend to be against rule changes, even if they would open up new opportunities for women. This is because protectionist work rules regulating women's employment were the result of organizing drives led by that union in the past. Ironically, those workplaces with a long history of men and women working together were inclined to be much slower in occupational desegregation.

### (2) Differences in Muscle Strength

In the railway industry, technical innovations have proven women capable of taking on almost every job, but in the automobile industry, there are a few jobs women are still unable to undertake. In all cases, managers, union leaders, and workplace supervisors are greatly concerned with women's abilities when they first start their new duties; however, managers are put at ease after they observe women actually working on the job. Briefly, the importance of muscle strength is much smaller than one would think. Also, even if women's jobs were rather limited in the automobile industry, managers, union leaders and many women workers believe it is possible that men and women could still participate together in the same system for promotion and status. In fact, physical limitations do not appear to be the major problem once envisioned.

### (3) Theory in Statistical Discrimination

There are two points that can be concluded from the phenomena of career segregation in Japan. As a general trend, when firms began employing women they introduced several career courses divided by gender. Therefore, occupational sex segregation still remains widespread. Although integrated career courses do exist for both sexes, the gap in career development remains in workplaces because women consistently leave their jobs after a short period. Secondly, in 50% of the cases examined (Company B, C and E), women were generally able to continue in a particular career course. At the same time, it must be noted that these women were not always provided with the choices found in the male-centered career system. In some cases, career integration is enabled by the introduction of a new career system for both sexes. Under the new system, women receive job skill training and are paid higher wages compared with women in the historically sex-segregated system. On the other hand, the range of skill development and wage scales for men appears to narrow, as can be seen from examples in company B. That is, careers for both sexes are integrated from either side and an increase in demand for women's wages and skills appears to necessitate a decrease in men's wages and required job skills.

Additionally, there is the possibility that the integration of women is being used as an excuse to implement significant restructuring of employment patterns. In the railway indus-

try, it was thought that drivers required a high level of job skills, whereas technological innovation had decreased the level of skills necessary to perform job duties. However, the company had found that its unions opposed any modification of the career and wage system. Also, it may have found the need for gender integration provided the political leverage necessary to restructure job and skill categories. Indeed, after the integration of women, many men, on their own and through the voice of their union leaders, complained by saying “anybody can do our jobs from now on” or “our jobs are diminishing.” Still, the unions had little choice but to eventually accept the systemic changes. It is not clear what managers meant, but it is clear that the integration of women triggered a restructuring of the employment pattern.

### 3. Impact on the Japanese Model

The progression of de-segregation demanded revision of the Japanese model. In the customary Japanese model, firms manage homogeneous labor resources so that their human resource management relies one-sidedly on an inflexible long-term training and promotion system. Workers not suited for this system were generally excluded from the employment framework. This article clearly shows that, at present, some companies face a non-conventional challenge to integrate heterogeneous laborers. And yet, such companies seem to be developing new systems for improving workers abilities based on flexible long-term employment; such experiments have so far brought positive results.

Furthermore, a closer examination confirms that enterprise-based training and multi-skilled work still remains the norm, and most employees are expected to work for many years for the same firm. This means that elements in the Japanese employment model are still being retained even after the acceptance of women into the workforce. Thus, we can conclude that certain elements of the Japanese model can exist in an employment environment characterized by declining gender segregation.

This article introduces only six case studies; however, the employment experiments investigated have been performed within most industries. The trend is inevitable, and indeed irreversible. The Japanese government, for instance, initiated a redesigning of its social welfare policies, historically based on a model premised on one male wage earner per family, into a system where both men and women are assumed to be engaged in waged work. Japan has only begun investigating employment models in which men and women work together, and the model proposed in this article might well become one of those used to represent the Japanese case.

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