

Female Employment Focusing on Occupations and Tasks: An Empirical Analysis Using the Occupational Information Network of Japan and PIAAC

Kyoko KOMATSU

This study analyzes female employment in Japan by focusing on occupations and tasks, where “task” is a unit of work activity that produces output. Specifically, this study examines recent changes in female employment and challenges in utilizing women’s skills in Japan, focusing on tasks and detailed occupational types to capture the characteristics of occupations that major occupational groups cannot adequately measure. This study conducts the following four empirical analyses.

First, this study analyzes the trends in task distribution in the Japanese labor market from 1990 to 2015, focusing on gender differences. This is carried out by matching occupations in the Population Census with those in the Occupational Information Network of Japan. Based on the definitions developed by Acemoglu and Autor (2011), tasks are classified into five categories: non-routine analytical, non-routine interactive, routine cognitive, routine manual, and non-routine manual tasks. The results demonstrated a trend of “task polarization,” in which there were increases in both high-skilled non-routine analytical and interactive tasks, and low-skilled non-routine manual tasks. Concurrently, routine manual tasks decreased. Additionally, it was clear that the increase in non-routine tasks was consistently greater for women than for men, and task polarization was particularly pronounced among female regular workers. Moreover, focusing on women’s occupational skills, a significant increase was observed in the distribution of care skills, while no increase was observed in the distribution of skills in management, computer science, and the scientific and technical areas.

Second, this study examines the impact of literacy and numeracy skills on employment and the gender gaps observed. Moreover, it analyzes the effect of the use of such skills on wages compared to that in South Korea, the United Kingdom, and Norway. Drawing on the microdata collected from the Programme for the International Assessment of Adult Competencies (PIAAC), conducted by the Organisation for Economic Co-operation and Development (OECD) from 2011 to 2012, the study presents the following results. In Japan, unlike women in the UK and Norway, women with children do not tend to participate in the labor market, regardless of their literacy and numeracy skill levels. In addition, even among the younger generation (born between 1978 and 1988), many competent women with children do not participate in the labor market, despite the recent expansion of childcare support systems. Further, the utilization of literacy skills at the workplace and their effect on wages differ between men and women. In particular, the

wage gap is relatively small when they utilize their skills in the context of regular employment.

Third, this study examines how occupation and contractual type affect women's continuation behaviors of the first job during pregnancy. Sourcing data from the Japanese Panel Study of Employment Dynamics 2016, this study compares the data collected on the women who secured their first job before the 1999 enforcement of the Equal Employment Opportunity Law and those who started after it. This study found heterogeneity among the same major occupational categories of clerical workers and professional or technical workers. In addition, it was found that the probability of job continuation differed according to occupation and contractual type before and after the revision in the Law. After the revision in the Law, planning and administrative clerical workers, who have relatively many non-routine analytical or interactive tasks and high flexibility in working hours, have been likely to continue their jobs during pregnancy. Moreover, while there has been an increase in the job continuation for regular employees, no change has been observed among the non-regular employees.

Fourth, this study investigates the rate of women returning to the labor market who had left their jobs due to pregnancy or childbirth and how their prior work experience affects their re-employment to the same occupation. Obtaining data from the Japanese Panel Study of Employment Dynamics 2016–2018, the following results were obtained. While women with more credentials than a four-year college degree and marketing staff return early to the labor market, they are likely to be employed as non-regular workers rather than regular workers. However, healthcare and social welfare workers return to the labor market early as regular workers and are also likely to return to the same occupation. In general, while employment patterns differ by occupation, whether women return to the same occupation or not depends on the number of years they worked in their previous jobs and the number of years they remained unemployed after quitting.

Overall, the employment situation of Japanese women has diversified, and women's employment patterns differ according to differences in occupational characteristics such as flexibility of working hours and type of tasks. Some women with regular employment are now engaged in high-skilled non-routine tasks, similar to men. However, there is no significant change in the employment situation of high-skilled women with children and those with non-regular employment in Japan, demonstrating that their skills are not being fully used. To fully utilize women's skills, companies must change their employment practices and increase the flexibility of their working styles. Moreover, the government must support their re-employment and establish a system to assist non-regular workers' career development.