

Wage Distribution in Japan: 1989-2003

Ryo Kambayashi, Daiji Kawaguchi, and Izumi Yokoyama*

November 28, 2007

1 Introduction

This study examines the recent trend of the Japanese wage distribution based on a micro-level data set from the *Basic Survey on Wage Structure* (1989-2003). We perform several decomposition analysis of changes in the distribution of the hourly wage. We observe that lower returns to education and years of tenure contribute to a diminishing income disparity between groups for both sexes. A larger variance within a group contributes to the wage disparity for males, while an increased heterogeneity of workers' attributes contributes to the wage disparity for females. The Dinardo, Fortin, and Lemieux decomposition confirms the basic findings with a parametric variance decomposition.

2 Data

The data set used in this study is micro-level data from the *Basic Survey on Wage Structure* (*BSWS*), compiled annually by the Japanese government between 1989 and 2003. This survey includes observations randomly chosen from almost all regions and industries except for agriculture in Japan. The annual number of observations is approximately 1.5 million workers from 60-70 thousand establishments. The sample includes all establishments with 10

*Ryo Kambayashi: Institute of Economic Research, Hitotsubashi University, 2-1 Naka, Kunitachi, Tokyo 186-8603 Japan; Tel: +81-42-580-8364; Fax: +81-42-580-8364; E-Mail: kambayas@ier.hit-u.ac.jp; Corresponding Author: Daiji Kawaguchi: Faculty of Economics, Hitotsubashi University, 2-1 Naka, Kunitachi, Tokyo 186-8601 Japan; Tel: +81-42-580-8851; Fax: +81-42-580-8882; E-Mail: kawaguch@econ.hit-u.ac.jp; Izumi Yokoyama: Faculty of Economics, Hitotsubashi University, 3-11-33 Higashi Kunitachi, Tokyo 186-0002 Japan; Tel +81-42-501-9751; Fax: +81-42-501-9751; E-Mail: ed062008@ier.hit-u.ac.jp

or more employees in both private and public sectors and all establishments that belong to private firms with 5 to 9 employees.

3 Results

Simple aggregate statistics indicates that wage inequality did not change during the period, but the decomposition analysis reveals that the seemingly steady trend is a product of two opposing trends: 1. declining between-group (defined by education, experience, tenure and firm/establishment size) wage inequality for both sexes, and 2. increasing within-group inequality among male workers and increasing observed heterogeneity among female workers.

The declining between-group wage differentials are largely due to the decline of the return to education and job tenure, perhaps because of the increase in college-educated and long-tenured workers. Our results show that the aging of the population in itself cannot explain the recent increase in within-group wage inequality among males. As for females, gradual increases in college-educated and long-tenured workers make the female full-time workers more heterogeneous. This contributes to the increase of wage inequality among them.

The increase of within-group inequality among male workers may well explain why the general public in Japan feels that inequality has increased in the last 15 to 20 years, though we can hardly confirm it in the aggregate statistics. An individual presumably perceives inequality by comparing his/her wage within a group to which he/she belongs rather than comparing it to the total distribution. The increase in the heterogeneity of female workers is consistent with the emergence of career-oriented women in the last 20 years, and this trend will continue mechanically as long as these career-oriented women stay on the current track.