
Is Temporary Work “Dead End” in Japan?: Labor Market Regulation and Transition to Regular Employment

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This paper examines the transition from temporary to permanent or regular employment in Japan, using panel data (Keio University Household Panel Survey, KHPS). Employment protection legislation (EPL) in Japan for regular employees is more rigorous than the average of OECD countries even though it is weaker for temporary workers. Those currently engaged in temporary work may be at “dead ends” on their way to become regular employees. Making a comparison between Japan and European countries, it became clear that Japan had the lowest possibility of transition from temporary to regular employment. Focusing only on men, however, 30% of temporary workers find regular employment each year. This is nearly equal to the lowest rates of transition among European countries. Analyzing gender differences of the rate of transition in Japan, there was a substantial gap between women and men, irrespective of age or employment status. In particular, the rate of transition to regular employment within the same firm was much lower among women than among men. In the case of temporary-agency workers who are assigned to the client companies to work only for a limited period, they are less likely to find regular employment within the firm where they are working and more likely to become non-working.

I. Introduction

Most OECD countries have seen an increase in young people employed for part-time work and temporary work during the period between the 1990s and 2000s, and those engaged in temporary work have also increased among adults (OECD 2008). In Japan, these types of employment, collectively referred to as non-standard employment, have become a social problem. Non-standard workers are not only at a disadvantage due to their contractual status for only a fixed term or short term, but also they are treated differently from standard workers in that they are subject to lower wages than standard workers and excluded from the welfare and pension programs provided for standard workers.¹

It is pointed out that young people find it more difficult to get out of temporary or

¹ In this study, the term “temporary employment/worker” refers to employment as fixed-term contract workers or as temporary-agency workers. The term “non-standard employment/worker” refers to workers other than those called “*seishain* (regular employees)” at each firm. Workers in non-standard employment are called with various names, such as *pato* (part-time worker), *arubaito*, *shokutaku*, *keiyaku*, and the like. In Japan, not all non-standard workers are hired under fixed-term employment contracts. The category of non-standard worker is often used to indicate workers whose work conditions are different from those of regular employees in terms of the wage level, working hours, scope of duties, and degree of engagement in compulsory duties. For typical characteristics of non-standard employment in Japan, see Duell et al. (2010), Box 1.1.

non-standard employment. Kondo (2007) clearly showed that their failure to find standard employment as their first job made it difficult for them to find standard employment thereafter. Sakai and Higuchi (2005) and Hori (2007) stated that it has become less likely these years that young people who work as non-standard workers or have no employment will find jobs as regular employees. If the transition from non-standard to standard employment rarely takes place in the future, the pay gap between temporary workers and regular workers will increase along with the increase in age and the length of service (e.g. Ministry of Health, Labour and Welfare [MHLW] 2011; Yanagida and Miyoshi 2006; Furugori 1997). When today's young people become older, the income disparity will further expand. To avoid such a situation, policy measures must be implemented to promote the transition from non-standard to standard employment.

However, as the distinction between non-standard workers and standard workers involves the difference in terms of the degree of engagement in compulsory duties and the scope of duties assigned, it is considered to be a matter of the employment management of each firm and partly excluded from employment regulation by law. Therefore, the main subjects of employment legislation are related to fixed-term contracts and contracts for temporary-agency workers.

In fact, many countries regulate the practice of hiring temporary workers for the purpose of having them engaged in long term work in the same manner as regular workers. Specifically, there are limitations to the term of contract and the extension of contracts for temporary employment, thus when firms intend to hire temporary workers beyond the statutory maximum period, they have to re-hire them as regular workers without fixed terms. Hence, if regulation of temporary employment is tightened, this would facilitate the transition from temporary to regular employment. However, if firms are not allowed to hire temporary workers for a longer term, this would increase the possibility of unemployment for temporary workers.

In Japan, regulation of temporary employment is relatively loose. Although there is an upper limit to the term of contract for fixed-term employment, the contract may be extended or renewed without limitation, which enables firms to in effect hire fixed-term contract workers for a long term. On the other hand, there is a law that sets an upper limit to the period of continuous employment with respect to temporary-agency workers. In order to use workers assigned from temporary staff agencies continuously for three years or more, firms must hire these workers as their regular employees.

Regulation of temporary employment must also be considered in connection with regulation of regular employment. If it is easy to dismiss regular workers, firms can adjust their labor force by dismissing their regular workers and they will not have to hire temporary workers for labor adjustment. In this respect, if employment protection legislation for regular employment is weak, firms would be less motivated to hire temporary workers for labor adjustment. On the contrary, when protection legislation for regular employment becomes stringent, it might be difficult to dismiss regular workers after hiring them, so firms

Table 1. Share of Temporary Employment in OECD Countries, by Age (2010) (%)

	Men			Women		
	15-24	25-54	55-64	15-24	25-54	55-64
France	52.9	9.7	8.3	58.0	12.4	8.7
Germany	58.8	9.2	4.7	55.5	10.4	4.5
Italy	44.9	9.3	6.7	49.3	13.2	5.4
Japan	26.1	4.5	10.1	27.1	18.9	23.1
Spain	58.7	22.9	9.3	58.4	24.9	11.4
Sweden	51.1	9.4	5.4	63.1	12.7	5.5
United Kingdom	14.3	4.0	4.7	13.0	5.2	5.4
OECD countries ¹	26.4	9.0	8.7	24.2	10.8	9.8

Source: OECD, Temporary Employment Database.

Note: ¹Unweighted mean for OECD countries other than those specified above.

would have a greater incentive to enter into fixed-term contracts with workers. Concurrently, the transition from temporary to regular employment would be less likely to take place as firms would be less inclined to convert their temporary workers to regular workers.

OECD (2006) clearly showed that in European countries where employment protection legislation (EPL) for regular employment is stricter, the share of temporary employment is higher and the rate of transition from temporary to regular employment is lower. According to the EPL indicator compiled by OECD (2004), Japan’s EPL is stricter for regular employment and is less strict for temporary employment compared to the OECD average. This may be the reason that temporary employment accounts for a larger proportion in Japan and it is more difficult for workers to shift from temporary to regular employment.

Table 1 shows the share of temporary employment in OECD countries. As for men, the share of temporary employment among young people in Japan is on a level equal to other OECD countries but is lower among people aged between 25 and 54. As for women, the share of temporary employment substantially declines in many OECD countries in the 15-24 age group and the 25-54 age group, whereas the decline in share is not so large in Japan. As a result, unlike men, the share of temporary employment among women aged between 25 and 54 is high in Japan.

The share of temporary employment in Japan is not high as compared to the level in other countries. However, the situation in Japan possibly makes the transition from temporary to regular employment rather difficult because EPL is relatively strict for regular employment and it is less strict for temporary employment. This paper examines the transition from temporary to regular employment in Japan through analysis using panel data. If the path from temporary to regular employment is fully open, temporary employment is regarded as a “stepping stone” toward becoming a regular employee, but if it is not, tempo-

rary employment is a sort of ‘dead end’. In the real world, it is impossible to assume a situation where there is no transition from temporary to regular employment, so whether temporary employment is a stepping store or dead end is an issue related to the level of such transition. In this paper, the situation in Japan is compared with the situation in European countries, in order to explore the level of transition from temporary to regular employment in Japan. Then, analysis is conducted concerning whether such transition takes place in the internal or external labor market, in light of various attributes of workers such as gender, age, and length of service, with the goal of clarifying the characteristics of temporary employment in Japan.²

The composition of this paper is as follows. Section II reviews the prior studies. Section III explains the data used for the analysis. Section IV compares Japan and Europe with regard to the transition from temporary to regular employment, and examines two patterns of transition in Japan, intra-firm transition and inter-firm transition. Section V demonstrates a multivariate analysis of the probability of transition from temporary to regular employment. Section VI presents the views on the transition from temporary to regular employment in Japan.

II. Prior Studies and Analysis Goals

In European countries, EPL is related to the share of temporary employment or the rate of transition from temporary to regular employment. This section reviews the prior studies that inquired into the state of transition in each country.

Booth, Francesconi, and Frank (2001) analyzed the situation in England, where EPL is relatively weak both for regular employment and temporary employment and the percentage of fixed-term contract workers is low. They stated that more than 80% of temporary workers became regular workers within five years. In another report, they clarified that when female temporary workers became regular workers, their wage level is almost equal to the average wage of regular workers who have never been in temporary jobs (Booth, Francesconi, and Frank 2002). From these findings, they concluded that fixed-term employment provides a “stepping stone” to regular employment.

Hoffmann and Walwei (2003) researched the situation in Germany, where ELP for regular employment is stricter than the OECD average and ELP for temporary regulation is on a par with the average, and stated that temporary employment contracts function as “stepping stones” to regular, full-time employment, based on the time-series data which

² Shikata (2010) conducted the same analysis as the one utilized in this paper, by applying the distinction between standard and non-standard employment instead of the distinction between temporary and regular employment. According to the analysis results in this study based on the latter distinction, the following facts can be pointed out: (i) the rate of transition from non-standard to standard employment is lower than the rate of transition from temporary to regular employment; and (ii) there is a large gender gap in the transition from non-standard to standard employment within the same firm.

show that the temporary employment rate maintains a certain level and moves widely.

Unlike Japan, EPL in Italy is less strict than the OECD average in relation to regular employment and stricter than the average in relation to temporary employment. Gagliarducci (2005) focused on this country in his analysis and demonstrated that the longer the term of contract, the higher the probability for fixed-term contract workers to become regular workers, and that workers who have experienced unemployment or repeated fixed-term jobs are less likely to find regular jobs.

In conducting analysis concerning the transition from temporary employment to other kinds of employment status, D’Addio and Rosholm (2005) used the data from the survey titled the European Community Household Panel (ECHP), in which 13 European countries participated. The analysis results indicated that for women, the longer they have been in temporary jobs, the higher the probability for them to find regular jobs, whereas for men, the longer duration in temporary jobs decreases such probability. They also suggested that women who have young children and older workers as well as men with low education levels have higher risk of becoming non-working, or in other words, these people are at “dead ends” in terms of their employment status.

Thus, the prior studies on European countries clearly showed that temporary employment is a “stepping stone” to regular employment, especially for women. On the other hand, there is a view that older workers, workers with lower education level, and workers who had been unemployed are more apt to lose temporary jobs and become unemployed, or in other words, these people would easily come to a “dead end.”

There are also prior studies that researched the situation in Japan. Aizawa and Yamada (2008), Genda (2008), and Pretel, Nakajima, and Tanka (2009) analyzed the transition from temporary or non-standard employment to regular or standard employment through job changes.

Aizawa and Yamada (2008) analyzed the data extracted from the Employment Status Survey (Statistics Bureau, Ministry of Internal Affairs and Communications (MIC)), which were taken at five points in time during the period between 1982 and 2002, and clarified the changes in the employment status of workers who changed their jobs. They found many facts in the analysis, and in connection with the theme of this paper, i.e. transition from temporary to regular employment, they demonstrated that people with a higher education level can shift from non-regular to regular employment more easily, and that those who have been in non-regular jobs for a longer period are less likely to find regular jobs. As for the trends over time, they stated that the percentage of those who move from a non-regular job to another non-regular job has increased over the past 20 years, whereas the movement from non-regular jobs to regular jobs has been stagnant since the beginning of the 1990s.

Genda (2008) used the data from the Employment Status Survey 2002 and analyzed the transition to standard employment among persons who left their previous non-standard jobs. The key finding that he mentioned is that non-standard workers who had worked for two to five years for the same firm before leaving their job are more likely to find standard

jobs.

Pretel, Nakajima, and Tanka (2009) also used the sample data extracted from the Employment Status Survey 2002, regarding young men within three years from graduation, and made structural estimation of the probability of transition from non-standard to standard employment. They stated that in the short term, those who started to work as non-standard workers after graduation are more likely to become standard workers as compared to those who found no employment after graduation, but the simulation results show that there is no disparity between the two groups in the long term, so non-standard employment can be regarded as neither “dead end” nor “stepping stone.”

The Employment Status Survey, which was used as the data source in these prior studies, allows us to capture changes in the employment status only by means of the survey items concerning a job change, so it is not appropriate for analyzing changes in the employment status within the same firm. Because of this, the analyses that used the Employment Status Survey may have been successful only partially in grasping the state of transition from temporary to regular employment or from non-standard to standard employment.

In addition, Genda (2008) targeted non-standard workers who left their jobs and analyzed the probability of transition from non-standard to standard employment on condition of separation from employment. Because of this, workers who continued to engage in non-standard jobs without changing their firm due to lack of opportunities for standard employment are excluded from the scope of analysis subjects.

Genda (2009) and JILPT (2010) also covered the transition from non-standard to standard employment within the same firm. Genda (2009) targeted the respondents in the Internet survey and analyzed the situation of standard workers who once worked as non-standard workers. In his study, Genda clarified important points including: (i) in the case of intra-firm transition, those who shifted from non-standard to standard employment are more likely to engage in the same job and stay at the same workplace before and after the transition; and (ii) between intra-firm transition and inter-firm transition, there is no significant difference in terms of the impact on the wage function.

However, since Genda (2009) took a sample of standard workers who once worked as non-standard workers, those who remained in non-standard employment are excluded from the scope of analysis subjects, as in the case of his study in 2008. For this reason, while discussing the transition from non-standard to standard employment within the same firm, Genda (2009) did not analyze the probability of transition from non-standard to standard employment in a true meaning, but targeted workers who experienced the transition from non-standard to standard employment and estimated the possibility that their transition took place within the same firm. The probability thus estimated is different from the probability of non-standard workers becoming standard workers within the same firm. In order to analyze the latter probability, it is necessary to target all non-standard workers at a specific point in time and estimate the probability that these employees become standard workers within a certain period of time.

Based on the survey that it independently conducted, JILPT (2010) clarified that about 40% of persons whose first job was non-standard employment became standard workers, and that of all cases of transition from non-standard to standard employment, about 20% were through the promotion within the same firm and about 80% were through the movement between firms. However, this study used the data of the employment survey of workers aged between 25 and 44, and while the entire sample have employment records at the age of 25 and younger ages, the share of the sample who have employment records beyond the age of 25 becomes smaller as the age of the sample increases; as a result, the employment period at younger ages (in one’s 20s) was overvalued in the tabulated historical data.

To summarize the above, in connection with the relevance between labor market regulation and temporary employment, the prior studies overseas suggest that since Japan implements stricter regulation for regular employment and less strict regulation for temporary employment compared to other OECD countries, the transition from regular to temporary employment may be less likely to take place. However, as most of the prior studies in Japan took up non-standard employment instead of temporary employment as the analysis theme, it has been difficult to compare the situation in Japan with the situation in other countries, and the issue of fixed-term contracts has rarely been discussed. Another problem with these prior studies is that they did not fully examine the transition from temporary to regular employment that takes place in the internal labor market. In order to verify these points, analysis is conducted in the sections below with regard to the transition probability of temporary workers becoming regular workers within a certain period of time, separately for intra-firm transition and inter-firm transition, using panel data.

III. Explanation of Data

The data used for the analysis in this paper are a panel data taken from the Keio Household Panel Survey (KHPS) that was conducted by the Keio/Kyoto Joint Global Center of Excellence Program, for six years from 2004 to 2009. The subjects of the first survey were 4,005 men and women aged between 20 and 69, selected by two-stage stratified random sampling. In the 2009 survey, the sample size was 2,290 (cumulative survival rate: 57.2%). From 2007, the survey targeted additional 1,419 men and women selected by the same sampling method. In this study, for the statistical analysis of the patterns of transition from temporary to regular employment in Japan, the initial sample taken for the 2004 survey was used in order to ensure sample representativeness, and when conducting a multivariate analysis which requires a larger sample, the additional sample introduced in 2007 was also used.

As this study aims to examine the changes in the employment status between the survey year and the following year regarding persons who were in temporary employment in

the survey year, the sample data used in this study are limited to those who continued to be included in the sample for two or more survey periods and who were in temporary employment during their first survey period. For the purpose of cleaning the sample, students and workers categorized as “agricultural, forestry or fishery worker,” “mineworker,” “manager,” and “other” are excluded from the analysis subjects.

IV. Transition from Temporary Employment

1. Comparison between Japan and European Countries with Regard to Transition from Temporary to Regular Employment

This section first examines to what extent the transition from temporary to regular employment has taken place in Japan, through comparison with European countries. The data on European countries used here are extracted from the table in the report of OECD (2006), compiled by using the European Community Household Panel (ECHP), with the exception that the data for Japan are compiled from the KHPS data by the same method. The analysis focuses on the proportion of workers who shifted from temporary employment (as fixed-term contract workers and temporary-agency workers) to regular employment.

Table 2 indicates the share of temporary workers aged between 25 and 64 in each country in terms of employment status as of one year or three years after the reference year. It ranks the countries in descending order of the percentage of those who shifted to regular employment within one year. In Luxemburg, Austria, and the United Kingdom, more than half of the sample became regular workers within one year. On the other hand, in Southern European countries such as Greece, Spain, Portugal, and Italy, and in France, the share of those who shifted from temporary to regular employment within one year was at a low level, less than 30%. In Japan, the percentage of those who became regular workers within one year was lower than the above low level in the latter group of European countries, whereas the share of those who became non-working within one year is relatively low in Japan.

The major characteristic of the situation in Japan, the lower frequency of transition from temporary to regular employment, is observed more clearly in the employment status of temporary workers as of three years after the reference year. Even in France and Southern European countries where the percentage of those who became regular workers within one year is low, nearly half of the sample became regular workers within three years (except in Greece), and in all countries except for Japan, the percentage of those who became regular workers is higher than that of those who became temporary workers. However, in Japan, only about 25% of the sample shifted to regular employment within three years. The situation in Japan where many temporary workers remained in temporary employment even after three years had passed is in contrast to the situation in European countries where many workers shifted to regular employment after engaging in temporary jobs only as a one-time experience.

Table 2. International Comparison of the Employment Status of Temporary Workers as of One Year or Three Years after the Reference Year (among Men and Women Aged between 25 and 64)

	1 year after			3 years after		
	Regular worker	Temporary worker	Non-working	Regular worker	Temporary worker	Non-working
Luxemburg	58.7	27.9	13.4	79.7	11.8	8.5
Austria	55.9	35.3	8.8	67.5	22.6	9.9
UK	51.9	29.9	18.3	63.4	15.1	21.5
Netherland	49.1	40.9	10.0	69.9	17.6	12.5
Germany	46.6	38.5	14.9	60.0	23.5	16.4
Belgium	45.0	49.3	5.6	71.4	23.2	5.4
Ireland	41.6	44.5	13.9	66.1	15.8	18.2
Denmark	35.2	46.2	18.6	61.3	20.5	18.2
Finland	31.2	45.6	23.2	44.7	30.0	25.3
Spain	29.1	52.4	18.5	46.0	37.5	16.5
Greece	28.3	49.1	22.6	36.0	47.8	16.2
Italy	27.2	49.7	23.1	47.2	30.3	22.5
Portugal	24.6	64.5	10.8	55.0	31.3	13.7
France	18.1	52.1	29.9	45.3	30.6	24.1
Japan (temporary)	17.5	72.1	10.4	24.9	59.7	15.4
Japan (non-standard)	7.5	81.5	11.0	10.7	71.5	17.8

Sources: European countries: Calculated based on *European Community Household Panel (ECHP)*, wave 5 (1998) to wave 8 (2001), from data between 1998 and 1999 for “1 year after” and data between 1998 and 2001 for “3 years after” (OECD, *Employment Outlook 2006: Boosting Jobs and Incomes*, Supplementary statistical material). Japan: Calculated by the author based on the Keio Household Panel Survey (KHPS), wave 1 (2004) to wave 5 (2008).

Notes: 1. Temporary workers include fixed-term contract workers and temporary-agency workers.

2. Data for “Japan (non-standard)” indicates the share of non-standard workers who became standard workers, remained in non-standard employment, or became non-working, respectively. “Non-standard worker” refers to workers categorized by the name of status into “*keiyaku*,” “*pato* (part-time),” “*arubaito*,” “temporary-agency worker,” or “*shokutaku*,” irrespective of whether or not they are under fixed-term contracts.

As mentioned earlier, in comparison with European countries, EPL in Japan is less strict for fixed-term contract workers and temporary-agency workers and stricter for regular workers. Seeing this feature of the Japanese labor market, it is assumed that the transition from temporary employment (as fixed-term contract workers or temporary-agency workers)

to regular employment is less likely to take place, and in reality, the transition takes place less frequently in Japan than in European countries.³

For Japan only, Table 2 indicates the results based on the distinction between non-standard employment and standard employment as well. The change from non-standard to standard employment is smaller than the change from temporary to regular employment for both one year and three years after the reference year. This suggests that the transition from non-standard to standard employment is extremely unlikely to take place in Japan.

2. Patterns of Transition from Temporary to Regular Employment in Japan

Next, in order to clarify the characteristics of the transition from temporary to regular employment in Japan, analysis is conducted by gender, age, and employment status, and in particular, separately for intra-firm transition and inter-firm transition. The sample used here is limited to persons aged 59 or younger, in order to minimize the influence of those who retire at the mandatory retirement age.

The employment status of temporary workers one year after the reference year is categorized as follows: (i) regular worker within the same firm; (ii) regular worker at another firm; (iii) temporary worker at another firm; (iv) non-working; and (v) no change. Here, in the case where persons who were temporary workers in a given survey year have become regular workers by the next survey year, these persons are deemed to have experienced the transition to regular employment. The distinction between (i) regular worker within the same firm and (ii) regular worker at another firm comes from whether or not the worker has changed their job.⁴

The state of transition from temporary employment is indicated in Table 3, by age. As for the rate of transition to regular employment among men in all age groups, the rate of intra-firm transition is higher than the rate of inter-firm transition, suggesting that men

³ However, the regression analysis of the level of transition from temporary to regular employment in each country, conducted by applying the EPL indicator which represents the strictness of regulation, does not clearly show the relevance between EPL and transition. Contrary to what was expected, the rate of transition to regular employment is lower for the countries that implement stricter EPL for temporary employment. However, the rate of transition from temporary to regular employment is lower as EPL for regular employment becomes stricter, although this is not a significant result. Presumably, this result may signify that variations in labor status, including job change and separation from employment, are smaller in countries with stricter EPL, rather than representing the relevance between the EPL indicator and the transition from temporary to regular employment. How the transition from temporary to regular employment changes when EPL on temporary employment becomes stricter may be the issue that remains to be analyzed in future study.

⁴ The concepts of “job change” and “separation from employment” are defined as follows. In response to the question in the KHPS, “Are you working at the same job as the one for which you were working one year ago?”, those who answered “I am at a different company or organization from the one where I was one year ago” are categorized as “job change,” and those who answered “I quit the job I had one year ago, and I am not working” are categorized as “separation from employment.” Those who were in employment at time t and were non-working at time $t+1$ are categorized as “transition to non-working.”

Table 3. Transition from Temporary Employment (Employment Situation as of One Year after) among Workers Aged 59 or Younger: By Age (%)

	No change	Regular worker within the same firm	Regular worker at another firm	Temporary worker at another firm	Non-working	Total	Sample size
<i>Men</i>							
20-29	57.1	33.3	2.4	2.4	4.8	100.0	42
30-39	46.9	21.9	9.4	3.1	18.8	100.0	32
40-49	60.9	30.4	4.3	4.3	0.0	100.0	23
50-59	68.1	19.4	4.2	2.8	5.6	100.0	72
Non-standard total	60.4	24.9	4.7	3.0	7.1	100.0	169
<i>Women</i>							
20-29	53.3	17.4	9.8	4.3	15.2	100.0	92
30-39	71.3	6.5	6.9	6.0	9.3	100.0	216
40-49	78.5	8.8	2.8	4.9	4.9	100.0	284
50-59	77.3	8.8	1.1	2.8	9.9	100.0	181
Non-standard total	73.2	9.2	4.4	4.7	8.5	100.0	773

Source: Compiled by the author based on KHPS.

Note: Students and workers categorized as “agricultural, forestry or fishery worker,” “mineworker,” and “unknown” are excluded from the analysis subjects.

shifted from temporary to regular employment mainly within the same firm.⁵ By age, the rate of transition to regular employment within the same firm is low among those aged between 50 and 59.

⁵ With regard to the gender gap in the transition from non-standard to standard employment, JILPT (2010) stated that, “While the ratio hovers around 10-20% among men in their 20s and early 30s, the ratio rarely exceeds 10% for women and stands low at 2-3% for women in their 30s.” This is not very inconsistent with the findings in this study. However, the survey discussed in JILPT (2010) showed that of all cases of transition from non-standard to standard employment, about 20% were transition through the promotion within the same firm and about 80% were transition through movement between different firms. This is considerably different from the result obtained in this study. Such difference between the survey in JILPT (2010) and this study can be partly explained by the fact that while the employment period at younger ages (in one’s 20s) is overvalued in historical data, the young sample is undervalued in panel data, because in the case of panel data, as the survey period extends, the survey subjects become older and the number of persons in the young sample decreases accordingly. In addition, as this study shows, the rate of transition to regular employment within the same firm among men does not decline along with the increase in age, whereas the rate of transition to regular employment at another firm sharply declines along with the increase in age. Hence, the rate of transition to regular employment at another firm would be higher based on the survey in JILPT (2010), which involved many cases of transition at younger ages, but the rate would be lower based on this study. Even taking this into account, the difference between the two is still large. The remaining difference may be due to various other factors, such as the difference in terms of the survey method, the interview survey in JILPT (2010) versus the drop-off and pick-up method in KHPS.

Table 4. Transition from Temporary Employment (Employment Situation as of One Year after) among Workers Aged 59 or Younger: By Employment Status (%)

	No change	Regular worker within the same firm	Regular worker at another firm	Temporary worker at another firm	Non-working	Total	Sample size
<i>Men</i>							
Part-time worker	64.7	20.6	5.9	2.9	5.9	100.0	34
Temporary-agency worker	53.3	26.7	3.3	3.3	13.3	100.0	30
Other	61.0	25.7	4.8	2.9	5.7	100.0	105
Total	60.4	24.9	4.7	3.0	7.1	100.0	169
<i>Women</i>							
Part-time worker	74.1	9.7	3.3	5.1	7.8	100.0	487
Temporary-agency worker	66.7	6.0	10.3	3.4	13.7	100.0	117
Other	75.1	10.1	3.6	4.1	7.1	100.0	169
Total	73.2	9.2	4.4	4.7	8.5	100.0	773

Source: Compiled by the author based on KHPS.

Note: Students and workers categorized as “agricultural, forestry or fishery worker,” “mineworker,” and “unknown” are excluded from the analysis subjects.

As for women, the rate of intra-firm transition from temporary to regular employment in all age groups is lower than that among men, indicating a large gender gap. By age, the rate of transition to regular employment, both intra-firm and inter-firm, is relatively high among young women.

Table 4 shows the state of transition from temporary to regular employment, by the employment categories of “part-time worker,” “temporary-agency worker,” and “other temporary worker.” Both among men and women, the rate of transition to regular employment does not differ significantly by employment status. By gender, the rate of transition to regular employment within the same firm is higher among men than among women for all kinds of employment status. In the category of part-time workers, which is the largest category, about 20% of men became regular workers within the same firm, whereas women who achieved such transition accounted for only 9%. The gender gap is also large in the categories of temporary-agency worker and other temporary worker. Thus, the gender gap in the rate of transition to regular employment within the same firm does not come from the difference between men and women in terms of employment status, but a gap exists between

men and women even for the same employment status.⁶

The following points should be noted with respect to temporary-agency workers: (i) the rate of transition to non-working is high among both men and women; (ii) the share of those who became regular workers within the same firm is high among men, whereas the share of those who became regular workers at another firm is high among women.

About 30% of men shifted from temporary to regular employment within one year, within the same firm or at another firm. This is close to the level of the class of European countries with comparatively low rates of transition from temporary to regular employment. On the other hand, the rate of Japanese women who shifted from temporary to regular employment within one year stands at a low level below 15%. Thus, in Japan, the phenomenon that temporary workers are at “dead ends” is particularly significant among women. In the section below, an attempt is made to inquire into how the gender and other attributes of workers influence their transition from temporary to regular employment by conducting a multivariate analysis.

V. Quantitative Analysis Regarding Transition from Temporary Employment

1. Analysis Method and Descriptive Statistics

The analysis shown below is a multivariate analysis regarding the transition probability of the employment status of temporary workers during the period from time t to time $t+1$. With the use of the multinomial logit model for estimation, the transition probability to be estimated can be formulated as follows.

⁶ The gender gap in the transition from temporary to regular employment is also observed in the Longitudinal Survey of Adults in 21st Century (MHLW), which is a panel survey targeting young adults. Looking at the table of results attached to the survey, among men and women aged between 20 and 34 who were in temporary employment in 2002, the percentage of men who shifted to regular employment is higher than that of those who remained in temporary employment, whereas the percentage of women who shifted to regular employment is about one-third that of those who remained in temporary employment. Here, a large gender gap is observed.

Employment Situation of Young Non-Standard Workers as of Five Years after
(from the Longitudinal Survey of Adults in 21st Century)

	Standard worker	Non-standard worker	Other worker	Unemployed/ absent from work	Total
Men	46.4	34.5	10.7	8.4	100.0
Women	19.2	55.6	5.0	20.1	99.9

Source: Compiled by the author, based on MHLW, *Sixth Longitudinal Survey of Adults in 21st Century*.

Notes: 1. Data are collected with respect to persons who responded to the first to sixth surveys.

2. The sample for the first survey (2002) were men and women aged between 20 and 34.

$P_{j,t}$ denotes the transition probability that a worker who is in employment at time t will be in employment status j at time $t+1$, while $P_{0,t}$ denotes the probability that the worker maintains the initial status at time $t+1$. If these probabilities are formulated according to the multinomial logit model, the following simultaneous regression equation can be obtained:

$$\log\left(\frac{P_{j,t}}{P_{0,t}}\right) = \alpha_{jt} + \sum \beta'_j x_t \quad j=1, \dots, k$$

where

$$P_{0,t} + P_{1,t} + \dots + P_{k,t} = 1$$

By applying this analysis method, the influences of the explanatory variables on the respective transition probabilities can be estimated simultaneously. In this formula, α_{jt} is a variable representing the period of continuous employment until the shift to employment status j , x_t is a vector of explanatory variables, and β_j is its coefficient vector.

The descriptive statistics of explanatory variables, by gender, are shown in Table 5. The variable representing the period of continuous employment refers to the length of service. The percentage of those who were in service for a shorter period is higher among men than among women. From a demographic perspective, dummy variables for women, and workers' marital status and whether or not they have preschool-age children, as well as a categorical variable for age were also used. 83% of the entire sample is women. The percentage of those who are married is higher among women than among men.

In terms of the employment situation, the logarithmic value of hourly wage (the fixed salary divided by the fixed working hours), and categorical variables for the employment status, type of job, and firm size were used.

Another variable used in the analysis is associated with workers' perception concerning the reason for choosing temporary employment. In the question pertaining to the reason for such choice, the KHPS questionnaire provides four answer options, namely, 1. "I wanted to work as a regular employee but no company would hire me," 2. "The wages and working terms and conditions were good," 3. "I could not work as a regular employee due to personal reasons," and 4. "Other." Based on these options, a categorical variable is constructed by adopting Option 1 as representing "No opportunity for regular employment," Option 2 as representing "Satisfied with current work," and Options 3 and 4 as collectively representing "Other." The percentage of those who choose temporary employment due to "No opportunity for regular employment" indicates a large gender gap, standing at 35% among men, higher than the 15% among women. This suggests that the percentage of those who involuntarily choose temporary employment is higher among men.

As reviewed in the previous section, there is a large gap between men and women in terms of the transition from temporary to regular employment. In the next section, analysis is conducted in an attempt to discover whether this gender gap is caused by workers' attributes, such as their marital status and working attitude, or their perception concerning why they choose temporary employment.

Table 5. Descriptive Statistics

	Total	Men	Women
Length of service			
0 years	0.23	0.22	0.23
1 year	0.16	0.21	0.15
2-3 years	0.23	0.28	0.22
4 years or more	0.38	0.29	0.40
Dummy for women	0.83		
Married or unmarried	0.66	0.37	0.73
Married women	0.60		
Age			
≤ 29	0.14	0.24	0.12
30 to 39	0.26	0.18	0.28
40 to 49	0.33	0.14	0.37
50 to 59	0.27	0.44	0.23
Dummy for having preschool-age children	0.06	0.02	0.07
Education			
University or graduate school	0.20	0.33	0.17
Junior college or technical college	0.20	0.10	0.22
High school or junior high school	0.55	0.55	0.55
Other	0.06	0.02	0.07
Reason for choosing non-regular employment			
No opportunity for regular employment	0.19	0.35	0.15
Satisfied with current work	0.37	0.30	0.38
Other reasons	0.45	0.35	0.47
Hourly wage	6.88	7.08	6.84
Temporary-agency worker	0.15	0.18	0.14
Type of job			
Clerical worker	0.31	0.08	0.36
Service worker or salesperson	0.35	0.24	0.38
Laborer, etc.	0.19	0.58	0.11
Specialist or technical worker	0.14	0.10	0.15
Firm size			
Less than 30 employees	0.12	0.45	0.38
30 or more but less than 500 employees	0.41	0.39	0.42
500 employees or more	0.39	0.09	0.12
Public servant	0.07	0.07	0.07
Sample size	876	153	723

Source: Compiled by the author based on KHPS.

Notes: 1. “Hourly wage” is the logarithmic value of “the fixed salary divided by the fixed working hours”; the sample data falling within the highest and lowest one percent are excluded.

2. “Laborer, etc.” includes “Manufacturing, construction, maintenance or freight worker,” “Transportation or communications worker,” and “Public safety employee.”

3. Workers who fall within the categories of “Agricultural, forestry or fishery worker,” “Miner-worker,” or “Manager” in terms of the “type of job” are excluded from the sample.

2. Analysis Results

The results of the analysis using the multinomial logit model with regard to the transition from non-standard employment are shown in Table 6. This table indicates the relative risk ratio (RRR) as well as the p-value calculated by using the coefficient and standard error, for each dummy variable. The RRR of the coefficient for each dummy variable can be interpreted as representing how many times larger an influence each variable has on the probability in question compared to the reference category. Hence, one can infer that an RRR exceeding 1 suggests a positive influence, whereas an RRR below 1 suggests a negative influence.

A Hausman test was then performed to examine the independence of irrelevant alternatives (IIA) assumption—the assumption that the ratio between the probabilities of two alternatives is independent from the existence of other alternatives—, which is used in the multinomial logit model. The test did not reject the null hypothesis that “For no alternative does the coefficient depend on the existence of any other alternatives.” This suggests that one cannot rule out the IIA assumption, so it seems valid to apply the multinomial logit model to estimate the transition probabilities relating to the abovementioned options.⁷

The variables in relation to the length of service are categorized as “one year in service,” “two to three years in service,” and “four years or more in service,” while setting less than one year in service as the reference category. A significant influence is observed for the case of four years or more in service, showing a decline in the probability of transition to regular employment within the same firm. The RRR also suggests that the longer the workers have been engaged in service, the less likely they are to become regular workers within the same firm.⁸

Even taking into account variables relating to gender and demographic aspects, such as workers’ marital status and whether or not they have preschool-age children, it is observed that the probability of transition to regular employment within the same firm is significantly lower among women than among men. The RRR shows that temporary female workers successfully became regular workers within the same firm only at half the rate of success of male workers. Furthermore, the chance for married women to become regular workers at another firm is low. By age, the probability of transition to regular employment within the same firm is higher among those in their 20s than among those in their 40s. This means that young people are more likely to become regular workers.

As for wages, the higher the wage rate, the lower the probability that workers became regular workers at another firm.

⁷ The survey conducted in this study using a multinomial logit model does not give due consideration to the heterogeneity among individuals that is not observed from the model. This point remains to be solved in future study.

⁸ It may be possible to assume that temporary workers who have been in employment for a longer period are less likely to become regular workers within the same firm because workers with higher skills tend to find regular employment at an earlier stage.

Table 6. Multinomial Logit Analysis of Transition from Temporary Employment, among Men and Women Aged between 20 and 59

Variable (Reference category)	Regular worker within the same firm		Regular worker at another firm		Temporary worker at another firm		Non-working	
	RRR	P-value	RRR	P-value	RRR	P-value	RRR	P-value
Length of service (zero years)								
1 year	1.13	0.72	0.61	0.36	1.04	0.94	0.61	0.28
2 to 3 years	0.72	0.31	0.68	0.45	0.92	0.85	0.71	0.34
4 years or more	0.37	0.00 **	0.40	0.11	0.35	0.05 +	0.69	0.28
Dummy for women	0.49	0.09 +	1.67	0.43	1.49	0.56	2.75	0.05 *
Married or unmarried	1.42	0.47	2.10	0.43	0.95	0.97	2.60	0.19
Married women	0.77	0.65	0.12	0.03 *	1.00	1.00	0.26	0.09 +
Age (40 to 49)								
≤ 29	2.76	0.01 **	1.49	0.58	1.79	0.36	2.95	0.04 *
30 to 39	0.81	0.52	1.94	0.20	1.53	0.31	2.32	0.04 *
50 to 59	1.12	0.73	0.60	0.47	1.02	0.97	2.17	0.05 *
Dummy for having preschool-age children	0.89	0.85	1.76	0.48	0.63	0.56	1.25	0.68
Education (high school or junior high school)								
University or graduate school	0.72	0.33	0.76	0.57	0.80	0.66	1.12	0.78
Junior college or technical college	1.61	0.11	0.78	0.62	0.81	0.66	0.81	0.61
Other	1.55	0.39	0.28	0.29	0.45	0.44	2.14	0.07 +
Reason for choosing non-regular employment (other reasons)								
No opportunity for regular employment	1.24	0.51	2.15	0.13	1.98	0.15	1.76	0.11
Satisfied with current work	1.14	0.61	1.36	0.51	1.05	0.91	1.00	0.99
Hourly wage	1.07	0.80	0.34	0.02 *	0.73	0.53	0.69	0.32
Temporary-agency worker	0.51	0.09 +	2.55	0.08 +	0.45	0.23	2.33	0.02 *
Type of job (clerical worker)								
Service worker or salesperson	0.87	0.68	2.56	0.04 *	0.56	0.17	0.99	0.98
Laborer, etc.	2.04	0.07 +	0.82	0.75	0.49	0.21	1.27	0.56
Specialist or technical worker	1.05	0.91	3.88	0.01 *	0.93	0.88	0.84	0.73
Firm size (500 employees or more)								
Less than 30 employees	3.23	0.00 **	1.57	0.50	0.91	0.88	3.10	0.01 **
30 or more but less than 500 employees	1.82	0.03 *	1.31	0.51	0.72	0.39	1.33	0.34
Public servant	1.25	0.66	1.44	0.70	0.24	0.16	1.08	0.91
No. of events	105		36		37		73	
Sample size					876			
Pseudo coefficient of determination					-740.32			
Log pseudo-likelihood					0.126			

Source: Estimated by the author, based on KHPS (2004 to 2009)

Notes: 1. The P-value is estimated by using the coefficient and robust standard error. ***: p-value<0.001; **: p-value<0.01; *: p-value<0.05; +: p-value<0.10.

2. “Hourly wage” is the logarithmic value of “the fixed salary divided by the fixed working hours”; the sample data falling within the highest and lowest one percent are excluded.
3. “Laborer, etc.” includes “Manufacturing, construction, maintenance or freight worker,” “Transportation or communications worker,” and “Public safety employee.”
4. Students and workers who fall within the categories of “Agriculture, forestry or fishery worker,” “Mineworker,” or “Manager” in terms of the “type of job” are excluded from the sample.
5. The dummy for age and dummy for Panel B are also used in the model.

Among temporary-agency workers, the probability of transition to regular employment within the same firm is low and the probability of transition to non-working is high. There is a legal limit to the term of contract applicable to temporary-agency workers, and if firms intend to hire these workers beyond the statutory maximum period, they have to re-hire them as regular workers without term. The analysis results infer that this legislation does not contribute to changing temporary-agency workers to regular workers but rather results in turning them into non-working persons.

By firm size, the probability of transition to regular employment within the same firm is significantly high for small or medium-sized firms with less than 30 employees or 30 to 499 employees. This suggests that it is difficult for temporary workers to become regular workers at large firms.

With regard to the perception variable concerning the reason for choosing temporary employment, the factors such as “no opportunity for regular employment” and “satisfied with current work” do not have a significant influence on the probability of transition to regular employment.

In summary, even taking into account the employment conditions and workers’ perception, the probability of transition to regular employment within the same firm is significantly low among women, so it can be said that it is difficult for female temporary workers to become regular workers.

VI. Conclusion

This study has clarified the following points.

- i. Comparing the situation in Japan with the situations in European countries, the rate of transition from temporary employment (as fixed-term contract workers or temporary-agency workers) to regular employment in Japan was the lowest. Moreover, based on another categorization by the name of status used to refer to workers, the rate of transition from non-standard to standard employment was lower than the rate of transition from temporary to regular employment (the latter is based on categorization by the type of employment contract).
- ii. The major pattern of transition from temporary to regular employment in Japan was intra-firm transition or transition on the internal labor market.
- iii. There was a large gender gap in the rate of transition to regular employment within the same firm, and a clear gap existed between men and women even among those with the same employment status or those in the same age group. The multivariate analysis, conducted by taking into account other factors such as wage, firm size, and reason for choosing temporary employment, demonstrated that the probability of transition to regular employment within the same firm among men is more than double the probability among women.
- iv. In the category of temporary-agency workers who may be hired for up to the statutory

maximum period, the probability of transition to regular employment within the same firm was significantly low, whereas the probability of transition to non-working was high.

- v. The probability of transition from temporary to regular employment within the same firm is low in the case of large firms, suggesting that it is difficult to become regular workers at large firms which tend to have favorable work conditions.
- vi. The results of the multivariate analysis showed that the longer the years in service for temporary employment, the lower the probability of transition to regular employment within the same firm.

When we think about the question raised at the beginning of this paper—in Japan, is temporary employment a “stepping stone” to regular employment or is it a “dead end” where it is difficult to shift to regular employment?—based on the analysis results shown above, we have to say that temporary employment is a “dead end” in Japan, because of the lower rate of transition to regular employment than in other countries. Focusing on men alone, the rate of transition to regular employment in Japan is at a level close to the rate in Southern European countries, whereas the rate of transition among women is only one-third or half of the rate among men. In particular, there is an obvious gender gap with respect to the transition on the internal labor market, and the gap between men and women is large irrespective of age or employment status.

Moreover, firms may not be aware of the issue of the gender gap in terms of the transition probability, because female workers account for a large share of temporary workers, and this makes the gender gap appear to be relatively small in terms of the number of temporary workers who became regular workers.

As mentioned in Section I, a desirable form of legislation may be to regulate hiring of temporary workers such as fixed-term contract workers and temporary-agency workers. For example, in addition to the existing upper limit to the term of contract, an upper limit can also be set for the period of continuous employment of fixed-term contract workers within the same firm, in order to require firms to hire workers for regular employment if they intend to use them beyond the statutory maximum period. At present, when firms intend to hire temporary-agency workers for a period of three years or longer, they have to re-hire them as regular workers. According to the analysis results, however, it is less likely that temporary-agency workers are hired as regular workers at the firm where they have been working, and they are rather more likely to become non-working. Thus, if the limitation to the period of continuous employment of fixed-term contract workers is introduced alone, those who have been in temporary employment for a longer period would have a higher risk of being dismissed upon the expiration of the term of contract. To overcome this problem, the author proposes introducing the regulation that when dismissing temporary workers upon expiration of the term of contract, firms must first dismiss those who have been in employment for a shorter period, to be exercised together with the limitation to the period of continuous employment of fixed-term contract workers. Through this legislation, more

workers who have been in temporary employment for a certain period will have more chances to find regular jobs. At the same time, by regulating employment according to an objective criterion, i.e. period of continuous employment, it will be possible to eliminate the gender gap in the transition to regular employment.

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