
Introduction

The Gender Gap in the Japanese Labor Market

Among the labor economists who pay careful attention to international comparisons of labor market outcomes, the gender wage gap of Japan, as well as that of Korea, is known to be the largest among OECD countries.¹ The hourly wage in Japan of permanent and regular female workers relative to male workers, which is not adjusted for the observed characteristics of workers, was 59.1 in 1990, while the corresponding figure for 2000 was 66.0; this indicates that there has been only a 6.9 percentage point gender wage convergence in this 10-year period. This wage convergence, however, may have been caused by the convergence of the characteristics of workers across genders. Indeed, Akira Kawaguchi reports that 60% of unadjusted wage convergence between 1990 and 2000 is explained by the convergence of the observed characteristics of workers across genders, based on a large sample from the Basic Survey of Wage Structure.² He pointed out that in particular the convergence of years of job tenure explained the gender wage convergence.³

With this persistent gender wage gap as a background, this special issue of the Japan Labor Review aims at explaining the mechanisms behind the gender wage gap in Japan. To this end, this issue contains five papers that are largely classified into two categories. In the first category are two papers that attempt to explain the gender wage gap by occupational segregation. The second category consists of three papers that examine the relationship between female employment and the performance of firms.

Recent studies in the US have pointed out that occupation-establishment segregation explains a large fraction of gender wage gap in the US.⁴ The first paper by Haruhiko Hori reports that occupational segregation measured by the Duncan index based on the Population Census was almost constant between 1980 and 2000. He then goes on to estimate the wage regression model using the proportion of females in a given occupation as an additional explanatory variable based on the Basic Survey of Wage Structure. Through this, Hori finds that both males and females receive a lower level of compensation if they are engaged in

¹ Francine Blau and Lawrence Kahn, "Understanding International Differences in the Gender Pay Gap," *Journal of Labor Economics* 21, no. 1 (2003): 106-44.

² Akira Kawaguchi, "1990 Nendai ni okeru Danjokan Chingin Kakusa no Shukusho [Changes in the Japanese gender wage gap in the 1990s]," *The Economic Analysis*, no. 175 (2005): 51-80.

³ Geraint Johnes and Yasuhide Tanaka report that the wage convergence in Japan between 1993 and 2000 is almost completely explained by the changes in the Mincerian wage regression coefficients ("Changes in Gender Wage Discrimination in the 1990s: A Tale of Three Very Different Economies," *Japan and the World Economy* 20, no. 1 [2008]: 97-113). However, the result is based on 400 to 500 observations of International Social Survey Programs that do not include years of job tenure, which is a critical explanatory variable in Kawaguchi (2005).

⁴ For example, Trond Petersen and Laurie A. Morgan, "Separate and Unequal: Occupation-Establishment Sex Segregation and the Gender Wage Gap," *American Journal of Sociology* 101, no. 2 (1995): 329-65; Kimberly Bayard, Judith Hellerstein, David Neumark and Kenneth Troske, "New Evidence on Sex Segregation and Sex Differences in Wages from Matched Employee-Employer Data," *Journal of Labor Economics* 21, no. 4 (2003): 887-922.

occupations with a high proportion of female workers. However, the combination of occupational segregation and wage penalties for female-dominated jobs can only explain 5 percent of the gender wage gap in Japan; this figure is much smaller than those found in the US. As is clearly cautioned in the text, readers should recognize that this analysis is mainly limited to blue collar jobs; the majority of white collar jobs are excluded from the analysis as occupational information on white collar jobs are rarely recorded in the Basic Survey of Wage Structure. As such, further research based on a dataset that covers a wider range of occupations is warranted.

The second paper by Wakana Shuto shed light on the facts behind statistical figures reported in the first paper. It reports on cases of occupational segregation in the railway and automobile industries, which are traditionally considered as male-dominated jobs. Based on interviews with managers, trade union leaders, supervisors and workers themselves, Shuto describes how female workers enter those so-called male jobs and the problems that arise in the process. She reports that technological progress in the railway industry largely eliminated the physical handicap of females, but that this is not necessarily the case for the automobile industry. This finding implies that gender differences in physical strength are still a cause of occupational segregation. However, her additional finding challenges the commonly held belief that blue collar jobs are less suitable for females who are trying to strike a balance between work and family commitments, due to the irregular work shifts of such jobs. This interview-based report indicates that blue-collar jobs are even suitable for the purpose of work-life balance, because unscheduled overtime work is less frequent in blue-collar jobs than in white-collar jobs. In addition, Shuto points out that gender segregation is occurring even within occupations, as employers who expect short-term job tenure among female workers tend to design jobs for female workers as “dead-end” jobs with a small amount of training invested in them. These findings perhaps suggest the statistical analyses that capture heterogeneity in the dynamic aspects of job careers across genders give rise to meaningful implications.

The remaining three papers belong to the second category, which examines the relationship between female employment and the performance of firms. A testable implication of Becker’s original model of the taste-based discrimination of employers is that the discriminatory employer sacrifices his or her profit to indulge their own tastes. Judith K. Hellerstein, David Neumark and Kenneth R. Troske first examined this testable implication based on US data, and found that firms with a higher proportion of female workers earn higher profits, which is consistent with Becker’s prediction.⁵ Shinpei Sano implements a similar test based on the firm-level data of Japanese publicly traded companies, and finds that those firms with a higher proportion of full-time female workers earn higher profits once firm-level fixed effects are controlled for. In addition, he reveals that a positive correlation between the proportion of female workers and the profit of firms is observed in industries where the concentration is high; this observation is also consistent with Becker’s prediction,

⁵ Judith K. Hellerstein, David Neumark and Kenneth R. Troske, “Market Forces and Sex Discrimination,” *The Journal of Human Resources* 37, no. 2 (2002): 353-80.

because only employers in non-competitive industries can indulge their discriminatory tastes at the expense of profits. These findings coincide with the results of Daiji Kawaguchi based on the Basic Survey of Japanese Business Structure and Activities.⁶

Naomi Kodama, Kazuhiko Odaki and Yoko Takahashi point out that firms which hire more women record higher returns on assets in cross-sectional estimations; however, this correlation disappears once firm-level fixed effects are allowed for. They then investigate what are the fixed effects that create a positive correlation between the proportion of female workers and return on assets. They match information of positive human resource management strategies for female workers, taken from a guidebook for job hunting for female students, with the financial information of the firm. In their data set human resource management practices are measured by the gender gap of average job tenures, the proportion of female workers in management positions, and the existence of a re-employment system for job interruption due to family reasons. These variables are found to be positively correlated with the proportion of female workers and the performance of firms. Based on these findings, they claim that a human resource management style that fully utilizes the female labor force produces results.

The last paper by Akira Kawaguchi posits a hypothesis that employers without strict corporate governance are likely to indulge their taste of discrimination at the expense of shareholders. He examines this hypothesis by examining the relationship between the corporate finance structure of the firm/activity on the investor's relationship, the proportion of female workers among managers, and other indexes of human resource strategies for utilizing female workers. The analysis based on original survey data finds that firms under the stronger control of stockholders are more likely to adopt human resource management strategies that attempt to fully utilize the female labor force. We should admit here a possible endogeneity issue caused by an unobserved factor that determines both corporate governance structures and human resource management strategies; however, the idea by Kawaguchi to examine the relationship between corporate governance structures and gender issues is very novel and important. This idea may well explain why Becker's long-term prediction that competitive pressure in markets eventually purges discrimination does not seem to hold in the real world. Further research based on this original idea seems promising.

Overall, the papers in this special issue suggest the importance of social institutions, such as occupational segregation or practices of human resource management, as an explanation for the persistent gender wage gap in Japan. Conscious reforms of these institutions and the competitive pressure of markets seem to be important factors in narrowing the gender wage gap.

Daiji Kawaguchi
Hitotsubashi University

⁶ Daiji Kawaguchi, "A Market Test for Sex Discrimination: Evidence from Japanese Firm-Level Panel Data," *International Journal of Industrial Organization* 25, no. 3 (2007): 441-60.