Abstract in English

Classification of Occupational Career by Dynamic Hamming Distance: Description of Women's Occupational Career and its Application to Quantitative Analysis

Sumire KUROKAWA

There have been various structural and institutional backgrounds to the expansion of women's labor force participation since the 1980s, including changes in employment system and the industrial structure, and improvement in work-family balance system. Women's employment pattern was diversified, while some women had been working as regular employees, more women had been starting occupational careers in non-regular employment.

Women's career studies in sociology are divided into three types. The first, is that of studies of occupational career trends that describes women's employment status by birth cohort using aggregate data. The second, is that of studies which explore determinants of women's occupational mobility. The third, is the studies which describe and classify occupational careers of individuals using microdata and examine the relationships between careers and various variables. In the third type, most of the previous studies that attempted to classify careers used some methods of concatenating employment statuses at any points in time and reproducing the quasi-career. However, such a method involves the risk that an individual career may be represented in an employment status which is regarded as exceptional from her/his overall career. Especially women's employment statuses tend to be fluid due to life events and family factors.

To avoid the risk, we need to describe personal occupational career using entire career history data. In this study, we attempt to describe and classify women's careers using Dynamic Hamming Distance, one of the methods of analyzing sequential data. The two aims of this study are stated as bellow. Firstly, we present that DHD can describe women's employment patterns while solving problems left in women's career studies. Secondly, we present that careers classified by DHD can be effectively used in quantitative analysis as female career pattern variables.

In sociology, DHD is used in occupational career data analysis, life-course data analysis and so on. We are able to classify women's career patterns using this method. We use the data of the "Questionnaire Survey on Occupational Career and Working Style" from The Japan Institute for Labor Policy and Training. This survey was conducted in July and August 2013, using a combination of Life History Calendars and normal questionnaires. In this study, the subject of

analysis is female in mid-prime age (aged 35-44). As a result, we classified women's career patterns into eight.

We submit some findings of the classification by DHD summarized as follows: Firstly, it considers not only the composition ratio of employment statuses in occupational careers but also the timing of changes of employment statuses. Secondly, it uses only the information from the data in the classification process. Lastly, it describes women's careers without being affected by exceptions because it uses entire career history data.

By using women's careers classified by DHD as explanatory variables, it becames possible to examine the effects of previous work experience on current consciousness. As a result of analyses with life satisfaction and subjective class identification as dependent variables, it is found that such a past work experiences have a significant effects as the experience of transition from a regular employee to non-regular employee, transition from white-collar regular to blue-collar non-regular employment, work in lower white-collar like a clerical work and sales work.

This study clarifies that DHD can efficiently classify women's careers. we describe women's careers by DHD which include a complex combination of transition between occupations and transition between employment statuses. DHD can be an effective method of describing and classifying individual careers because it can describe careers without losing the diversity of women's working styles. Furthermore, it is possible to comprehensively consider how occupational careers affect current consciousness, by applying careers as an explanatory variable to quantitative analysis.