“No One Left Behind”?: Youth Employment in Japan

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1. Introduction

The youth employment rate in Japan had been low throughout the 1970s and 1980s. The average employment rate during the early half of the 1980s was about 94% for those between ages 20 and 24 (compared to 89% in the United States and 82% in the United Kingdom during the same period) (Martin 2009). However, the situation has deteriorated rapidly. According to the OECD report (OECD 2009), the rate of employment of youth between the ages of 15 and 24 in the 1990s is about 40%. This rate has further decreased in the last decade from 43% in 2000 to 39% in 2010. Among youth who are employed, a growing number has been working in non-regular settings (i.e., temporary jobs).

Though studies have explored youth employment in OECD countries, their findings may have limited application to the Japanese context (Breen 2005; Furnham 1985; Lynch 1985; Mroz and Savage 2006). Recruitment arrangements in the Japanese labor market are uniquely different from other OECD countries. Companies do not recruit employees all year round. Most companies' recruitment efforts occur at a particular time each year. Individuals who miss a company's application period have to wait for the next year. In addition, only those who are employed as "regular employees" are eligible for company benefit packages. With the tough economic environment of the last two decades, a growing number of companies are employing temporary employees rather than regular employees to save costs.

There are many studies about youth employment in Japan. They focus on high school graduates (Brinton 2011), low-skilled workers(Iguchi 2012), or consequences of unemployment (Mroz and Savage 2006) . Most of them are based on cross-sectional data. Surprisingly few studies have used longitudinal data to provide a more comprehensive picture of employment outcomes for young male and female high school and college graduates. Furthermore, existing studies fails to capture the highly rigid nature of Japanese youth labor market by empirical data.

To fill this major gap in the research, we employed a unique longitudinal data set, the Japanese Life Course Panel Survey, to explore the pattern of youth employment in Japan, the third largest

economy in the world. The results capture a peculiar feature of Japanese youth labor market. It suggests that the impact of years after graduation is much greater than that of gender and educational qualifications.

2. Data and variables

The Japanese Life Course Panel Survey (JLPS) is used in the following analysis. It started from 2007 and still continues. In this study, we used three waves (2007, 2008, and 2009) of data that are publicly available. Individuals aged 20 to 40 at the first survey were interviewed by a stratified multistage random sampling. Sample size is 13,320. The data suffers substantial attrition. At the first wave, there are 4,800 effective respondents (retention rate is 36.0%), 3,962 at the second (29.7%), and 3,607 at the third (27.1%).

The unit of analysis is the person-period observation. Dependent variables are the probability of getting the first job and probability of getting the first job as a regular job at each year. The observation begins at the year of graduation or dropout, and ends at the year of getting a job or by left-censoring. Total number of observation used in the analysis depends on the missing values of explanatory variables (see each tables).

Explanatory variables are gender (male dummy), educational level (the last school attended), years after graduation of the last school, unemployment rates at the period of graduation, and the year of observation. We did not include marital status because most respondents were single when they graduated. The analysis is based on a discrete-time logit model because the explanatory variables are binary and the unit of analysis is the person-period, not the person.

3. Analysis and results

We first present descriptive information. We then use a discrete-time logit model to determine how obtaining regular and non-regular jobs is related to gender, educational level, and economic situation at the year of graduation.

TABLE 1 ABOUT HERE

We begin our analysis by reporting the probability of getting a job, whether regular or non-regular, within the year after graduation. Only 69% of respondents secured a job in the first year after graduating or leaving school. The percentage dropped dramatically to 21% in the second year. By the third year after graduating or dropping out, the percentage of individuals getting a job was reduced to below 7%. The data seem to suggest that there is a brief period of time for individuals to secure a job. This pattern seems dramatically different from other OCED countries (Scherer 2001; Scherer 2005).

TABLE 2 ABOUT HERE

In Table 2, we further explore the types of job obtained by youth. We show the percentages of individuals who obtained regular jobs, non-regular jobs, or who are self-employed. We reported only the first 5 years after graduating or dropping out because the numbers of cases are too small for reporting the percentages of the three separate categories of landing jobs after the first five years. The results clearly suggest that individuals who cannot secure a regular job are more likely to turn to non-regular jobs when more years have passed since graduating or leaving school.

It is worthwhile to point out that a substantial percentage of respondents who were employed had non-regular jobs. Even among those who obtained jobs in the first year after graduation, about 14% had non-regular jobs. The percentage rises to 33% in the second year. Taken together with the findings in Table 1, only about half of the respondents obtained regular jobs in the first year after graduating or dropping out.

TABLE 3 ABOUT HERE

There is a perception that it has become more difficult to obtain a job in recent years in Japan due to worsening Japanese and world economies. In Table 3, we report the percentage of individuals who obtained their first jobs within one year after graduating or dropping out. The results show that the percentages vary over the years. However, the level of employment within one year after graduating or dropping out remains between 62% and 72%.

TABLE 4, FIGURE 1, AND FIGURE 2 ABOUT HERE

The results of the discrete-time logit model are reported in Table 4. We tried estimations with different interaction patterns of explanatory variables. For the model estimating the probability of getting the first job, the model with interaction between educational level and years after graduation significantly improves the fit compared to the model with no interaction terms. For the model estimating the probability of getting the first job as a regular job, the model with no interaction terms shows the best fit.

Figure 1 shows the predicted values by length of time after graduation and educational level. At the initial stage, one year after graduation, the probability varies considerably according to level of education. However, the probability of obtaining a job quickly reaches similar low levels, regardless of level of education**.** Figure 2 shows the similar patterns among those who obtained regular jobs.

The striking fact is that the effect of years after graduation is much stronger than the effect of education levels. High school graduates are much more likely to be employed just after their graduation than those with college degrees after two or more years after graduation. In short, we have shown that the window of opportunity for obtaining a regular job is brief. If youth cannot find jobs within one year after graduation, their regular employment opportunities are virtually diminished. Most of them turn to non-regular employment. However, once they have non-regular employment, the chance of switching to regular employment is extremely low (Kondo 2007).

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Table 1: Probability of Getting the First Job

Year After Graduation	Employed
1	68.78
2	20.64
3	13.14
4	7.21
5	4.68
6	3.96
7	3.87
8	1.47
9	0.45
10	1.19
11	1.03
12	1.36
13	1.16
14	2.83
15	0.00

Table 2: Probability of Getting First Job by Job Type

Year After Graduation	Regular	Non-Regular	Self Employed	Total
1	83.80	14.36	1.84	100.00
2	63.24	32.84	3.92	100.00
3	65.31	24.49	10.20	100.00
4	60.42	33.33	6.25	100.00
5	60.71	35.71	3.57	100.00

Table 3: Employment Rate in Japan (within one year after graduation), 1991-2006

Year	Employment Rate
1991	69.55
1992	71.22
1993	72.89
1994	66.49
1995	72.82
1996	71.96
1997	74.29
1998	75.85
1999	69.10
2000	62.83
2001	66.28
2002	62.01
2003	68.86
2004	70.59
2005	72.73
2006	69.57

Table 4: Discrete Time Logit Model to Predict Likelihood of Getting the First Job

	Estimated coefficient for the probability of getting the first job	Estimated coefficient for the probability of getting the first job as a regular job
Gender (male=1)	-0.110 †	0.038
Educational level		
High scool or less	(Reference)	(Reference)
Two-year college /Professional school	0.596 ***	0.395 ***
Four-year college	1.210 ***	0.647 ***
Years after graduation	-1.138 ***	-1.379 ***
Years after graduation (squared)	0.037 ***	0.050 ***
Educational level*Years after graduation		
Two-year college /Professional school	-0.231 ***	
Four-year college	-0.494 ***	
Educational level*Years after graduation (squared)		
Two-year college /Professional school	0.013 ***	
Four-year college	0.029 ***	
Unemployment rate at the period of graduation	-0.507 ***	-0.391 **
Year of observation		
1981	-1.946	-0.760
1982	-2.832 **	-2.617 *
1983	-1.267 *	-0.969
1984	-1.179 **	-0.325
1985	-0.996 **	-0.278
1986	-1.081 **	-0.187
1987	-1.135 ***	-0.422
1988	-1.298 ***	-0.609
1989	-0.905 **	-0.157
1990	-1.270 ***	-0.470
1991	-1.452 ***	-0.650
1992	-1.322 ***	-0.440
1993	-1.357 ***	-0.565
1994	-1.403 ***	-0.780 *
1995	-0.937 **	-0.152
1996	-0.890 **	-0.358
1997	-0.761 **	-0.340
1998	-0.500 *	-0.001
1999	-0.508 *	-0.060
2000	-0.251	-0.119
2001	-0.157	0.027
2002	(Reference)	(Reference)
2003	0.131	0.117
2004	0.509 **	0.180
2005	0.521 **	0.223
2006	0.512 *	0.058
2007	-3.499 **	-2.979 **
2008	-1.309 *	0.000
2009	-0.853	-2.878 *
Intercept	4.061 ***	2.871 ***
Number of observation	12,316	11,849
Number of individuals	3,919	3,886
Likelihood Ratio Chi-squared (df)	6711.67(38) ***	5280.03(33) ***
Pseudo R-squared	0.462	0.4165

p*** < 0.001; p**<0.01; p* < 0.05; p† <0.1

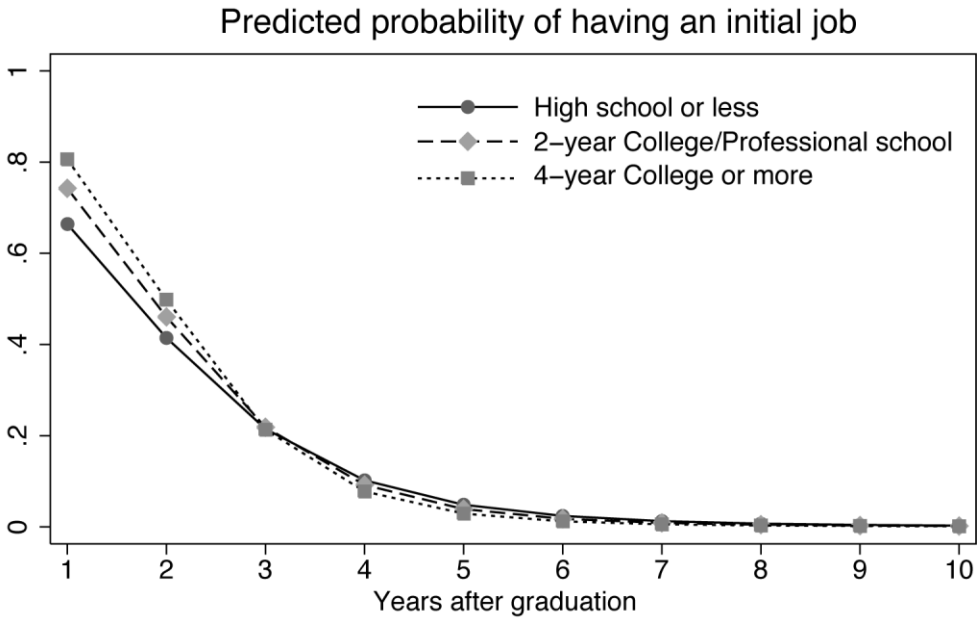

Figure 1: Predicted Probability of Getting First Job Controlling For Various Factors

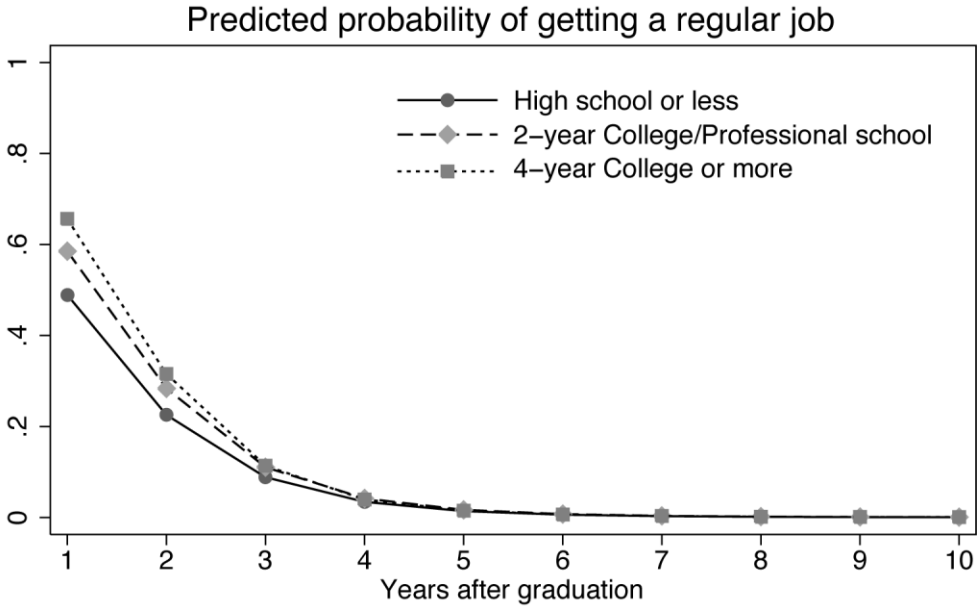

Figure 2: Predicted Probability of Getting First Regular Job Controlling For Various Factors