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Employment Preferences of Workers: Results of a Joint Survey with an Employment Support NPO



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Employment Preferences of Workers: Results of a Joint Survey with an Employment Support NPO¹

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In this study, we estimated the preferences of workers facing difficulties in finding jobs. Specifically, through an organization that provides employment support to workers facing difficulties in finding jobs, we conducted an online survey of workers who are eligible for support. Specifically, we used the results of a conjoint survey in which respondents select a job description and answer direct questions about desired work content and created a multifaceted estimate of the distribution of respondents' preferences. The results of the analysis showed heterogeneity among the respondents regarding their preferences for work. For the question "Which is more important, responsibility or less work?", the responses were divided equally, and there was extreme variation among the answers provided by workers facing difficulties in finding jobs. There was also a strong relationship between important factors and the jobs selected in the conjoint survey. There was a clear trend that workers who preferred less burden avoided jobs with detailed descriptions. In contrast, that trend was weak for workers who preferred responsibility.

¹ The data used in this paper were collected through a joint survey with the Global Skills Initiative (one of Microsoft's global initiatives, a work support project developed by Microsoft Japan in collaboration with NPOs in various fields to improve the skills and expand the employment possibilities for people whose employment has been affected by COVID-19), certified NPO Sodateage Net, the NPO Single Mothers Sisterhood, and Japan Association for Refugees (JAR).

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1. Introduction

In this study, we estimated the preferences of workers facing difficulties in finding jobs. Specifically, we analyzed the results of an online survey of workers supported by an organization that provides employment support to single mothers (NPO Single Mothers Sisterhood)⁶ and an organization that provides support mainly to young workers (Certified NPO Sodateage Net)⁷. Herein, we report the results.

Worker preferences are the basis for discussion about labor policy, work support, and the actual hiring policies of companies and are included in the questions in many public surveys. For example, the Labor Force Survey includes questions regarding the reasons why job seekers began looking for work; this survey is conducted monthly. However, such surveys are generally designed to get a "big picture" perspective of workers.

The number of responses from workers facing difficulties in finding jobs is often small, making it difficult to conduct an adequate statistical analysis. Survey items on preferences for job location are also limited.

If sufficient quantitative surveys are not conducted, there is a risk of over-identification with stereotyped images (e.g., all are living in poverty, most are not looking for job satisfaction, and **most** are just looking for a job with a less work and a secure income), which may lead to inappropriate policies, support, and recruitment.

In particular, workers facing difficulties in finding jobs may be more in need of policy assistance and support, and the development of a program aligned with their preferences is a pressing issue.

Over-reliance on stereotyped images can lead to policies and support that focus only on the quantity of employment, "ignoring" the quality of employment other than working hours and wages.

Considering that the existing research is inadequate, the basis for affirming or denying such images is weak.

This study verifies this uniform image by conducting a survey specifically on workers facing difficulties in finding jobs.

Particularly, a conjoint survey in which respondents choose a job description and answer direct questions about desired work content is conducted using an online survey.

In the conjoint survey, respondents choose their preference from two hypothetical job postings. Each posting included a brief job description and wages. One job posting also include a more detailed job description, either (1) reporting requirements to supervisors, or (2) the significance of the job to overall business activity, or both. Based on the

⁶ <https://www.sodateage.net/>

⁷ <https://www.singlemomssisterhood.org/>

selection results for these different job postings, we estimated whether a detailed job description increases the probability of being a preferred option by respondents.

In direct questions, the respondents were asked whether they preferred responsibility or less work in their jobs.

This conjoint survey on the selection of work through job descriptions and work preferences has implication for the type of workers who will apply for a given job description. The detailed description in job postings is considered effective for reducing employment mismatch.

However, too many details may put too much pressure on job seekers, resulting in job seekers rejecting work.

The results of the analysis showed heterogeneity among the respondents regarding their preferences for work.

For the question "Which is more important, responsibility or less work?", the responses were divided equally, and there was extreme variation in answers among workers facing difficulties in finding jobs.

There was also a strong relationship between important factors and the jobs selected in the conjoint survey.

There was a clear trend that the workers who preferred less work avoided jobs with detailed descriptions. In contrast, that trend was weak for workers who preferred responsibility.

When monthly wages were high, the difference between the workers who preferred less work and those who preferred responsibility was high.

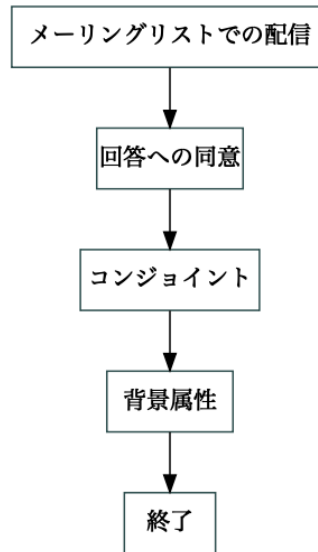
2. Survey Design

From January 26, 2022, to March 9, 2022, we conducted an online survey through support groups (certified NPO Sodateage Net and NPO Single Mothers Sisterhood). Respondents were recipients of support from the NPOs, and they received the URL for the survey, created in Microsoft Forms, via e-mail.

Among the methods that attempt to identify preferences through hypothetical selection experiments, conjoint surveys have several advantages.

This method contains a small number of specific options and allows respondents to select their preference by comparison, thus reducing the cognitive load on respondents. Furthermore, conjoint surveys, in which options are presented in tabular form, may require a smaller cognitive load than does vignette studies, in which options are presented as sentences. Hainmueller, Hangartner, and Yamamoto (2015) confirmed that conjoint surveys are superior by comparing actual selection results for conjoint and vignette surveys in the context of the "pros and cons of immigration."

Figure 1 shows the flowchart for the survey.



Survey Design

The questions about background attributes are summarized in the Appendix.

2.1 Conjoint Survey

The main aim of this study was to establish the preferences for jobs through a conjoint survey. In the conjoint survey, respondents were presented with questions like that seen in Figure 2.

1. 以下の二つの求人の内、より応募したいものを選んでください。

企業1からの求人

— 企業のお金の支出入における情報の管理、データ入力および分析を行っていただきます

企業2からの求人

— 企業のお金の支出入における情報の管理、データ入力および分析を行っていただきます

— 営業担当者のアシスタントとして、日々の報告を行うことが必要です

— 上司や同僚と連携して、職場環境の改善や部署の意思決定向上に貢献することが望まれます



企業1 (月給:17万円 ~ 20万円)

企業2 (月給:17万円 ~ 20万円)

Conjoint Survey

Respondents selected job postings a total of eight times. Each time, the job description for Company 1 was the same, with a monthly salary of JPY 170,000-200,000, and the only job description given was "Manage information, enter data and analyze the company's revenue and expenditures". In contrast, the job description for Company 2 was different each time and included a combination of the following attributes.

Attribute	Level 1	Level 2
Monthly salary	JPY 170,000-200,000	JPY 200,000-250,000
Manage information, enter data and analyze the company's revenue and expenditures	Displayed	Hidden
Provide day-to-day information as an assistant of a sales representative.	Displayed	Hidden

In the above example, the monthly salary is Level 1 (JPY 170,000-200,000), "Manage information, enter data and analyze the company's revenue and expenditures" is Level 1, and "Provide day-to-day information as an assistant of a sales representative" is also Level 1.

3. Data

3.1 Descriptive Statistics

Table 1 shows the descriptive statistics for selection results and background attributes obtained from the conjoint survey.

Characteristic	Preference for responsibility, N = 48 ¹	Preference for less work, N = 57 ¹
Age	38 (35, 46)	40 (30, 46)
No response	19	26
Gender		
Other	1 (2.1%)	1 (1.8%)
Female	37 (79%)	42 (75%)
Male	9 (19%)	13 (23%)
No response	1	1
Educational qualification		
Other	2 (4.2%)	0 (0%)

Characteristic	Preference for responsibility, N = 48¹	Preference for less work, N = 57¹
Junior high school	1 (2.1%)	2 (3.5%)
College	24 (50%)	30 (53%)
Graduate school	5 (10%)	1 (1.8%)
Professional school	4 (8.3%)	14 (25%)
Junior college	6 (12%)	4 (7.0%)
Senior high school	4 (8.3%)	5 (8.8%)
Higher professional school	2 (4.2%)	1 (1.8%)
Desired workplace: Stable employment	30 (62%)	47 (82%)
Desired workplace: Open workplace	27 (56%)	24 (42%)
Desired workplace: Self-growth	25 (52%)	5 (8.8%)
Desired workplace: High salary	19 (40%)	16 (28%)
Desired workplace: Option of work from home	11 (23%)	9 (16%)
Desired workplace: Less overtime	12 (25%)	27 (47%)
Desired workplace: Good benefits	18 (38%)	32 (56%)
Difficulty in finding a job: Work experience	31 (65%)	37 (65%)
Difficulty in finding a job: Educational qualification	14 (29%)	8 (14%)
Difficulty in finding a job: Age	28 (58%)	29 (51%)
Difficulty in finding a job: Gender	2 (4.2%)	3 (5.3%)
Difficulty in finding a job: Limited information about the job	6 (12%)	12 (21%)
Difficulty in finding a job: Workplaces requiring a longer commute time	12 (25%)	16 (28%)
Difficulty in finding a job: Poor work experience with gaps	18 (38%)	20 (35%)
Difficulty in finding a job: Family reasons	24 (50%)	29 (51%)

Characteristic	Preference for responsibility, N = 48¹	Preference for less work, N = 57¹
Conjoint selection: Reporting and equal pay	16 (33%)	11 (19%)
Conjoint selection: Reporting and higher pay	35 (73%)	34 (60%)
Conjoint selection: Significance and equal pay	24 (50%)	17 (30%)
Conjoint selection: Significance and higher pay	37 (77%)	30 (53%)
Conjoint selection: Reporting, significance and equal pay	19 (40%)	12 (21%)
Conjoint selection: Reporting, significance and higher pay	35 (73%)	25 (44%)

¹Median (IQR); n (%)

Table 1. Descriptive statistics

The median (bottom 25%, top 25%) is shown for age, and the number of respondents (as a percentage of the total) is shown for the other variables.

Of the respondents, 48 preferred responsibility, and 57 preferred less work, showing no extreme bias.

This finding indicates that even among the respondents facing difficulties finding jobs, who are often seen as homogeneous, preferences about the workplace vary widely.

No significant differences were found in preferences among age and gender groups. Some differences were observed with regard to educational qualifications.

In the graduate group, which represents the largest number of years of education in this study, the majority of respondents preferred responsibility.

In contrast, among the professional school graduates and junior college graduates, who had the same number of years of education, respondents who were junior college graduates tended to prefer responsibility, and the professional school graduates tended to prefer less work.

The preferences about the workplace also varied widely. Respondents who preferred responsibility seek personal growth and higher salaries, and those who prefer less work prefer less overtime, benefits, and stable employment. The findings indicate that responsibility or less work summarizes well the preferences regarding the workplace.

In addition, there were many graduate and junior college graduates who preferred responsibility.

Differences were also observed in terms of difficulties in finding a job. Respondents who preferred responsibility responded that their educational background was a barrier in finding a job, and those who preferred less work reported that too much information about a job was a deterrent.

4. Estimation

4.1 Method

We observed significant differences in basic background attributes (age, gender, and educational qualification) among the respondent groups, i.e., those who preferred responsibility and those who preferred less work.

In this section, we estimate the differences in the preferred job postings across the preferences, even after adjusting for distributional variations.

The statistical estimation was conducted using the least squares method to control for differences in background attributes.

The least squares method is typically used to control for variation in background attributes; challenges developing an appropriate statistical model have been reported.

There is little detailed knowledge about the specific relationships of age, gender, and educational qualification with factors that are important in employment and preferred job postings, and it is possible that statistical models used for such analyses have been incorrect.

However, descriptive statistics indicate that there is a clear correlation between the factors that are important in employment and background attributes, and the model used for estimation can have a significant impact on the estimation results.

In this paper, matching (Ho et al. 2007) is performed as a preprocessing step to alleviate model dependence.

Before estimating the statistical model using the least squares method, we aligned the distribution of background attributes to some extent between the respondent groups, i.e., those who preferred less work and those who preferred responsibility.

Adding this preprocessing step reduce the dependence of the estimation results on the statistical model. We used Coarsened Exact Matching (Iacus, King, and Porro 2012) as the matching algorithm. Specifically, we (1) discretized continuous variables, (2) divided discretized continuous variables and categorical variables into homogeneous subgroups, and (3) performed regression and aggregation within the subgroups.

We calculated and estimated the weights summarizing the matching results using the weighted least squares method.

The statistical model estimated by the least squares method is as follows:

$$I(\text{Detailed explanation}_i = 1) = \beta_0 + \tau \times \text{Preference for discretion}_i + \beta_1 \times \text{Educational background dummy}_i + \beta_2 \times \text{Age}_i + \beta_3 \times \text{Gender}_i + u_i$$

However,

$$E[u_i | \text{Preference for discretion}_i, \text{Educational background dummy}_i, \text{Age}_i, \text{Gender}_i] = 0.$$

For the error term, statistical inference was performed using the clustered-robust standard error considering the heterogeneity of variance and the possibility of correlation within the matching group. This was performed in response to Abadie and Spiess (2022), who noted (1) that matching can produce correlations even in independent cases and (2) that the clustered-robust standard error should be used to address this possibility.

It was also necessary to perform correction for multiple testing in order to perform the estimation for the six outcome variables. We report corrected confidence intervals calculated using the Bonferroni method.

4.2 Matching Results

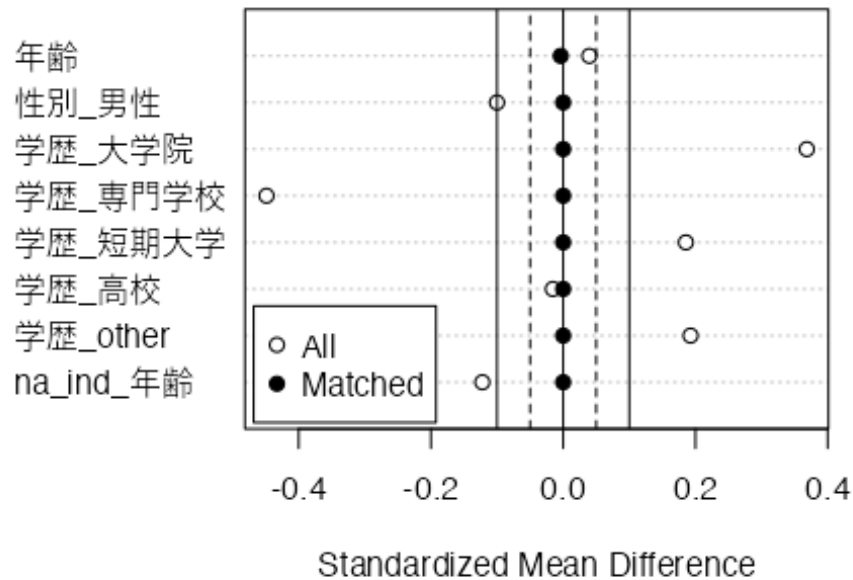
Preference for less work	Preference for responsibility	No. of respondents
57	48	All
41	33	Matched

Matching was successful for 41 respondents (out of 57) who preferred less work and for 33 respondents (out of 48) who preferred responsibility.

The relatively large number of respondents that could not be matched confirms that the variation in background attributes was very large. Therefore, limiting the analysis to respondents who can be matched may have several detrimental effects.

The first detrimental effect is that the sample size will be reduced, thus decreasing the precision of the estimation, and the second is that the overall respondents and the population of the analyzed sample will not match.

However, in this paper, we emphasized comparability and estimated using only those respondents that could be matched.



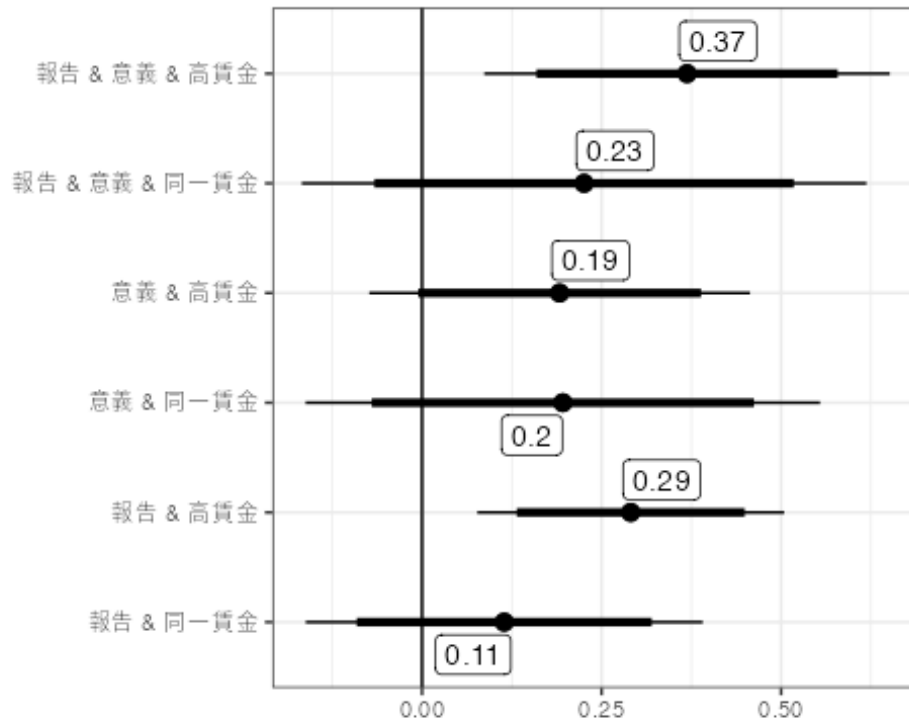
Balance Check

Figure 3 evaluates the bias of background attributes for respondents that were successfully matched. The standardized mean difference ($E[X_i|The\ respondents\ with\ preference\ for\ discretion] - E[X_i|The\ respondents\ with\ preference\ for\ less\ burden] / SD(X_i)$) is reported for age, gender, and education. Even for respondents who successfully matched the result, there were significant differences in background attributes among the unweighted group (All), the group who preferred less work and the group who preferred responsibility.

There was a large difference regarding educational qualifications. The group who preferred responsibility had more graduate school graduates and junior college graduates and fewer professional school graduates than college graduates. For the weighted (matched) results, the mean difference almost disappeared, indicating that the comparability greatly improved.

5. Estimation Result

The estimation results for the least-squares method combined with Coarsened Exact Matching are provided in Figure 4.



Point estimates and corrected/pre-correction 95% confidence intervals

The results indicate that there was a remarkable difference in job description preferences between the group who preferred responsibility and the group who preferred less work.

The respondents who preferred responsibility always preferred job postings with a description about reporting and work significance. Among the workers facing difficulties in finding jobs, those who preferred responsibility were more likely to prefer jobs with a more detailed job description.

The relative preference for detailed job descriptions by workers who preferred responsibility was greater when presented in conjunction with higher pay, and they tended to prefer such descriptions more than the 25% workers who preferred less work.

This trend was clear even when estimation errors were considered. Several interpretations are possible.

One possibility is that the "high pay" information may provide respondents with some idea about the actual job details.

For example, a job that requires higher pay may give the impression that the job is more "important" to the organization.

When detailed reports and job descriptions are presented in job postings, respondents who preferred less work may avoid such jobs. Respondents who simply prefer responsibility are more likely to accept additional work, such as detailed reporting, if they are offered higher pay.

6. Summary

In this study, we surveyed, with the cooperation of support groups, and analyzed the job preferences of workers facing difficulties in finding jobs.

We conducted an online conjoint survey that included a selection experiment to determine the preferences regarding job descriptions in job postings and important factors considered when seeking employment (less work or responsibility).

Significant heterogeneity was observed in the job description preferences among the workers facing difficulties in finding jobs, with almost half of the respondents giving preference to responsibility.

The important factors they considered when seeking employment also showed a clear correlation with the selection results of the conjoint survey. The group who preferred responsibility showed a clearer preference for jobs that offer higher pay and explained the significance of their work than did the group who preferred less work.

In this paper, we conducted a quantitative empirical analysis of the preferences of workers facing difficulties in finding jobs; notably, these workers are often perceived as homogenous.

With the cooperation of worker organizations that actually provide support to workers facing difficulties in finding jobs, we conducted an online conjoint survey that included a selection experiment to determine preferences regarding job descriptions in job postings and important factors considered when seeking employment (less work or responsibility).

Significant heterogeneity was observed in the job description preferences among the workers facing difficulties in finding jobs, with almost half of the respondents giving preference to responsibility. These results indicate that the reality is different from stereotyped images such as "the majority of workers facing difficulties in finding jobs do not seek job satisfaction but rather seek a job that will secure an income and require less work".

The important factors workers facing difficulties in finding jobs consider when seeking employment showed a clear correlation with the selection results of the conjoint survey.

Compared with the respondents who preferred less burden, the respondents who preferred responsibility showed a clearer preference for jobs that offered higher pay and explained the significance of their work.

Appendix: Background Information

- What is your gender?
 - Male, Female, Other, Don't want to answer
- What was the last educational institution you attended?
 - Junior high school, Senior high school, Higher professional school, Professional school, Junior college, College, Graduate school, Other
- What is your age? (Leave blank if you do not want to answer)
- Please select three important things when seeking work
 - Stable employment, high salary, self-growth, open workplace, option to work from home, less overtime, good benefits, other
- Please select three things that you find/found particularly challenging when finding a job.
 - Education, work experience, age, gender, family situation, workplaces requiring a longer commute time, limited information about work, poor work experience with gaps, other
- What IT qualifications and skills you have acquired? (You can select multiple answers)
 - MOS, IT passport, Basic information engineer, Applied information engineer, Information security specialist, Network specialist, Database specialist, Embedded system specialist, Other
- What qualifications and skills other than IT you have acquired? (You can select multiple answers)
 - Design, Psychology, Civil engineering and architecture, Teaching licenses, Languages, Other
- What type of support you receive from NPOs has been helpful? (You can select multiple answers)
 - Provides a place to stay, Listens to our concerns that we would not normally express, Helps to develop skills, Provides opportunities to find a job, Gives career options, Provides opportunities to meet others, Introduces lawyers and other professionals, Provides free groceries and daily necessities, Accompanies to the government office for applications, Other
- In general, a workplace that allows for a lot of responsibility in which your own judgment is easily reflected can be a "rewarding place" to work, but it also tends to increase the work. Which is more important and to what extent? Answer on a scale of 1 to 4.
 - I strongly prefer responsibility, I prefer responsibility, I prefer less work, I strongly prefer less work

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