
Job Security Concern among Temporary Agency Workers in Japan

Akiko Ono

The Japan Institute for Labour Policy and Training

This paper conducts factor analysis regarding the choice of temporary agency work, particularly short-term work, short-term temporary workers' job security concern and their hope to become regular employees, and complements the findings with an analysis of the hearing survey results. The period covered by the analysis is the time of recession that followed the failure of major investment bank Lehman Brothers (Lehman Shock) in 2008, when the supply of jobs shrank rapidly. My analysis found that the most typical short-term temporary agency worker is a woman in her 20s or 30s with a junior or senior high school diploma who engages in a sales, manufacturing or light manual labor job, rather than a clerical job. It also found that the typical short-term temporary agency worker works in prefectures where the unemployment rate is high and has a post-school history of illness that could affect working life. The factor analysis regarding job security concern showed that temporary agency workers with a short-term contract of less than three months are more prone to be concerned about job security than those with a long-term contract of more than one year. It also indicated that whereas workers' hope to become regular employees is significantly affected by job security concern, people who realistically expect to become regular employees are less prone to be concerned about job security. Moreover, the analysis found that short-term temporary agency workers who realistically expect to become regular employees typically work under a contract with an employment period of more than one year, while those who hope to become regular employees but who realistically expect to continue temporary agency work or who have no idea of what employment arrangement they will be working under three years later typically work under a contract of less than one year. The hope to become a regular employee stems largely from job security concern. Therefore, first of all, it is essential for the government to take measures to ease job security concern, such as promoting the extension of the contractual employment period. In addition, employers need to provide jobs in ways that enhance workers' vocational skills, while temporary staff agencies should assign jobs in ways that enable workers to climb the career ladder.

I. Introduction

This paper conducts analysis with a particular focus on temporary agency workers working on a short-term contract in light of surveys that have been conducted since 2008 with regard to temporary work.¹ The period covered by the surveys is the time of recession

¹ The Japan Institute for Labour Policy and Training (JILPT) holds hearings with and conducts questionnaire surveys on temporary staff agencies, employers and temporary agency workers. The results so far published are those of surveys and hearings conducted by Ono (2009), Okuda (2009) and JILPT (2010a, 2010b, 2010c, 2011a, 2011b).

Table 1. Ratio of Employers that Stopped Using Temporary Agency Workers

	n	%
Total (Number of employers which stopped using temps)	870	100.0
Stopped using temps in or before August 2008	333	38.3
Stopped using temps in or after September 2008	537	61.7
Total (Employers which stopped using temps in or after September 2008)	537	100.0
Manufacturing		43.8
Information/communications		3.9
Transport		10.8
Wholesale/retail		17.1
Financial/insurance		6.7
Medical/welfare		8.8
Academic research/professional engineering services		2.8
Life-related services		3.5
Other business services		2.6

Source: The Japan Institute for Labour Policy and Training, *Survey Concerning Temporary Agency Workers' Careers and Working Styles (Temporary Staff Agency Survey)*.

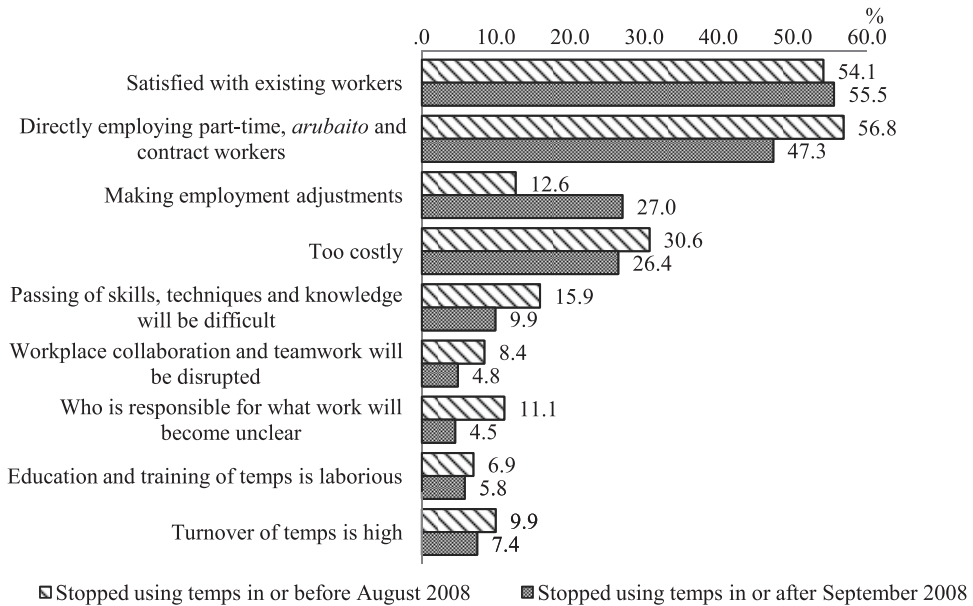
that followed the Lehman Shock of 2008, when the supply of jobs shrank rapidly. This paper will not only conduct empirical analysis but also complement the analysis with the results of hearings from temporary agency workers.

After peaking at 1.4 million people in 2008, the number of temporary agency workers declined by around 300,000 people² in 2009. The decline was mainly caused by employment adjustments targeted at temporary agency workers engaging in manufacturing jobs. Of the “employers which stopped using temps” covered by the surveys, 61.7% said that they stopped using temporary agency workers after the Lehman Shock (September 2008). Of these employers, 43.8% are in the manufacturing industry (Table 1). As for the reason for discontinuing the use of temporary agency workers, “making employment adjustments” was cited by a much larger proportion of employers after the Lehman Shock (Figure 1) than before it.

During recession, the supply of jobs shrinks, producing a greater impact on non-regular employees, who are regarded as a “buffer,” than on regular ones. In particular, temporary agency workers are expected to grow concerned about job security because their contractual employment period is specified. The ratio of workers concerned about job security was 53.8% among temporary agency workers, higher than the 45.5% among regular employees and the 47.7% among part-time workers and *arubaito* workers.³

² Labour Force Survey by the Statistics Bureau, the Ministry of Internal Affairs and Communications.

³ The Working Person Survey by Recruit's Working Institute collected data concerning items relating to job security concern as categorized by employment arrangement in 2006 and 2008. Among non-standard employees, the ratios for contract workers (56.4%) and temporary agency workers were



Source: The Japan Institute for Labour Policy and Training, *Survey Concerning Temporary Agency Workers' Careers and Working Styles (Temporary Staff Agency Survey)*.

Figure 1. Reasons for Stopping Use of Temporary Agency Workers (Multiple Answers Allowed)

Meanwhile, the contract period for temporary agency workers has been becoming shorter since 2007 (Table 2). In fiscal 2009, contracts with an employment period of one month or shorter accounted for more than half of all temporary agency work contracts. That is presumably because employers using temporary agency workers tried to avert risk by reducing the contract period amid uncertainty over the prospects of corporate earnings due to the recession. Reduction of the contract period causes employers to treat temporary agency workers from a short-term perspective, and as a result, they choose to replace existing temps with new ones, rather than helping them adapt to jobs and workplaces.⁴ Workers not only lose the opportunity to receive training and other support necessary for such adaptation but also face termination of their employment contracts. Presumably for this reason, temporary agency workers are prone to be concerned about job security.

The structure of the paper is as follows. In section II, I will draw hypotheses from the findings of previous studies and our hearings regarding factors related to labor supply, those related to companies accepting temporary agency workers (labor demand-related factors), and those related to temporary staff agencies. In section IV, I will make estimations and

high, indicating that non-regular employees working full-time tend to have job security concern.

⁴ Shimanuki and Morishima (2004) argue that the structural framework that governs temporary agency work is different from the one that governs regular employees in that (i) workers are subject to management by two entities and (ii) workers have a short-term career perspective.

Table 2. Changes in the Proportions of Temporary Agency Workers by Contract Period (As a Proportion of All Temporary Agency Workers at Employers Employing General Temporary Agency Workers)

	(%)								
	Up to 1 day	1-7 days	1 week- 1 month	1-3 months	3-6 months	6-9 months	9-12 months	1-3 years	Other
FY2007	10.6	11.2	14.8	33.2	20.7	4.3	2.9	2.2	0.2
FY2008	24.9	9.5	13.2	31.8	13.0	3.7	2.5	1.3	0.1
FY2009	26.9	10.0	16.4	31.4	10.9	1.6	2.3	0.9	0.1

Source: Ministry of Health, Labour and Welfare, *Statistics on Temporary Staffing*.

discuss the analysis results in light of cases identified in the hearing survey. Finally, in section V, I will provide my conclusion and offer my thoughts.

II. Previous Studies and Hypotheses

1. Factors for Choice of Temporary Agency Work

What causes temporary agency workers to choose a short-term contract over a long-term contract and vice versa? The choice of temporary agency work is significantly affected by factors related to labor supply. Sato (2006) and Sato and Koizumi (2007) argued that most temporary agency workers make their choice in order to strike a balance between their jobs and the duties of housekeeping and child care. It is true that housewives (married women) working as temporary agency workers are highly likely to have chosen that working arrangement due to their own preference, as in the case of housewives working part-time. In light of this, as factors related to labor supply, I will adopt gender, marital status and age in the following hypotheses.

From past hearings with temporary agency workers and temporary staff agencies, it was found that in many cases, people worked as temporary agency workers during periods of recuperation from illness, including mental disease. Yuda (2010) confirmed that male workers in particular experience a significant decline in wages if their health condition deteriorates. His paper does not identify a correlation between this phenomenon and the type of employment arrangement. However, given that non-regular employees' wages are usually lower than regular employees' wages, it may be said that people whose health condition is not good have a higher probability of working as non-regular employees than those whose health condition is good and as a result, they choose short-term temporary agency work. Therefore, this paper also adopts as a variable factor the history of illness in the working career since the first job.

In addition, as factors related to employers' demand for human resources, I adopt academic attainment and working career, including job types. Moreover, as temporary agency

workers are employed for specific jobs, I will examine factors related to demand for job types. What types of jobs are in high demand for short-term contracts? Run-of-the-mill work and jobs that require short-term employment adjustments according to the market supply-demand conditions are presumed to be in high demand for such contracts. Assuming that the local economic conditions affect temporary agency workers' choice of employment arrangement, I also adopt the prefecture-by-prefecture annual unemployment rate in 2009 as a variable factor.

2. Temporary Agency Workers' Job Security Concern and Their Hope to Become a Regular Employee

(1) Job Security Concern

If the employment situation deteriorates during recession, workers are prone to be concerned about job security. What types of people are particularly prone to be concerned about job security? The Questionnaire Survey concerning Temporary Agency Workers' Life and Job Search Activity, conducted by the Research Institute of Economy, Trade and Industry (RIETI), focused on workers' subjective happiness. This research concluded that from the perspective of subjective happiness, the most important of the three axes of non-standard workers—(i) “axis of employment” (direct or indirect employment), (ii) “axis of the contract period” (fixed-term or non-fixed-term contract) and (iii) “axis of working hours” (full-time or part-time work)—is the axis of the contract period (Tsuru 2010). In light of that, I will classify temporary agency workers into three groups by the length of the contract period—short-term workers, medium term workers and long-term workers—and examine which group of workers is prone to be concerned about job security. As for labor supply-related factors, particular attention will be paid to the history of illness. The history of illness may be significantly correlated to job security concern.

What sets temporary agency work apart from other types of employment arrangements is the presence of a temporary staff agency as a middleman between the worker on the labor supply side and the employer on the labor demand side. In his analysis of determinant factors concerning workers' “satisfaction with the current working arrangement” and “future career prospects,” Shimanuki (2007) showed that workers' satisfaction is affected mainly by the personnel management of their employer and is also positively affected by education and training provided by their temporary staff agency. Shimanuki also confirmed that continuous job assignment by the temporary staff agency has a positive impact on future career prospects. In light of that, this paper will examine how job security concern is affected by factors related to the employer's use and management of temporary agency workers, such as the state of education and training and the degree of routineness (mix of the elements of routine work and judgment-based work) and past records of conversion of temporary agency workers into regular employees. I will also adopt such variables as the state of education and training provided by temporary staff agencies, the frequency of the

agencies' consultation with workers, the state of job assignment by the agencies and the gap between the present hourly wages and the desired level of wages.⁵

(2) Hope to Become a Regular Employee and Realistic Expectations for the Future

According to the surveys used in this paper, the combined ratios of temporary agency workers who “strongly hope to become a regular employee” and those who “would rather like to become a regular employee” surpassed 70%. This was the highest percentage recorded among similar large-scale surveys. Survey data used by Sato and Koizumi (2007) (the survey was conducted in February 2001) showed that 35.6% hoped to become a regular employee.⁶ According to the Temporary Agency Staff's Perspective on Work and Working Styles Survey by the Department of Research on the Staffing Industry of the University of Tokyo's Institute of Social Science (conducted in October 2005),⁷ 53.3% hoped to become a regular employee, while the Ministry of Health, Labour and Welfare's Survey on the Actual Status of Temporary Agency Workers, conducted in October 2008, immediately after the Lehman Shock, showed that 40.8% hoped to work as a regular employee.⁸ Assuming that increased job security concern causes temporary agency workers to hope to become a regular employee during recession, this paper pays attention to the relationship between such concern and hope.

However, temporary agency workers' hope to become a regular employee may not necessarily reflect their realistic expectations of what kind of employment arrangement they will be working under in the future. In fact, while more than 80% of the respondents in the hearing survey expressed hope to become a regular employee, less than 10% were actually conducting job-search activity. Many workers have realistically given up on becoming a regular employee in light of their housekeeping duties and life patterns and their disadvantages regarding, educational attainment, working career and age. Therefore, apart from the factor analysis regarding the hope to become a regular employee, I will examine factors that encourage temporary agency workers to expect that they will become regular employees in the future. Below, I will draw hypotheses from the analysis of labor supply-related

⁵ Tachibanaki and Urakawa (2007) conducted research on the poor class and pointed out that one notable feature of poor households is that the household head is typically a worker working under a contract of less than one year. Relatively low income presumably causes job security concern.

⁶ The data source is the Survey on Workers under Non-Typical Employment Arrangements (Recruit's Works Institute). The survey subjects were contract workers, *shokutaku* workers, temporary agency workers, part-time workers and *arubaito* workers aged 18-64 (excluding people attending school) who are working in the area within a 50-kilometer radius from central Tokyo (Tokyo and Kanagawa, Chiba, Saitama and Ibaraki Prefectures). Answers were collected from 6,000 people.

⁷ The survey subjects were limited to registered temporary agency workers engaging in clerical jobs.

⁸ The ratio of workers who hope to continue working for their current employers as regular employees instead of as temporary agency workers was 23.3% and the ratio of workers who hope to work for employers other than their current ones as regular employees instead of as temporary agency workers was 17.5%. The total ratio for these two categories of people came to 40.8%.

factors, employer-related factors (labor demand-related factors) and factors related to temporary staff agencies.

Regarding determinant factors concerning the conversion of non-regular employees into regular employees, Genda (2008) conducted analysis using data collected through the “Basic Survey on the Employment Structure” (2002). This analysis showed that male workers have a higher chance of becoming regular employees and that people aged 50 or older tend to avoid becoming regular employees for labor-supply-side reasons. As for labor demand-related factors, workers with a higher level of educational attainment have a significantly higher chance of becoming a regular employee.⁹ It is also known that the experience of working as a non-regular employee for a certain period of time (2 to 5 years) increases a worker’s chance of becoming a regular employee. Hori (2007) pointed out that among male *freeters* who have worked as non-standard employees for more than three years, less than half can shift to a more stable working status and that the ratio is around 30% among female *freeters* with such a working career. In light of that, this paper will also pay attention to individual workers’ attributes and examine how the length of the period worked as a non-standard employee affects the hope to become a regular employee and realistic expectations for the future.

Next, I will look at the impact of internal training (on-the-job training) as an employer-side factor (labor demand-related factor). From previous studies on the education and training opportunity gap faced by non-regular employees, it is known that non-regular employees who have little chance of shifting to regular work (employees working on short-term employment contracts, including seasonal and temporary workers) have significantly lower probability of receiving education and training (Arulampalam and Booth 1998; Booth, Francesconi, and Frank 2002). Hara (2010) showed that internal training of non-regular employees has a positive impact on their conversion into regular employees. In light of that, I will adopt the impact of employer-provided OJT as a variable factor. In addition, I will examine such employer-related factors as whether the job is routine or judgment-based and records of the conversion of non-regular employees into regular employees.

Finally, Shimanuki (2007) showed that continuous assignment of jobs by temporary staff agencies motivates workers to continue to work as temporary agency workers. In light of that, I will adopt such temporary staff agency-related factors as training and education, the frequency of agency-worker consultation, and the state of job assignment.

III. Survey Method and Data

This paper uses data collected through the surveys on temporary agency workers and employers that were conducted by the Japan Institute for Labour Policy and Training in

⁹ Kosugi (2003) also pointed out that it is difficult for people whose academic attainment is low to quit the status of non-regular employee.

Table 3. Proportions of Temporary Staff Agency Workers by Period of Contract with Agencies

	n	%
<i>Short-term</i>	(390)	(10.2)
Up to 1 month	22	0.6
1 month	142	3.7
1-2 months	128	3.4
2-3 months	98	2.6
<i>Medium-term</i>	(1663)	(43.6)
3 months	1164	30.5
3-6 months	88	2.3
6 months	358	9.4
6-12 months	53	1.4
<i>Long-term</i>	(1675)	(43.9)
1 year	527	13.8
1-3 years	88	2.3
3 years	40	1.0
Other	53	1.4
No fixed term	967	25.4
No answer	86	2.3
Total	3814	100.0

Source: Ministry of Health, Labour and Welfare, *Statistics on Temporary Staffing*.

February and March 2010. The survey on employers covered employers across Japan with a workforce of 30 employees or more in industries highly dependent on temporary agency workers,¹⁰ with 10,000 such employers randomly selected from among companies registered with Teikoku Data Bank. Of the surveyed employers, 3,085 provided valid replies.¹¹ In the survey on temporary agency workers, 80,000 copies of the questionnaire were distributed via employers to workers and answers were collected via mail directly from workers. Of the surveyed workers, 4,473 provided valid answers. In this paper, the analysis is conducted regarding 3,814 cases for which data concerning both employers and workers were available.

In this paper, the short-term temporary agency worker (hereinafter referred to as “short-term worker”) is defined as a worker with a contract period of less than three months. The medium-term temporary agency worker (hereinafter referred to as “medium-term worker”) and long-term temporary agency worker (hereinafter referred to as “long-term worker”) are defined as workers with a contract period of three months to one year and with a contract period of more than one year, respectively (Table 3). What is notable about medium-term workers is that more than around 70% of such workers work for the same employer for more than one year through the renewal of their contracts (Table 4). Although some short-term workers also work for the same employer for more than one year through the

¹⁰ Six industries (manufacturing, information/communications, financial/insurance services, general services, wholesaling/retailing and transportation).

¹¹ Of the samples covered by the survey on employers, those employing temporary agency workers accounted for 39.3% (1,212 employers).

Table 4. Relations between the Period of Contract with the Agency and the Total Period Worked as a Temporary Agency Worker at the Current Employer

	Total period worked as a temp at the current employer		
	Up to 1 year	More than 1 year	Total
Period of contract with the current temp agency			
Short-term: Up to 3 months	219 (56.3%)	170 (43.7%)	389 (100%)
Medium-term: 3-12 months	497 (29.9%)	1163 (70.1%)	1660 (100%)
Long-term: More than 1 year	360 (21.7%)	1297 (78.3%)	1657 (100%)
Total	1073 (28.9%)	2637 (71.1%)	3710 (100%)

Missing value: 86.

renewal of their contracts, their ratio is much lower, 40%. The variables and descriptive statistics are as shown in Table 5. The analysis in this paper was complemented by a hearing survey on temporary agency workers, which was conducted from September 2008 through December 2009. The total number of people surveyed was 88. Details are available in JILPT (2011b).

IV. Analysis

1. Factor for Choice of Temporary Agency Work

I classified temporary workers into short-term, medium-term and long-term temporary agency workers and used the contract period length as an explained variable to deduce factors for the choice of temporary agency work through multi-nominal logit analysis. The analysis results are as shown in Table 6. Among explanatory variables are labor supply-related factors, such as gender, marital status, age, history of illness, and labor demand-related ones, such as the last school attended, the length of the period worked as a non-standard employee, the size of the employing company, the job type and the unemployment rate in the relevant prefecture. I will make estimations using data concerning each of medium-term and long-term workers as the base of analysis and look into correlations.

First, let us look at labor supply-related factors. Analysis using gender as the variable indicated a negative value in Estimation 1 and a positive value in Estimation 3, indicating that short-term and medium-term workers are more likely to be women than men compared with long-term workers. Analysis using age as the variable indicated significant negative values for all age groups in Estimation 1, which uses the age group “30s” as a reference group. The value for the age group “20s” in Estimation 2 was negative but not significant, which probably indicates that short-term workers are typically likely to be younger than medium-term workers, who are in turn likely to be younger than long-term workers. Analysis using the history of illness as the variable showed a positive correlation, indicating that short-term workers are likely to have suffered from some kind of illness or other after graduating

Table 5. Descriptive Statistics

Variables: Explanations concerning variables	n	Average	Standard deviation	Min. value	Max. value
Explained variables					
Temp contract period: Short-term=1, medium-term=2, long-term=3	3728	2.345	0.660	1	3
Job security concern D: Concerned about job security=1	3672	0.428		0	1
Wish to become a regular employee D: By all means=1	3384	0.486		0	1
Expectations for future working style: Expecting to become a regular employee=1, Expecting to continue temp work=2, No idea of future employment arrangement=3	2259	2.114	0.810	1	3
Labor supply factors					
Gender D: Male=1	3734	0.295		0	1
Marital status D: Married=1	3738	0.417		0	1
Age					
20s D	3515	0.241		0	1
30s D	3515	0.430		0	1
40s D	3515	0.220		0	1
50s and older D	3515	0.109		0	1
History of illness D ¹	3814	0.182		0	1
Employer factors (human resources)					
Last school					
Junior or senior high school D	3727	0.369		0	1
Technical college D	3727	0.160		0	1
Junior college D	3727	0.192		0	1
University/graduate school D	3727	0.278		0	1
Period worked as a non-standard employee (No. of months worked) ²	3679	70.778	62.180	0	372
Period worked as a non-standard employee					
Less than 1 year D	3679	0.219		0	1
1 to 3 years D	3679	0.167		0	1
3 to 5 years D	3679	0.186		0	1
More than 5 years D	3679	0.524		0	1
Employer factors (general)					
Employer size*					
1 to 99 employees D	3784	0.079		0	1
100 to 299 employees D	3784	0.282		0	1
300 to 999 employees D	3784	0.248		0	1
1000 or more employees D	3784	0.391		0	1
Job type ³					
Clerical D	3704	0.538		0	1
Medical/welfare service D	3704	0.036		0	1
Sales D	3704	0.029		0	1
IT engineering/creative D	3704	0.093		0	1
Other professional D	3704	0.125		0	1
Manufacturing D	3704	0.133		0	1
Light manual labor D	3704	0.046		0	1
Prefecture-by-prefecture unemployment rate	3814	4.917	0.736	3.5	7.5
Total period worked at the current employer					
1 year or less D	3784	0.289		0	1
1 to 3 years D	3784	0.410		0	1
More than 3 years D	3784	0.300		0	1

Table 5 (Continued)

Variables: Explanations concerning variables	n	Average	Standard deviation	Min. value	Max. value
Employer factors (Management and use of temps)					
Employer-provided OJT D ⁴	3785	0.679		0	1
Job's degree of routineness: Ordinal scale ⁵	3793	2.046	0.843	1	4
Records of conversion into regular employees D ^{*,6}	3654	0.401		0	1
Employer problems					
Can't use capabilities or experiences D	3674	0.134		0	1
Often required to do a job other than the one specified by the contract D	3674	0.068		0	1
Absence of a fixed chain of command D	3674	0.059		0	1
Excessive workload D	3674	0.138		0	1
Long overtime hours D	3674	0.051		0	1
Too much idle time D	3674	0.108		0	1
Lack of education or training D	3674	0.104		0	1
Colleagues' inappropriate workplace behavior D	3674	0.092		0	1
Burden of workplace relationship D	3674	0.139		0	1
Sexual, power and other harassment D	3674	0.044		0	1
Low wages D	3674	0.313		0	1
Safety and sanitary problems/poor workplace environment D	3674	0.051		0	1
Lack of access to employees' amenity facilities D	3674	0.086		0	1
Difficult to take paid leave D	3674	0.154		0	1
Temp agency factors (Management)					
Agency-provided Off-JT (Number of lectures) ⁷	3554	1.371	1.680	0	12
Frequency of agency-worker consultation: Ordinal scale ⁸	3742	2.609	1.617	0	5
Agency's job assignment D: Continuous assignment=1	3622	0.376		0	1
Hourly wages	3647	1343.889	571.624	530	8000
Gap between desired and actual wages: Desired wages-actual wages	3574	223.646	225.254	-800	3000
Contract period					
Less than 3 months D	3728	0.078		0	1
3 to 12 months (medium-term) D	3728	0.446		0	1
More than 1 year (long-term) D	3728	0.449		0	1
Other					
Job search					
Conducting specific activity D	2570	0.069		0	1
Collecting information online D	2570	0.351		0	1
Doing nothing D	2570	0.580		0	1

Notes: D indicates a dummy variable. * indicates survey data concerning employers.

¹The history of illness, which was surmised from answers to relevant questions, is a dummy variable. Value 1 was given when the answers selected in response to any of the questions "Why did you become a temporary agency worker?" "Why did you quit your first job?" "Why don't you hope to become a regular employee?" and "Why did you decline to be directly employed?" included "Worried about physical fitness," "Suffering from mental or physical illness," or "Mental or physical health was not good." Multiple answers were allowed regarding all those questions.

²"Period worked as a non-standard employee" (number of months) represents the total period of time worked as a contract, part-time, *arubaito* and temporary agency worker. The period worked as a non-standard employee was divided into four brackets by the length of period, from less than one year to more than five years.

³Regarding “Job type,” a total of 46 jobs were classified into eight types. For the specifics of the 46 jobs, refer to the research overview of any of JILPT (2010b), (2010c) and (2011a).

⁴“Employer-provided OJT” is a dummy variable. Value 1 was given when the answer “I think so” was selected from among the three answer options in response to the question “Is there an instructor or trainer at your employer.”

⁵Routine job mostly following instructions=1; Routine job requiring some degree of judgment=2; Judgment-based job sometimes requiring instructions=3; Judgment-based job seldom requiring instructions=4.

⁶Dummy variable with the value 1 given when the employer has converted temporary agency workers into regular workers in the past three years.

⁷Fifteen answer options were available in response to the question “Have you participated in any of the following training programs at agencies (including agencies with which you have signed a contract)?” (multiple answers allowed), and the value 1 was given when the answer “None” was selected and the value 0 was given when other answers were selected. The 15 answer options were: 1. Beginner-level OA skill training; 2. Senior-level OA skill training; 3. Language training; 4. Vocational ability-specific training; 5. Business skills training; 6. Business manners training; 7. Training in protection of information; 8. Compliance training; 9. Pre-placement training; 10. Training for acquisition of public qualification certificate; 11. E-learning training; 12. Partner school discount program; 13. Correspondence education subsidy program; 14. Career counseling/career seminar.

⁸Very rarely=0; Around once a year=1; Around once every six months=2; Around once every three months=3; Around once a month=4; Several times a month=5.

from the last school (Estimations 1 and 2).

According to analysis using the last school attended as the variable, short-term workers are highly likely to be people with a junior or senior high school diploma (Estimation 1), while long-term workers are likely to have graduated from a higher educational institution than medium-term and short-term workers (Estimations 1 and 3). Analysis based on the length of the period worked as a non-standard employee showed that long-term workers are likely to have the experience of working as non-standard employees for less than one year (Estimation 3), shorter than the period for medium-term workers. Regarding the size of the employer company, long-term workers are more likely to work for companies with a workforce of more than 1,000 employees than for companies with a workforce of 100 to 299 employees (Estimation 3). As for the job type, short-term workers are more likely than long-term workers to engage in sales, manufacturing and light manual labor jobs, rather than clerical jobs (Estimation 1). On the other hand, long-term workers are highly likely to engage in “IT engineering and creative job” and “other professional job” (Estimations 1 and 3). Finally, analysis using the prefecture-by-prefecture unemployment rate as the variable indicated significant positive values in Estimations 1 and 2, indicating that temporary agency workers are likely to work on a short- or medium-term contract in prefectures where the unemployment rate is high.

From the analysis of factors for the choice of short-term temporary agency work, it can be concluded that short-term workers are typically more likely than long-term workers

Table 6. Results of Multi-Nominal Logit Analysis Concerning Factors for the Choice of Temporary Agency Work

	Estimation 1 Base: [Long-term] [Short-term]			Estimation 2 Base: [medium-term] [Short-term]			Estimation 3 Base: [medium-term] [Long-term]		
	Coefficient	Standard deviation	Asymptotic t-value	Coefficient	Standard deviation	Asymptotic t-value	Coefficient	Standard deviation	Asymptotic t-value
<i>Labor supply factors</i>									
Gender D	-0.3932	0.178	-2.21 *	0.1883	0.175	1.08	0.5815	0.119	4.91 ***
Marital status D	-0.1752	0.146	-1.20	-0.0451	0.144	-0.31	0.1301	0.085	1.52
Age <30s>									
20s	-0.3708	0.170	-2.18 *	-0.2106	0.166	-1.27	0.1602	0.106	1.52
40s	-0.7800	0.179	-4.36 ***	-0.2939	0.178	-1.65	0.4862	0.103	4.70 ***
50s and older	-1.1905	0.271	-4.39 ***	-0.7600	0.272	-2.79 **	0.4305	0.143	3.00 **
History of illness D	0.3875	0.157	2.47 *	0.2714	0.152	1.79	-0.1161	0.100	-1.16
<i>Employer factors (human resources)</i>									
Last school <Junior or senior high school D>									
Technical college	-0.1335	0.196	-0.68	0.0093	0.191	0.05	0.1428	0.123	1.16
Junior college	-0.4384	0.210	-2.09 *	-0.1086	0.206	-0.53	0.3299	0.114	2.89 **
University/graduate school	-0.4884	0.184	-2.66 **	-0.1493	0.182	-0.82	0.3391	0.106	3.19 ***
Period worked as a non-standard employee									
<More than 5 years>									
Less than 1 year	-0.1989	0.174	-1.14	0.0502	0.175	0.29	0.2491	0.105	2.37 *
1 to 3 years	0.1761	0.171	1.03	0.1678	0.167	1.00	-0.0083	0.108	-0.08
3 to 5 years	-0.2120	0.178	-1.19	-0.2874	0.173	-1.66	-0.0754	0.105	-0.72

<i>Employer factors (overall)</i>										
Employer size [†] <100-299 employees>										
1-99 employees	-0.0579	0.256	-0.23		-0.0300	0.250	-0.12	0.0279	0.159	0.17
300-999 employees	-0.0968	0.180	-0.54		-0.1622	0.174	-0.93	-0.0654	0.109	-0.60
1000 or more employees	-0.2067	0.162	-1.28		0.1080	0.160	0.68	0.3147	0.098	3.21 ***
Job type <Clerical>										
Medical/welfare service	-0.3539	0.397	-0.89		0.3656	0.402	0.91	0.7194	0.206	3.49 ***
Sales	1.0574	0.337	3.14 **		1.0915	0.326	3.35 ***	0.0341	0.245	0.14
IT engineering/creative	-0.3752	0.258	-1.46		0.3096	0.264	1.17	0.6848	0.134	5.13 ***
Other professional	-0.6633	0.294	-2.25 *		-0.0940	0.300	-0.31	0.5693	0.134	4.23 ***
Manufacturing	1.9779	0.212	9.32 ***		1.7424	0.199	8.73 ***	-0.2355	0.157	-1.50
Light manual labor	1.2912	0.285	4.54 ***		1.7059	0.292	5.85 ***	0.4147	0.227	1.83 *
Prefecture-by-prefecture unemployment rate	0.2317	0.087	2.68 **		0.1669	0.085	1.96 *	-0.0649	0.054	-1.21
Constant term	-2.1453	0.474	-4.52 ***		-2.7464	0.466	-5.89 ***	-0.6011	0.287	-2.09 *
Sample size						3211				
Log likelihood						-2802.1765				
Pseudo coefficient of determination						0.0825				

Note: *** 0.1%, ** 1%, * 5% significant. Items in < > are reference groups. D indicates dummy variables. [†] indicates data collected through the survey on employers.

to be women, in their 20s or 30s, with a junior or senior high school diploma, or those who have experienced some illness or other as well as those who are engaging in sales, manufacturing or light manual labor jobs rather than clerical jobs. While both short-term and medium-term workers are more likely to be women than men, medium-term workers are likely to be younger—typically in their 40s or younger—and more likely to engage in clerical jobs than short-term workers. In prefectures where the unemployment rate is high, temporary agency workers are likely to work on a short-term contract.

From the hearing survey, it was found that some workers chose to work on a short-term contract due to illness and other problems, including mental and physical disease and mental stress not so severe as to be diagnosed as depression, that they experienced after graduating from the last school. People who choose to work on a short-term contract mostly find short-term work to be preferable because it allows them to adjust their work schedule according to their health condition. In the case of a one-day job, workers feel little mental stress about cancelling the contract for health reasons. Some short-term workers said they prefer to use a temporary staff agency as a go-between, rather than look for a part-time or *arubaito* job themselves in the neighborhood of their residence, because they want to keep their illness secret in the workplace. Temporary agency workers who chose to work on a short-term basis due to their history of illness invariably said that they would face serious difficulty if the option of working on a short-term contract became unavailable.

2. Job Security Concern

The questionnaire distributed to temporary agency workers included the question “Are you concerned about the prospect of your job security?” and there were five answer options for varying degrees of concern, ranging from “not concerned at all” to “concerned.” I made estimations based on a probit analysis conducted on an overall sample group comprised of short-, medium-, and long-term workers and a sample group of short-term workers, with the answer “concerned,” which represents the highest degree of worry, indicating the base figure of 1. The results are as shown in Table 7. Below, I will mainly look at variables that indicated significant correlation.

Analysis using labor supply-related factors as variables indicates that regarding the overall sample (Estimation 4), people are increasingly likely to be concerned about job security as they move from the age group 20s to 30s to 40s and married people are more likely to be concerned than single people. Meanwhile, regarding the sample of short-term workers, people in their 30s are more likely to be concerned about job security than those in their 20s, and people with a history of illness are more likely to be concerned than those with a clean slate.

According to analysis based on employer-related factors, it was found that people who have the experience of working as a non-standard employee for a long time are likely to be concerned about job security. Regarding the job type, workers engaging in a “medi

Table 7. Results of Probit Analysis Concerning Determinant Factors for Job Security Concern

Job security concern = 1	Estimation 4 [Overall]			Estimation 5 [Short-term contract]		
	Marginal effect	Standard deviation	Asymptotic t-value	Marginal effect	Standard deviation	Asymptotic t-value
Labor supply factors						
Gender D	-0.0159	0.033	-0.48	-0.0640	0.127	-0.50
Marital status D	-0.1005	0.022	-4.46 ***	-0.1531	0.102	-1.48
Age <30s>						
20s	-0.1415	0.026	-5.23 ***	-0.2770	0.109	-2.37 *
40s	0.0853	0.028	3.01 **	-0.1507	0.134	-1.10
50s and older	-0.1046	0.040	-2.55 *	0.0871	0.210	0.41
History of illness D	0.0278	0.026	1.07	0.1878	0.106	1.72
Employer factors (human resources)						
Last school <Junior/senior high school D>						
Technical college	0.0598	0.033	1.82	-0.0532	0.145	-0.37
Junior college	0.0014	0.030	0.05	0.0080	0.153	0.05
University/graduate school	0.0539	0.029	1.89	0.0192	0.141	0.14
Period worked as a non-standard employee	0.0005	0.000	2.50 **	0.0011	0.001	1.03
Employer factors (overall)						
Employer size [†] <100-299 employees>						
1-99 employees	0.0581	0.044	1.33	0.1230	0.180	0.66
300 to 999 employees	-0.0250	0.029	-0.87	-0.2339	0.117	-1.90
1000 or more employees	-0.0431	0.027	-1.61	0.0102	0.134	0.08
Job type <Clerical>						
Medical/welfare service	-0.1433	0.052	-2.56 **	-	-	-
Sales	0.0028	0.064	0.04	-0.0773	0.195	-0.39
IT engineering/creative	0.0079	0.038	0.21	-0.3650	0.139	-2.01 *
Other professional	-0.0079	0.036	-0.22	0.2761	0.199	1.17
Manufacturing	0.0367	0.041	0.89	0.1841	0.146	1.23
Light manual labor	-0.1351	0.055	-2.33 *	-0.2113	0.200	-0.99
Prefecture-by-prefecture unemployment rate	0.0161	0.014	1.15	0.0253	0.060	0.42
Total period worked at the current employer <more than 3 years>						
1 year or less	-0.0339	0.031	-1.11	0.0552	0.161	0.34
1 to 3 years	-0.0132	0.026	-0.51	-0.0379	0.159	-0.24
Employer factors (management and use of temps)						
Employer-provided OJT D	-0.0583	0.025	-2.37 *	-0.0171	0.118	-0.15
Job's degree of routineness	-0.0511	0.013	-3.84 ***	-0.0338	0.062	-0.54
Records of conversion into regular employees [†]	-0.0381	0.022	-1.77	0.0253	0.100	0.25
Employer problems						
Can't use capabilities or experiences	0.0916	0.031	2.91 **	0.3426	0.101	2.88 **
Often required to do a job other than the one specified by the contract	0.1057	0.042	2.49 **	0.1176	0.272	0.42
Absence of a fixed chain of command	-0.0376	0.047	-0.80	-0.3325	0.150	-1.75
Excessive workload	-0.0116	0.033	-0.35	0.0956	0.152	0.62
Long overtime hours	-0.0153	0.049	-0.32	0.1940	0.219	0.82
Too much idle time	0.0046	0.034	0.13	0.2889	0.149	1.62
Lack of education or training	0.0445	0.037	1.21	0.2228	0.173	1.17
Colleagues' inappropriate workplace behavior	0.0030	0.037	0.08	0.2724	0.140	1.70
Burden of workplace relationships	0.0621	0.032	1.93	-0.1302	0.137	-0.93
Sexual, power and other harassment	0.1593	0.052	2.98 **	-	-	-
Low wages	0.1073	0.024	4.49 ***	-0.0914	0.115	-0.79
Safety and sanitary problems/poor workplace environment	0.0417	0.047	0.90	-0.1117	0.199	-0.55
Lack of access to employees' amenity facilities	0.0754	0.038	1.98 *	-0.0889	0.260	-0.34
Difficult to take paid leave	0.0394	0.029	1.35	0.2097	0.150	1.31

Table 7 (Continued)

Job security concern= 1	Estimation 4 [Overall]			Estimation 5 [Short-term contract]		
	Marginal effect	Standard deviation	Asymptotic t-value	Marginal effect	Standard deviation	Asymptotic t-value
<i>Temp agency factors (management)</i>						
Agency-provided Off-JT (Number of lectures)	-0.0090	0.007	-1.31	-0.0168	0.038	-0.44
Frequency of agency-worker consultation (Frequency = 6 scales)	-0.0143	0.007	-2.02 *	-0.0797	0.026	-3.03 **
Agency's job assignment (Continuous assignment =1)	-0.0676	0.022	-3.07 **	-0.0386	0.108	-0.36
Hourly wages	-0.0001	0.000	-3.42 ***	-0.0001	0.000	-0.41
Gap between desired and actual wages	0.0001	0.000	2.80 **	0.0004	0.000	1.23
Contract period <1 year or longer (long-term)>						
Less than 3 months (short-term)	0.0837	0.042	1.97 *	-	-	-
3 to 12 months (medium-term)	0.0355	0.023	1.57	-	-	-
Sample size		2578			191	
Log likelihood		-1603.5392			-95.021	
Pseudo coefficient of determination		0.0959			0.2823	

Note: *** 0.1%, ** 1%, * 5% significant. Items in < > are reference groups. D indicates dummy variables. † indicates data collected through the survey on employers.

cal/welfare service job” and “light manual labor job” are less likely to be concerned about job security than those engaging in a “clerical job.” Workers willing to take a “medical/welfare service job” are chronically in short supply, and “light manual labor jobs” are constantly available in such fields as house-moving, door-to-door parcel delivery and transport, so people engaging in these jobs may be less prone to be concerned about job security. Regarding the sample of short-term workers, it was found that people engaging in an “IT engineering and creative job” are less prone to be concerned about job security (Estimation 5).

“Employer-provided OJT,” a variable regarding the employer’s use and management of temporary agency workers, is a dummy variable which indicates the presence of an instructor or an educator in the workplace. “Job’s degree of routineness” is a variable that indicates the varying degrees of routineness of a job—the higher the value for the job is, the closer it is to judgment-based work. “Records of conversion into regular employees” is a dummy variable that indicates the employer’s records of the conversion of non-regular employees into regular ones for the past three years. Regarding Estimation 4 (overall sample), these variables indicated significant negative values (however, the significance level for “records of the conversion into regular employees” was 10%). In other words, in cases where the employer has an instructor or an educator who provides OJT or where the job has elements of judgment-based work, or where the employer has converted non-regular employees into regular ones in the past, workers are less prone to be concerned about job security. On the other hand, regarding the sample of short-term workers, significant correlation was not found. The reason for that may be that in the first place, short-term workers receive OJT in few cases, their jobs are of a highly routine nature and short-term workers are rarely

converted into regular employees.

As for employer-related problems, regarding the overall sample (Estimation 4), significant positive values were recorded with regard to “Can’t use capabilities or experiences,” “Often required to do a job other than the one specified by the contract,” “Burden of workplace relationship,” “Sexual and power or other harassment” “low wages” and “Lack of access to employees’ amenity facilities.” In particular, the value of the marginal effect regarding “Sexual, power or other harassment” is high, indicating that workers facing this problem are highly likely to be concerned about job security. On the other hand, among short-term workers, it is clear that “Can’t use capabilities and experiences” is a factor that causes job security concern (Estimation 5). This variable recorded the highest marginal effect among the variables used in Estimation 5, indicating that it considerably affects job security concern.

Finally, let us look at factors related to temporary staff agencies. “Frequency of agency-worker consultation” is an ordinal scale variable, which means that the higher the frequency is, the higher the value is. “Agency’s job assignment” is a dummy variable that indicates continuous job assignment by staff agencies. Regarding the overall sample, we see that the more frequently agency-worker consultation is held, the smaller the probability of the worker being concerned about job security is. Also, if the staff agency assigns jobs continuously, the worker is less likely to be concerned about job security. Among short-term workers in particular, the positive correlation between the frequency of agency-worker consultation and the reduction of job security concern is prominent. The length of the contract period was also used as a variable for the overall sample (Estimation 4). The estimation result showed that employees working on a short-term contract of less than three months are prone to be concerned about job security.

From the above results, it may be concluded that if a worker’s contract period is less than three months, they are highly likely to be concerned about job security. On the other hand, the total length of the period worked as a temporary agency worker at the employing company does not have any effect on job security concern. In other words, the contract period is more important than the total length of the actual period worked as a feel-good factor for workers. From the analysis regarding the sample of short-term workers, it was found that people in their 30s are more likely than those in their 20s to be concerned about job security and that people with a history of illness are more likely than those with a clean slate to be concerned. In addition, people who cannot use their capabilities or experiences in the workplace and people who infrequently hold consultation with their temporary staff agency are prone to be concerned about job security. Regarding the job type, people engaging in jobs requiring sophisticated professional skills, such as IT engineering, are less likely to be concerned about job security than people engaging in clerical jobs.

The hearing survey found that some workers were concerned about job security due to the reduction of their contract period and a lack of availability of medium- or long-term work following the Lehman Shock. Some workers experienced immediate termination of

their contracts because of the poor business performance of their employers and many others saw their contracts terminated after experiencing gradual reduction of their contract period due to employer-side reasons. When the contract is shortened, that could be a sign of its termination in the near future. After the Lehman Shock, the travel industry, for example, was suffering from the deterioration of their business performance due to rising crude oil prices and the outbreak of a new type of influenza. Some workers, including those who had previously been sounded out on whether they wanted to become regular employees, were notified of the termination of their contracts, so the workers surveyed expressed strong job security concern.

3. Hope to Become Regular Employees and Realistic Expectations

Most non-regular employees grow concerned about job security during recession, and such concern is presumed to lead them to hope for the status of regular employee, which (supposedly) enjoys relative employment stability. In light of that, I will examine factors that may affect the hope to become a regular employee through a probit analysis (Table 8). The explained variable used is a dummy variable with the hope to become a regular employee indicated by the value “1” and the explanatory variables include “job security concern” in addition to the labor supply-related factors, employer-related factors and factors related to temporary staff agencies that were used in the analysis described in the previous section.

Analysis concerning the hope to become a regular employee (Estimation 6) shows that regarding labor supply-related factors, single men in their 30s are highly likely to hope to become a regular employee but people in their 40s are less likely to have such hope. From the marginal effect, it is clear that people in their 50s are even less likely to hope to become a regular employee. “History of illness” indicates a significant negative correlation with the hope to become a regular employee. Workers are likely to hope to become a regular employee when they do not have the experience of suffering from illness that could affect their working ability since graduating from the last school.

Regarding employer-related factors, employees working for employers with a workforce of 1 to 99 employees are highly likely to hope to become a regular employee. But temporary agency workers engaging in an “IT engineering and creative job” tend to have no such hope, presumably because they are highly paid compared with workers doing other types of job¹² and they are accustomed to the external labor market.¹³ Regarding employers’ use and management of temporary agency workers, it was found that workers are highly likely to hope to become a regular employee in cases where OJT is provided by their employer or where the job has elements of judgment-based work. The prefecture-by-prefecture

¹² For details of wages by job type, refer to JILPT (2010b).

¹³ Studies by Sato et al (2008) and Sano and Takahashi (2009) also showed that people engaging in engineering jobs tend to care about what type of job they do but not about which employment arrangement they work under.

unemployment rate has positive correlation with the hope to become a regular employee, indicating that workers are likely to hope to become a regular employee during recession, when the unemployment rate rises.

Regarding factors related to temporary staff agencies, it was found that the lower workers' hourly wages are or the wider the gap between their desired wages and actual wages is, the more likely they are to hope to become a regular employee. It was also found that people working under a contract of one year or longer are more likely to hope to become a regular employee than those working under a contract of less than three months.

Finally, "job security concern has a positive correlation with the hope to become a regular employee. The marginal effect is also very high. In other words, when workers are concerned about job security, they are more likely to hope for the status of regular employee which (supposedly) enjoys relative employment stability.

Of the workers who hope to become a regular employee, less than 10% are conducting job search activity. In light of that, I will examine factors that lead workers to "hope and expect to become a regular employee in the future" and factors that cause workers to "hope to become a regular employee but expect to continue working as a temporary agency worker." I will make estimations through multi-nominal logit analysis using three explained variables¹⁴ — (1) "hoping to become a regular employee and expecting to do so in three years (hereinafter referred to as "people expecting to become a regular employee," (2) "hoping to become a regular employee but expecting to continue temporary work" (hereinafter referred to as "expecting to continue temporary work"), and (3) "hoping to become a regular employee but having no idea of the employment arrangement three years later" (hereinafter referred to as "no idea of future employment arrangement").¹⁵ The explanatory variables used in this analysis include those related to job search activity in addition to those used in the estimation regarding the hope to become a regular employee. Regarding "job search activity," "making specific activity," "collecting information online" and "doing nothing" were adopted as dummy variables.

The estimation results are represented by Estimations 7 and 8 in Table 8. I will mainly

¹⁴ Regarding these explained variables, people who selected the answers "By all means" and "I rather hope to do so" in response to the question "Would you like to work as a regular employee in the future" were categorized as "people hoping to become a regular employee." Of them, those who selected the answer "Expecting to become a regular employee" in response to the question "What kind of employment arrangement do you expect to be working under three years later" was categorized as (1), those who selected "Expecting to continue working as a temporary worker" as (2), and those who selected "Have no idea" as (3). People who selected other answer options—"Expecting to become a contract worker," "Expecting to become a part-time or *arubaito* worker," "Expecting to be self-employed or managing an own business," "Expecting to be managing a family business," "Expecting to do household work," and "Other"—were excluded from the analysis data.

¹⁵ People who selected "Have no idea" were included in the analysis because such people accounted for the largest proportion, around 30%, of the total, compared with 15.9% for people who selected "Expecting to become a regular employee" and 29.9% for people who selected "Expecting to continue temporary work."

Table 8. Results of Analysis Concerning the Hope to Become a Regular Employee and Realistic Expectations

	Estimation 6			Estimation 7			Estimation 8		
	Probit Analysis			Multi-nominal logit analysis			Multi-nominal logit analysis		
	(Hoping to Become a Regular Employee = 1)			Base: (2) Expecting to continue temporary work			Base: (3) No idea of future employment arrangement		
	Marginal effect	Standard deviation	Asymptotic t-value	(1) Expecting to become a regular employee			(1) Expecting to become a regular employee		
			Coefficient	Standard deviation	Asymptotic t-value	Coefficient	Standard deviation	Asymptotic t-value	
Labor supply factors									
Gender D	0.1666	0.033	4.90 ***	0.5539	0.228	2.43 *	0.3444	0.213	1.61
Marital status D	-0.0442	0.023	-1.88 *	0.0191	0.163	0.12	0.0964	0.159	0.61
Age <30s>									
20s	0.0389	0.029	1.35	0.5916	0.193	3.06 **	0.1746	0.175	1.00
40s	-0.0743	0.028	-2.61 **	-0.4011	0.196	-2.05 *	-0.2831	0.193	-1.46
50s and older	-0.2391	0.040	-5.30 ***	-0.9520	0.381	-2.50 *	-0.7034	0.385	-1.83
History of illness D	-0.0847	0.027	-3.17 **	-0.2533	0.194	-1.31	-0.1181	0.183	-0.65
Employer factors (human resources)									
Last school <Junior/senior high school D>									
Technical college	-0.0136	0.034	-0.41	0.1777	0.231	0.77	0.0209	0.220	0.09
Junior college	-0.0097	0.032	-0.31	0.1345	0.226	0.60	-0.1361	0.220	-0.62
University/graduate school	0.0141	0.029	0.48	0.4799	0.196	2.44 *	0.1480	0.188	0.79
Period worked as a non-standard employee <More than 5 years>									
Less than 1 year	0.0764	0.030	2.51 *	0.5452	0.207	2.63 **	0.2100	0.190	1.10
1 to 3 years	0.0426	0.030	1.43	0.7619	0.197	3.86 ***	0.4477	0.176	2.55 *
3 to 5 years	0.0427	0.028	1.50	0.1308	0.192	0.68	0.2366	0.182	1.30
Employer factors (overall)									
Employer size [†] <100-299 employees>									
1-99 employees	0.1020	0.044	2.27 *	0.3250	0.305	1.07	0.4913	0.284	1.73
300 to 999 employees	-0.0016	0.030	-0.05	-0.1503	0.207	-0.73	0.0149	0.196	0.08
1000 or more employees	-0.0121	0.028	-0.44	0.0247	0.191	0.13	0.0791	0.181	0.44
Job type <Clerical>									
Medical/welfare service	0.0325	0.061	0.53	0.4595	0.406	1.13	0.1858	0.367	0.51

Sales	0.0447	0.067	0.66	0.5290	0.453	1.17	0.4558	0.416	1.10	
IT engineering/creative	-0.0864	0.039	-2.20 *	-0.4856	0.255	-1.90	-0.0519	0.255	-0.20	
Other professional	0.0178	0.038	0.47	-0.7176	0.250	-2.87 **	-0.5648	0.247	-2.29 *	
Manufacturing	-0.0141	0.043	-0.33	0.0942	0.307	0.31	-0.4082	0.275	-1.48	
Light manual labor	-0.1073	0.061	-1.72	0.0636	0.446	0.14	-0.2397	0.402	-0.60	
Prefecture-by-prefecture unemployment rate	0.0308	0.015	2.11 *	-0.0625	0.105	-0.60	0.0360	0.100	0.36	
Total period worked at the current employer <More than 3 years>										
1 year or less	0.0257	0.032	0.80	0.3571	0.217	1.65	0.1536	0.208	0.74	
1 to 3 years	-0.0197	0.027	-0.73	0.1093	0.186	0.59	-0.0102	0.182	-0.06	
Employer factors (management and use of temps)										
Employer-provided OJT D	0.0508	0.024	2.12 *	0.1303	0.166	0.78	0.0104	0.159	0.07	
Job's degree of routineness	0.0614	0.014	4.42 ***	0.3059	0.096	3.18 ***	0.0657	0.091	0.73	
Records of conversion into regular employees [†]	0.0250	0.022	1.11	0.5387	0.152	3.54 ***	0.4945	0.144	3.44 ***	
Temp agency factors (management)										
Agency-provided Off-JT (Number of lectures)	0.0077	0.007	1.10	-0.0239	0.046	-0.52	0.0447	0.045	0.98	
Frequency of agency-worker consultation (Frequency: 6 scales)	0.0022	0.007	0.30	-0.0888	0.050	-1.79	-0.0832	0.046	-1.81	
Agency's job assignment (Continuous assignment=1)	0.0092	0.023	0.40	-0.2705	0.153	-1.77 *	0.3666	0.151	2.43 *	
Hourly wages	-0.0001	0.000	-2.22 *	0.0001	0.000	0.48	0.0001	0.000	0.40	
Gap between desired and actual wages	0.0003	0.000	4.96 ***	0.0001	0.000	0.28	0.0004	0.000	1.25	
Contract period <1 year or longer (long-term)>										
Less than 3 months (short-term)	-0.0768	0.043	-1.75	-0.2111	0.322	-0.65	-0.3764	0.286	-1.32	
3 to 12 months (medium-term)	-0.0069	0.023	-0.29	-0.3950	0.161	-2.45 *	-0.3628	0.153	-2.37 *	
Job security concern (Concerned=1)	0.2158	0.022	9.75 ***	-0.5860	0.155	-3.77 ***	-1.0027	0.148	-6.79 ***	
Job search activity <Doing nothing>										
Conducting specific activity	-	-	-	2.1116	0.319	6.63 ***	1.7975	0.290	6.20 ***	
Collecting information online	-	-	-	1.1333	0.159	7.11 ***	0.6405	0.149	4.31 ***	
Constant term	-	-	-	-1.4279	0.695	-2.05 *	-1.1056	0.672	-1.65	
Sample size	2410			1569						
Log likelihood	-1521.1571			-1512.619						
Pseudo coefficient of determination	0.0894			0.1126						

Note: *** 0.1%, ** 1%, * 5% significant. Items in < > are reference groups. D indicates dummy variables. [†] indicates data collected through the survey on employers.

point out differences compared with the results regarding the hope to become a regular employee (Estimation 6).

Regarding the variables related to human resources, it was found that people expecting to become a regular employee are more likely than those expecting to continue working temporary work to have a university or graduate school degree (Estimation 7). As for the period worked as a non-standard employee, people who have the experience of working as such for less than three years are likely to expect to become a regular employee (Estimation 7), a slightly longer period compared with people hoping to continue temporary work (Estimation 6). However, a significant difference is not observed concerning workers who have the experience of working as a non-standard employee for more than three years and no difference is observed concerning workers who have the experience of working as a non-standard employee for more than five years.

As pointed out by Genda (2008), people who have the experience of working as a non-standard employee for some period of time have a better chance than those with no such experience to become a regular employee due to the screening effect. However, as Hori (2007) pointed out, it may be difficult for people who have worked as a non-standard employee for more than three years to quit that status.

What is notable about the variables regarding the employer's use and management of temporary agency workers is that "records of conversion into regular employees" indicated a positive correlation with expectation concerning future employment status in Estimations 7 and 8 even though it did not show a significant correlation in Estimation 6. This suggests that workers' expectation as to the possibility of becoming a regular employee is significantly affected by the actual chance available at their current employer.

Regarding the factors related to temporary staff agencies, "agency's job assignment" showed a negative correlation in Estimation 7 even though a significant correlation was not indicated in Estimation 6. This suggests that people expecting to continue temporary agency work are more likely to receive job assignment continuously than people expecting to become a regular employee, who in turn are more likely to do so than people with no idea of their future employment arrangement. Presumably, if workers continue to receive job assignment continuously, they are encouraged to continue temporary agency work, and if no job is assigned, they are at a loss as to what employment arrangement they will work under in the future. As for the contract period, people working under a contract of one year or longer are more likely to expect to become a regular employee than those working under a contract of less than one year.

Finally, I will look at the correlation between job security concern and job search activity. As a result of the analysis using job security concern as a variable, it was found that people expecting to become a regular employee are less likely to be concerned about job security than people expecting to continue temporary work and people with no idea of their future employment arrangement. Meanwhile, analysis using job search activity as a variable showed that people expecting to become a regular employee are typically conducting spe-

cific job search activity, while people expecting to continue temporary work and people with no idea of their future employment arrangement are not.

From the above, it can be concluded that the hope to become a regular employee stems from job security concern. Meanwhile, people expecting to become a regular employee are less likely to have job security concern. That is presumably because such people are typically working for employers who have converted temporary agency workers into regular employees in the past and are conducting specific job search activity. As for the contract period, people working under a contract of one year or longer are highly likely to expect to become a regular employee. On the other hand, people with no idea of their future employment arrangement are typically likely to engage in manufacturing jobs, be older than people expecting to become a regular employee and have the experience of working as a non-standard employer longer than such people. In addition, they are highly likely to be concerned about job security. Thus, they face a more serious situation.

Through hearings, it was found that some people hoping to become a regular employee had worked as a temporary agency worker for a prolonged period of time as a result of repeatedly engaging in manual day jobs and other short-term work. What is common to such people is that they are strongly concerned about job security and that they are so financially squeezed that they cannot afford to conduct job search activity as they are busy scraping a living. Moreover, it is possible that if people continue to work as a temporary agency worker for a long period of time, their vocational skills could deteriorate. Recalling the days when he was engaging in a warehousing job, one temporary agency worker surveyed said he quit the job because he felt that he was losing his skills. In job search activity, continually working as a short-term temporary agency worker for a long period of time may result in a negative assessment of the worker's capabilities. If people continually work as a temporary agency worker for a long period of time, they could get trapped in a vicious circle of a financial squeeze reducing the opportunity to conduct job search activity and to develop vocational skills.

V. Summary and Consideration

Above, I conducted analysis regarding factors for the choice of temporary agency work, mainly by workers working on a short-term contract, as well as workers' job security concern, their hope to become a regular employee and realistic expectations. Finally, I will summarize the analysis results and offer my thoughts based on knowledge gained from hearings with workers.

- i. Short-term workers are typically more likely than long-term workers to be women in their 20s or 30s with a junior or senior high school diploma. They are likely to engage in sales, manufacturing or light manual labor jobs, rather than clerical jobs. They are also likely to be working in prefectures where the unemployment rate is high, which

means that short-term workers presumably increase during recession. It was also found that short-term workers are likely to be people who have experienced illness that could affect their working ability since graduating from the last school. From the hearings, it was also found that working on a short-term contract is a working arrangement necessary for people who want to work while recuperating from some illness or other, including mental disease. However, if workers are forced to continue working on a short-term contract for an extended period of time for health reasons, they will face difficulty resuming a normal working life. Recently, efforts to introduce mental health care in the workplace have been stepped up, and programs to help recuperating workers return to the workplace through labor-management collaboration have been implemented¹⁶. However, such programs are mainly targeted at regular employees, and efforts to support non-regular employees have lagged behind. Working as a temporary agency worker is a necessary option for people recuperating from illness to return to the workplace. Therefore, the government should meet this social demand by cooperating with temporary staff agencies.

ii. Factor analysis regarding job security concern showed that short-term workers in their 30s are more likely to be concerned about job security than workers in their 20s and that people with a history of illness are more likely to have job security concern than people with a clean slate. In addition, it was also found that workers engaging in jobs that do not enable them to use their capabilities or experiences and those who infrequently hold consultation with their agencies are likely to be concerned about job security. Moreover, people working under a contract of less than three months are more likely to have job security concern than people working under a contract of one year or longer. On the other hand, the total length of the period worked as a temporary agency worker at the current temporary staff agency does not have any correlation with job security concern. From the hearings, it was found that after the Lehman Shock, some workers saw their contracts terminated after experiencing reduction of their contract period. The reduction of the contract period is presumably a sign of the termination of the contract in the near future. Even if the total length of the period worked as a temporary agency worker at the current employer is long, the worker's job security concern is not dispelled if he has been retained through repeated renewal of short-term contracts. Companies employing temporary workers on a short-term contract for a long-term job on the premise of repeated contract renewal should offer a long-term contract in the first place.

iii. Factor analysis regarding the hope to become a regular employee showed that job

¹⁶ Workers targeted by mental health support discussed in roundtable discussions by Otsuka, Suzuki, and Takada (2007) and Ouchi et al (2010) are mainly regular employees.

security concern has a significant correlation with the hope to become a regular employee. On the other hand, it was found that people expecting to become a regular employee have little job security concern. Temporary agency workers expecting to become a regular employee are typically men in their 20s or 30s with a university or graduate school degree who have the experience of working as a non-standard employee for less than three years. They are also typically engaging in judgment-based jobs, rather than routine jobs, and working for employers who have converted temporary agency workers into regular employees in the past three years. People working under a contract of one year or longer are more likely to expect to become a regular employee than those working under a shorter contract. In short, the typical temporary agency worker who expects to become a regular employee is neither the type of short-term worker that is the main research subject of this paper nor the typical clerical temporary worker on a medium-term contract. These types of workers typically hope to become a regular employee but expect to continue working as a temporary agency worker or have no idea of what kind of employment arrangement they will be working under three years later. They are also strongly concerned about job security. In light of that, it is more urgent to dispel job security concern than to facilitate the path to a regular employee. To dispel job security concern, it is first necessary to extend the contract period for temporary agency workers. Employers should provide jobs in ways that enhance workers' vocational skills, while temporary staff agencies need to assign jobs in ways that enable workers to climb the career ladder.

In the hearings, short-term workers said that they were unable to devote themselves to job search activity because they were so financially squeezed and were busy scraping a living. While short-term temporary agency work is beneficial in that workers can earn quick money, there is the risk that if they continually work on a short-term basis for a long period of time, it will become difficult to quit that working style. Short-term workers will find it hard to decide on their own to quit the working style and will need appropriate advice from supporters and partners when exploring an exit. It is important to consider how to enable temporary staff agencies to cooperate in some way or other with the Hello Work job support centers (Public Employment Security Offices) and employment-supporting non-governmental organizations (NPOs) to assist short-term workers in that respect.

This paper classified temporary agency workers by the length of the contract period and conducted analysis regarding factors relating to the choice of employment arrangement and workers' perspective on employment. In the future, I would like to consider which types of contract, job and education and training provided by employers and temporary staff agencies facilitate the career formation of temporary agency workers. I would also like to examine what factors determine wages. Among other pending issues to be analyzed is how temporary agency workers are affected by repeated renewal of short- and medium-term contracts.

References

- Arulampalam, Wiji, and Alison L. Booth. 1998. Training and labour market flexibility: Is there a trade-off? *British Journal of Industrial Relations* 36 (4):521–36.
- Booth, Alison L., Marco Francesconi, and Jeff Frank. 2002. Temporary jobs: Stepping stones or dead end? *The Economic Journal* 112, no. 480:189–213.
- Genda, Yuji. 2008. Zenshoku ga hiseishain datta rishokusha no seishain he no iko ni tsuite [Transition into regular employment among separating non-regular employees]. *The Japanese Journal of Labour Studies* 50, no. 11:61-77.
- Hara, Hiromi. 2011. Hiseishain no kigyonai kunren ni tsuite no bunseki [The extent and effects of firm-provided training among non-regular employees in Japan]. Special issue, *The Japanese Journal of Labour Studies* 53:33–48.
- Hori, Yukie. 2007. Furita he no keiro to furita kara no ridatsu [Path to and exit from *freeter* status]. In *Furita ni tairyu suru wakamonotachi* [Young people trapped in *freeter* status], ed. Yukie Hori, chap. 2. Tokyo: Keiso Shobo.
- Japan Institute for Labour Policy and Training (JILPT). 2010a. Jinzai haken gaisha ni okeru kyaria kanri: Hiaringu chosa kara torokugata haken rodosha no kyaria keisei no kanosei wo kangaeru [Career management by temporary staff agencies: Reflecting on the possibilities of career formation for registered temporary agency workers based on a hearing survey]. JILPT research report no. 124, the Japan Institute for Labour Policy and Training, Tokyo.
- . 2010b. Jinzai haken gaish ni okeru kyaria kanri ni kansuru chosa (Hakenmoto chosa)[Survey concerning career management by temporary staff agencies (Temporary Staff Agency Survey)]. Research series no. 78, the Japan Institute for Labour Policy and Training, Tokyo.
- . 2010c. Haken shain no kyaria to hatarakikata ni kansuru chosa (Hakensaki chosha) [Survey concerning temporary agency workers' careers and working styles (Employer Survey)]. Research series no. 79, the Japan Institute for Labour Policy and Training, Tokyo.
- . 2011a. Haken shain no kyaria to hatarakikata ni kansuru chosa (Haken rodosha chosha) [Survey concerning temporary agency workers' careers and working styles (Temporary Agency Worker Survey)]. Research series no. 80, the Japan Institute for Labour Policy and Training (JILPT), Tokyo.
- . 2011b. Torokugata haken rodosha no kyaria pasu, hatarakikata, ishiki: 88 nin no haken rodosha no hiaringu chosa kara [Career path, working styles and perspectives of registered temporary agency workers: Findings of a hearings survey with 88 temporary agency workers]. JILPT research report no. 139-1, 2, the Japan Institute for Labour Policy and Training (JILPT), Tokyo.
- Kosugi, Reiko. 2003. *Furita to iu ikikata* [*Freeter* as a lifestyle]. Tokyo: Keiso Shobo.

- Okuda, Eiji. 2010. *Haken rodosha no hatarakikata to kyaria ni kansuru chosa: Haken rodosha 16-nin no daihyo jirei kara* [Survey concerning temporary agency workers' working styles and careers: 16 typical cases of temporary agency workers]. JILPT Report no. 8, the Japan Institute for Labour Policy and Training, Tokyo.
- Ono, Akiko. 2009. Torokugata haken rodosha no kyaria keisei no kanosei wo kangaeru: Senko chosa kenkyu sakei to kigyo jirei chosa kara [Thinking of potential of career development for registered temporary agency workers: From preceding research surveys and enterprise case researchs]. JILPT discussion paper no. 09-04, the Japan Institute for Labour Policy and Training, Tokyo.
- Otsuka, Yasumasa, Ayako Suzuki, and Misato Takada. 2007. Shokuba no mentaru herusu ni kansuru saikin no doko to sutoresu taisho ni chumoku shita shokuba sutoresu taisaku no jissai [Recent trends in occupational mental health in Japan and a stress prevention practice focusing on stress coping]. *The Japanese Journal of Labour Studies* 49, no. 1:41–53.
- Ouchi, Shinya, Yoshihide Sano, Staffs of Human Resource Department and Union Officials. 2010. Tayona kenko jotai no rodosha to jinji kanri [Workers in various health condition and the human resource management of them]. *The Japanese Journal of Labour Studies* 52, no. 8: 56–73.
- Sano, Yoshihide, and Koji Takahashi. 2009. Seihin kaihatsu ni okeru haken gijutsusha no katsuyo: Hakensaki ni yoru gino kojo no kikai teikyo to shigoto iyoku [Management of dispatched engineers in the Japanese R & D sections: The training opportunity at user's R & D workplace and its effect on engineer's motivation]. *The Japanese Journal of Labour Studies* 51, no. 1: 13–28.
- Sato, Hiroki. 2006. Haken sutaffu no tayona shugyo ishiki to haken gaisha, hakensaki kigyo no kadai [Temporary agency staff's various perspectives on employment and challenges for temporary staff agencies and employers]. In *Haken sutaffu no shugyo ishiki, hatarakikata to jinji kanri no kadai* [Temporary agency staff's perspectives on employment and working styles and challenges for personnel management], ed. Hiroki Sato, Tomoyuki Shimanuki and Koji Takahashi, 9–19. RSI Research Paper Series no.9, Department of Research on the Staffing Industry, Institute of Social Science, University of Tokyo, Tokyo.
- Sato, Hiroki, and Shizuko Koizumi. 2007. *Fuantei koyo to iu kyozo: Pato, furita, haken no jitsuzo* [Fiction of Unstable Employment: Reality of part-timers, *fretters* and temporary agency workers]. Tokyo: Keiso Shobo.
- Sato, Hiroki, Yoshihide Sano, Koji Takahashi, and Hidetada Azuma. 2008. *Seihin sekkei bunya ni okeru gijutsusha haken kigyo no kyaria kanri (2): Gijutsusha kojinn anketo chosa kara* [Career management by engineering temporary staff agencies in the field of product design (2): Findings of a questionnaire survey on individual engineers]. RSI Research Paper Series no.13, Department of Research on the Staffing Industry, Institute of Social Science, University of Tokyo, Tokyo.

- Shimanuki, Tomoyuki. 2007. Haken rodosha no jinji kanri to rodo iyoku [Influence of temporary worker human resource management on work motivation]. *The Japanese Journal of Labour Studies* 49, no. 9:17–36.
- Tachibanaki, Toshiaki, and Kunio Urakawa. 2007. Nippon no hinkon to rodo ni kansuru jissho bunseki [An empirical analysis on poverty and labour in Japan]. *The Japanese Journal of Labour Studies* 49, no. 6:4–19.
- Tsuru, Kotaro. 2010. Shinkokuka suru koyo no nikyokuka [Deepening polarization of employment]. *Nihon Keizai Shinbun*, May 11, 2010.
- Yuda, Michio. 2010. Kenko jotai to rodo seisansei [Health status and labor productivity]. *The Japanese Journal of Labour Studies* 52, no. 8:25–36.