

Job Separation Risk and Youth Unemployment in Korea *

Jaeho Keum** · Insill Yi***

Even with increasing trends of youth's absence of working experiences and job-separation experiences, the average duration in the first job has been decreasing steadily. Despite grave social concerns, job separation risk gradually decreased since 1999. Wage changes due to job separation were considerably affected by employment status, education level, and gender. Longer unemployment period led to higher wage increase. The frequent youth job separation reflects the structural vulnerability of the labor market and implies the need to not only provide support to find employment but also to remain in employment.

JEL Classification: J21, J24, J31, J40

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** First Author, Professor, Korea University of Technology and Education, E-mail: stopjaeho@hanmail.net

*** Corresponding Author, Professor, Graduate School of Economics, Sogang University, E-mail: insil723@sogang.ac.kr

1. INTRODUCTION

Job insecurity among youths has been serious enough to be discussed as an important global agenda. On September 4, 2015, G20 ministers of labor and employment agreed to reduce the share of “vulnerable youths” by 15% by 2025.¹⁾ Youth unemployment rate in Korea exceeded the total unemployment rate by 2-3%p before the Asian Financial Crisis, but afterwards this gap grew to 3-4%p, then rose rapidly again since the 2012 global financial crisis, becoming 4-5%p in 2015. The prolonged low-growth trend and highly inflexible labor market combined to affect the young generation first, who have less experience and organization power in the labor market. This reflects the demand in the labor market where companies prefer to hire experienced workers over entry-level workers.

Many discussions on the issue of Korean youth unemployment and their job insecurity focused on ‘employment mismatch’ indicating a limited supply of high-quality jobs and growing supply of highly-educated youths with higher job expectations. Because the labor supply competition is fierce, young people engage in various job-preparation activities in addition to formal education, such as attaining certificates, internship, and language courses. In particular, one of the biggest concerns is that students are postponing their graduation by taking time off college to study abroad. Another discussion point is that young people try to collect certifications and pursue job-preparation activities that are not necessarily related to their jobs because formal education does not equip them with the skills demanded by companies. In fact, young would-be workers have been spending longer time simply preparing for employment.

It is regarded that young workers tend to land themselves at unsatisfactory jobs and remain in search for another job, because of the severe gap between

¹⁾ “Vulnerable youths” can be broken down into: (i) Young people with low skills and qualifications (ii) NEETs (Not in Education, Employment or Training) (iii) Low-skilled who are NEET, (iv) Informally employed. In the case of Korea, NEETs aged 15-24 take up 14.5% of the total youth population and Korean government aims to reduce this number to 12.3% by 2025.

preferred jobs and offered jobs and the persistently high unemployment rate of youths. Most of the unemployed youths and youth NEET (Not in Education, Employment or Training) population are not newcomers to the labor market but become unemployed or NEET after employment. But it is noted that the average duration in the first job has been decreasing steadily, down to 13.8 months in 2015 from 16.5 months in 2005, while both the ratio of youths without any working experience and the ratio of youths without job-separation experience increased during the same period.

Given the harsh job market for youths, these outcomes clearly reflect the problem of job separation for the youths. As of May 2015, 86.1% of youth population had employment experience, over half of the unemployed youth and youth NEET had work experience, and over 80% of them voluntarily moved jobs. Whether it is voluntary or not, long periods of insecure youth employment prevent formation of human capital and depress the income earned throughout life, bringing down the potential growth level of the national economy.

We analyze the turnover among youths aged 18-29, using raw data from 2005-2015 “Economically Active Population Survey: Supplementary Survey on Youths” by Statistics Korea and 1999-2014 “Korean Labor & Income Panel Study”. We employed the concept of “job separation risk” to describe the probability of job separation that occurred in the period between the last and current survey of youth wage workers who either dropped out of or graduated from school.

This paper is structured as follows. Section 2 reviews theories and literature on youth job separation. Section 3 analyses Korean youth’s job separation phenomena, using raw data from “Economically Active Population Survey: Supplementary Survey on Youths” by Statistics Korea. It also tries to identify the causes of youth job separation by employing Logit model, using raw data from “Korean Labor & Income Panel Study”. Section 4 analyses the youth re-employment status and wage change, using raw data from “Korean Labor & Income Panel Study”. Section 5 summarizes the results and makes policy recommendations on youth employment and youth

job separation risk.

2. LITERATURE REVIEW ON YOUTH JOB SEPARATION

2.1. Theoretical Background and Issues

The theories that explain job separation and re-employment can be categorized into three groups based on wage and labor productivity. The first is the “Human Capital Theory” that is based on the classical economic theory that wage is determined by limited labor productivity (Becker, 1964). The limited labor productivity of each young job-seeker is determined by the human capital accumulated through formal education and informal job training. Therefore, the young job-seeker can earn as much profit as the he has invested. The decision to find another job or remain in the current job is determined by the cost-benefit of each option. The most commonly used variable in the economic model would be the wage. If the wage at the current job is not on par with the average market rate for the worker with a similar skill or education level, the young worker is likely to leave his current job for another one.

In comparison, “Job Competition Theory” considers job characteristics as the sole factor that determines wage and explains job separation based on this. This theory assumes that the labor market is a job training market that must be allotted to youth job-seekers with different training levels and not a competitive market that only demands skilled labor. The limited productivity of youth job-seeker is not due to the individual worker’s characteristics, but due to the job characteristics. According to this theory, young people would move to better jobs for the purpose of protecting their job positions.

The “Job Assignment Theory” takes a position between the Human Capital Theory and Job Competition Theory to explain about job separation. It states that job separation is determined by the job compatibility of the young job-seeker, the difference in their job skills, individual job-seekers’

characteristics, and the mechanism used to match jobs to young job-seekers. The wage function is the balanced status where the job assignment problem has been resolved, and the limited labor productivity is related to individual characteristics and job. The wage level is not determined by individual characteristics or job characteristics alone, but by both. The wage level compared to these two factors is what makes the youth change jobs.

There are other explanations. For example, recovery in a country or a region's economy usually leads to more voluntary job change, whereas economic downturn would reduce voluntary job change. As Mobley *et al.* (1979) shows, the relationship between different levels of economic activity and voluntary job change produces varying results at the micro level.

It is important for a youth to enter the labor market after graduating from school and move between jobs several times to accumulate job experience in the process of finding the right job. Generally, it is normal for youths to change jobs more frequently than other age groups; this phenomenon itself should not be an issue. But there are extensive discussions about its causes. First discussion is based on the fact that youth job separation might be the result of unbalanced information access and changing jobs is a process of exploring jobs. Major advocates of this opinion are Topel and Ward (1992) that used American Longitudinal Employee-Employer data. Their empirical analysis showed that during the first 10 years in the labor market, a typical young worker work for seven employers, which accounts for about two-thirds of the total number of jobs he will hold in his career. They insisted that the evolution of wages is an important determinant for youth to decide to move his job in his process of finding stable employment. They estimated that wage gains at job changes account for at least a third of early-career wage growth. Kim (2006), using the Unemployment Insurance Database and Graduate List, found that in the four years following graduation, a young worker changes jobs 1.6 times on average and stays in his job longer. Kim (2006) analyzed that youth increased his wage by moving jobs and as his wage rises, he is less likely to change jobs.

The second research shows that the labor market segmentation also leads

to young people frequently changing jobs. The youth's labor migration usually takes place in the secondary market and in this case, it is not a positive job separation. Neal (1999) analyzed empirically that American youths initially change jobs across occupations and industries in a complicated way, then only change employers later on, making simple moves to only change workplaces. Kim (2006) showed that there was no special trend for Korean youths like the American one found by Neal.²⁾ It is in the same context as Lee (2002) which showed that frequent job changes did not have a significant impact on wage by using "Economically Active Population Survey: Supplementary Survey on Youths".

Ryan (2001) emphasized that a country's labor market environment and youth employment policy improvement are very important to youth job changes, by comparing seven countries including the US, France, and the UK. Only the US and France results showed that frequent job moves by the youth led to stable working conditions, while the UK results showed the opposite.

2.2. Literature Review

Empirical research on Korean youths' employment insecurity can be divided into three categories depending on the diagnosis and the policy direction. First, as Nam *et al.* (2014) emphasized, excessive supply of highly-educated youths who cannot find the job position suitable for their education level and job skill become economically inactive or unemployed. Even if they succeed in finding employment, it often does not meet their satisfaction level and therefore they end up leaving their jobs. According to Park *et al.* (2007), 24.0% of Korean college graduates find employment that does not match their education level, and 33.8% find jobs that are not consistent with their vocation. Nam and Kim (2014) states that youth NEETs

²⁾ While Neal's research (1999) used a 13 year-long longitudinal data, Kim (2006) used data from the four years following graduation, therefore the times series is much shorter and could be limited when trying to learn about the long-term job movement trend.

have lower employment rate, higher unemployment rate and are more economically inactive, compared to those who do have job experience. Also if a youth stays in NEET status for long, the negative impact increases, and the monthly average wage shows a gap by 74.1-85.5%, indicating that NEET experience led to decreased employment performance.

The second type of research looks into the demand side of youth labor. It observes that shortage of high-quality jobs preferred by youths leads to higher unemployment. In particular, since the 1997 Asian Financial Crisis, global competition is growing fiercer and the business trend is to prefer experienced workers rather than inexperienced youths. As Martin and Torres (2000) pointed out, “regular” workers in Korea still enjoy a relatively high degree of employment protection compared with their counterparts in other OECD countries. This is the reason why there are more non-regular workers and why demand for youth labor is decreasing. Therefore, highly-educated young workforce is not being used fully while SMEs struggle to find workers. Overall, there is a structural mismatch between workforce supply and demand.

The third research type studies why youths are postponing their entrance in the labor market and why they go through job separation. Kim and Jeon (2014) limited their study to youths who had graduated college and defined their time after graduation pursuing job-preparation activities as “preparing for the next chance for employment”. Using data from GOMS (Graduates Occupational Mobility Survey) to analyze their job-preparation status, they found that even at one year and six months after graduation, 13% of youths remained unemployed and that 45% of college graduates had taken time off during their college years to prepare for employment. They explained that job-preparation activities in addition to formal education were the cause of stagnant employment rate and slow entrance into the labor market. Despite the youth’s effort to postpone their entrance into the labor market, job-preparation activities were not found to have a clear effect on raising wage, according to Jeon (2013). In the case of youths, it was difficult to apply the Human Capital Theory that says that accumulating human capital leads to

higher chances of finding employment and higher productivity which leads to increased wage.

Keum (2012) insisted that youths are concerned about the “stigma effect” of being employed in a low-quality job and try to postpone their entrance into the labor market until they can find a job that is up to their expectation. Nam (2006) concludes that the cause of high youth unemployment is due to frequent job separation. He compared and analyzed the job separation and new job entrance rates of different cohorts: the young (age 15-29), middle-aged (age 30-54), and senior (age 55 and over). As for finding new jobs, the three cohorts did not show much difference but when it came to leaving jobs, youths showed a much higher rate. Lee (2002) and Chun and Yoon (2008) also showed that youths who failed to settle down in the labor market keep trying to match their expectation through job separation, but job separation has a negative effect on wage increase, years in service, and employment type.

Research on why youths postpone their entrance into the labor market and how this leads to insecure employment cite the following causes: lack of high-quality jobs; decreased number of entry-level hiring; prolonged periods of finding the right vocation; over-education; and job mismatch. Ahn and Hong (2002) and Kang and Ahn (2015) show that the longer it takes to find the first job, the greater the negative impact on the probability of finding a job. This is called the “negative duration dependence”.

If job separation can resolve the problem of job mismatch and the problem of youths being employed in “non-decent” jobs, it should be able to quicken their entrance into the labor market and help them find better jobs. However, the opposite is true. Job separation, or labor migration, is not resolving the problem of job mismatch, extended education and increased investment to find a “decent” job. Rather, it only promotes higher education and the eventual fall into the trap of job separation.

Using the Markov-Switching Model and the 1st-7th Youth Panel data, Kang and Ahn (2015) analyzed the initial stability in the labor market after a young worker finds employment. Their analysis shows that for male youths,

it was less likely for high school graduates to keep their jobs compared to those with higher-education, and that among wage earners, regular workers were 73% more likely to stay in the job compared to 33% of non-regular workers. The probability of a wage worker staying in the job for three consecutive years was 61.6% for regular workers and 52.8% for non-regular workers. This statistics showed that regardless of the work status, youths were changing jobs for a long time after their initial entry into the labor market. Also, the analysis on initial labor market entry, job separation and their effect on wage showed that keeping a job for three consecutive years was more likely to yield higher wage.

3. YOUTH JOB SEPARATION: STATUS AND CAUSES

3.1. Youth Population's Job-Finding and Separation Experience

The ratio of youths aged 18-29, who either graduated or quit school and did not have any experience working, increased from 8.1% in 2005 to 13.7% in 2015, and the ratio of youth without job-separation experience also increased from 36.4% to 46.3% during the same period (shown in figure 1 and figure 2). Even with these two increasing trends of youth's absence of working experiences and job-separation experiences, the average duration in the first job has been decreasing steadily, down to 13.8 months in 2015 from 16.5 months in 2005, as showing in table 1. By gender, men were not affected by their education level but women tended to remain in their first job for a shorter period if they had graduated from a four-year college or higher. However, a more recent trend shows women with lower than high school education leaving their first job much faster and now their duration is shorter than that of four-year college graduates. The fact that both male and female youths are remaining in their first job for a shorter period despite the worsening youth employment rate leads to the supposition that they might find employment only to leave the job or move to a better job.

Figure 1 Ratio of Youths with Job-Finding Experience

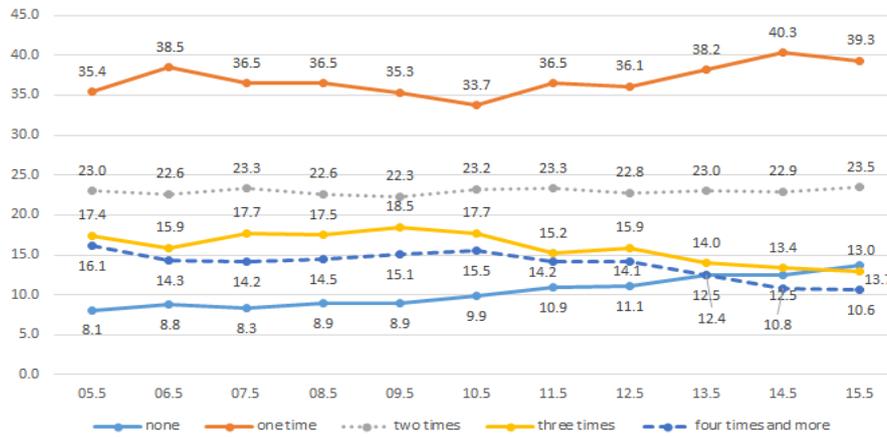
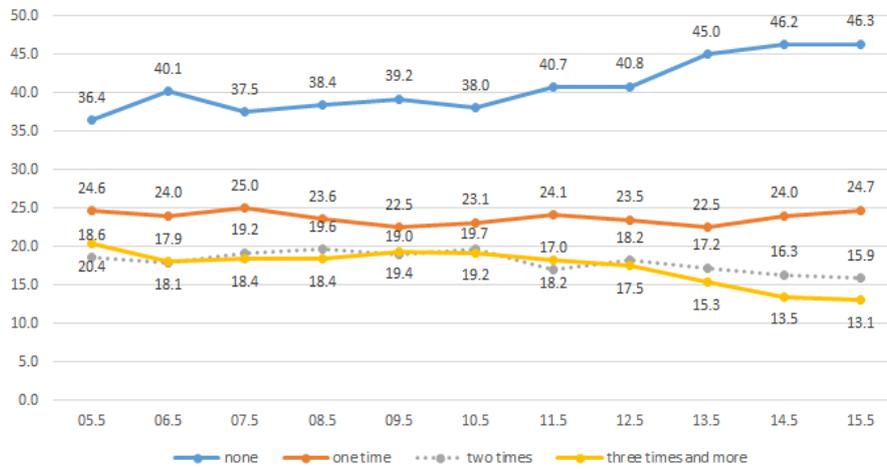


Figure 2 Ratio of Youths with Job-Separation Experience



As of May 2015, job-separation due to voluntary causes was 81.9% while involuntary causes were only 15.9% (shown in table 2). Mostly, youths were dissatisfied with their working conditions and other reasons were “health, household work, childcare, marriage, study and personal or family reasons”.

Table 1 Duration in the First Job

(unit: months)

Category		2005	2007	2009	2011	2012	2013	2014	2015
Total	High school diploma or no diploma	18.1	17.7	16.7	14.9	14.8	14.7	14.0	13.0
	Technical college degree	15.1	16.2	16.3	16.6	15.6	14.9	14.4	14.5
	University degree or higher	13.7	14.2	14.7	13.4	13.2	13.7	14.2	14.2
	Sub-total	16.5	16.6	16.1	15.0	14.7	14.5	14.2	13.8
Male	High school diploma or no diploma	14.2	15.4	15.5	13.3	12.8	13.6	12.6	11.3
	Technical college degree	13.2	12.7	12.7	13.4	13.3	12.6	11.2	12.3
	University degree or higher	13.0	13.6	12.4	11.4	12.3	12.4	12.4	11.0
	Sub-total	13.8	14.5	14.2	12.9	12.8	13.1	12.2	11.5
Female	High school diploma or no diploma	21.3	20.1	17.9	16.4	17.0	15.9	15.8	15.1
	Technical college degree	16.0	17.9	18.1	18.3	16.8	16.1	15.9	15.7
	University degree or higher	14.0	14.5	15.8	14.4	13.8	14.4	14.9	15.6
	Sub-total	18.3	18.1	17.5	16.5	16.0	15.5	15.5	15.5

Source: Statistics Korea, "Economically Active Population Survey: Supplementary Survey on Youths," May, each year.

Table 2 Main Reasons for Leaving the First Job

(unit: %)

Category		2005	2007	2009	2011	2013	2015
Voluntary	1. Dissatisfied with working conditions (working conditions, working environment, etc.)	41.5	42.2	43.1	42.3	45.1	47.4
	2. Incompatible with major, knowledge, technology, aptitude	7.5	7.9	6.6	7.3	7.6	6.4
	3. No future prospects with the current job	8.8	9.3	9.7	9.9	8.2	7.7
	4. Inter-personal relations within workplace (not getting along with boss, colleagues, etc.)	3.3	2.8	3.4	2.7	2.2	2.3
	5. Personal or family-related reasons	21.2	20.5	17.5	18.3	18.7	16.7
	6. To set up my own business or participate in family business	1.6	1.3	1.6	1.5	1.1	1.4
	Sub-total	83.9	84.0	81.8	82.0	82.9	81.9
Involuntary	7. Work was temporary and only available seasonally	3.7	3.8	3.9	3.4	4.3	5.5
	8. There is no work or business is bad	3.8	2.9	3.3	2.7	2.6	2.1
	9. Contract ended	1.7	2.1	3.4	5.5	4.9	5.7
	10. Was advised to resign, fired, voluntary retirement	1.3	1.0	1.5	0.8	0.9	0.8
	11. Business shut down, went bankrupt	3.7	3.8	3.6	2.5	2.2	1.9
	Sub-total	14.1	13.7	15.7	14.8	14.8	15.9
Other		2.0	2.3	2.5	3.2	2.3	2.2

Note: Including workplace from last week.

Source: Statistics Korea, "Economically Active Population Survey: Supplementary Survey on Youths," May, each year.

3.2. Youth Job-Separation Risk

As shown in the previous section, most of the unemployed youths were not newcomers to the labor market but individuals who already had work experience but became unemployed. To find out whether inefficient job matching was leading to young people's job separation or low job employment rate, we analyzed the reasons why they had left their first job, using raw data from the Korean Labor & Income Panel Study (KLIPS).³⁾ In KLIPS, an individual leaving his job is considered "job separation," and remaining in the job is considered "maintained". The "job maintaining rate" index is often used⁴⁾ to estimate job stability, but this study uses "job separation risk" that describes the probability of a person leaving his job in the period between the two surveys. We analyzed only wage earners between the age of 18-29 who had either graduated or left school,⁵⁾ excluding non-wage workers such as the self-employed.⁶⁾ It is not only very difficult to identify the income, but also difficult to determine if their income is the same as wage.

As shown in tables 3 and 4, the job separation risk of all youths was 23.1% during the observation period. It was 23.9% for women, higher than the 22.0% for men. When youths aged 18-29 were further broken down into smaller age groups by three years, men's job separation risk decreased as they grew older, but women did not show much difference. This shows that women's employment was more insecure overall. The 18-20 age group had

³⁾ The first Korean Labor & Income Panel Study was conducted in 1998 but at this point it was not possible to analyze youth's job separation. Therefore, job separation related analysis was only possible since the second survey in 1999.

⁴⁾ "Job maintaining rate" is a very clear concept that shows the ratio of individuals remaining in the same job after one, two, or five years since employment.

⁵⁾ KLIPS divides this into five categories: graduation, completion, drop-out, currently attending, and leave of absence. We assumed that completion also meant that the individuals had finished education and included them in the analysis.

⁶⁾ KLIPS only checks if there is a debt or not and does not identify the size of debt, therefore it is difficult to include this in the analysis. Self-employed workers' income not only includes wage income but also capital income. Thus direct comparison of income between the self-employed and wage earners is not possible. Excluding the self-employed, there were 17,839 (men 55.4%, women 44.6%) cases of youths aged 18-29 who had graduated/dropped out/completed education in 1999-2014.

Table 3 Demographics and Job Separation Risk Probability

(unit: %)

Category		Total	Male	Female
Age	18-20	27.2	31.7	24.6
	21-23	24.1	27.4	23.2
	24-26	24.0	23.7	24.3
	27-29	21.5	19.7	23.9
Education	High school diploma or no diploma	26.3	25.7	26.8
	Technical college degree	22.1	20.9	22.9
	University degree or higher	19.0	15.4	21.4
Relationship to Household Head	Household head	22.6	20.3	27.0
	Spouse	28.4	10.5	29.8
	Child	22.7	23.3	22.3
	Other	18.7	19.2	18.3
Marriage Status	Single	22.6	23.0	22.3
	Married	24.5	17.8	30.2
	Divorced·Widowed·Separated	33.0	36.8	30.8
Total		23.1	22.0	23.9

Source: Korea Labor Institute, "Korean Labor & Income Panel Study," 1999-2014.

a job separation risk of 27.2%, but the 27-29 group showed only 21.5%, due to the decreased probability of men. Education wise, both men and women showed similar trends. In the case of highly-educated workers, both men and women had lower job separation risk. When it came to the correlation with the status of being the household head, it was found that whether men left their job or not greatly depended on their responsibility for family. Married women's job separation risk was high, while men's was lower.

As shown in table 4, when youth wage earners had longer years in service and higher wages, both men and women saw a big drop in job separation risk. In particular, if the monthly wage was one million won or lower, the job separation risk was 32.3%, meaning that 1/3 of the youths left their job. Temporary or daily workers had higher job separation risk than full-time workers, and non-regular workers than regular workers. Job separation risk was lower for workers who worked for the government, public enterprise, or

Table 4 Economic Characteristics and Job Separation Risk

(unit: %)

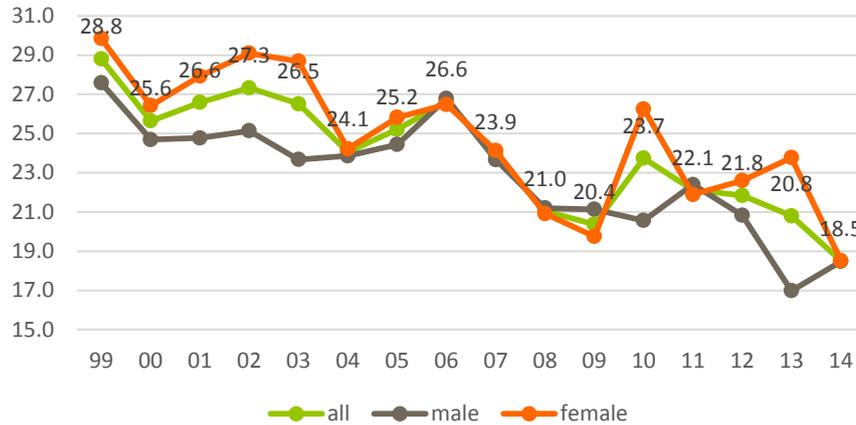
Category		Total	Male	Female
Years in Continued Service	0-<1 year	24.8	23.9	25.6
	1-<2 years	27.0	25.0	28.8
	2-<5 years	19.8	18.3	21.0
	5 years and over	13.0	10.4	14.1
Wage	0-<1 million won	32.3	30.6	32.3
	100-<1.5 million won	22.7	22.6	22.7
	150-<2 million won	16.9	16.7	16.9
	200-<3 million won	11.2	10.8	11.2
	3 million won and over	8.7	5.9	8.7
Work Status	Full-time worker	20.1	18.7	21.2
	Temporary worker	36.5	37.2	36.0
	Daily worker	35.8	32.5	40.4
Employment Type	Regular worker	19.6	18.2	20.7
	Non-regular worker	32.6	32.2	32.9
Company Type	Public	12.1	11.3	12.6
	Private and Other	23.9	22.7	25.0
Labor Union	Yes	12.0	11.4	12.4
	No	23.8	22.6	24.9
Business Size	1-4 persons	30.2	28.7	31.5
	5-9 persons	26.6	25.8	27.1
	10-29 persons	22.1	21.9	22.3
	30-99 persons	21.4	20.7	22.0
	100-299 persons	18.1	16.8	19.4
	300 persons and over	14.6	13.1	15.7

Source: Korea Labor Institute, "Korean Labor & Income Panel Study," 1999-2014.

local government institution than those in private enterprises. Labor union member's job separation risk was lower. Both men and women had lower job separation risk when the company they worked in was bigger. In the case of men, working in bigger companies reduced their job separation risk greatly but in the case of women, when the business size was bigger than 10 employees, the job separation probability did not decrease as much as men.

Figure 3 Trend in Job Separation Risk Probability by Year

(unit: %)



Both men and women's job separation risks have shown a decreasing trend since 1999 as in figure 3. Gender difference in job separation risk was significantly reduced since 2004, almost disappearing by 2009, but has been widening again since 2010.

3.3. Determinants of Job-Separation Risk

We used Logit model to estimate the determinants of youths' job separation. For the dependent variable, "0" was used when the job was maintained and "1" when it was not. As explanatory variables, age, education level, relationship with the household head, and marital status were used. For the variables that show employment characteristics, years in continued service, average monthly wage, type of business, business size, and existence of labor union were used. Other than these variables, years of observation were included as an explanatory variable as a way to reflect how employment security changed over time. Whether the worker was covered under the National Pension or Employment Insurance were used as proxy variables representing the different characteristics of jobs. The analysis also included the individual's employment type as a factor (i.e., whether the youth

was a regular worker or not). Variables reflecting households' financial characteristics that affect job separation were total household income (wage, asset, transfer income, others, etc.). As it is highly likely that in the case of women someone else in the household was economically active, total household income was expected to be used as a proxy variable that shows other household members' income.

Results shown in table 5 for explanatory variables are consistent with the results of the basic analysis done above. The variables with the biggest impact on job separation for both men and women was wage, company type, employment insurance coverage, and existence of labor union. In particular, wage had a bigger effect on men than women. With every 1% increase in wage, the job separation risk dropped by 1% or more for men. Business type also had a big effect as well. If it was a public enterprise the job separation risk probability dropped considerably. Also, when both male and female workers had employment insurance, the probability of continuing work was higher. Overall results are as follows:

First, older youths had greater job separation risk. In particular, older male youths had greater job separation risk. It must be noted that the numbers for women were statistically insignificant, making it difficult to conclusively determine if their job separation risk was as high as men's.

Second, men with longer education period had lower job separation risk while women showed little difference.

Third, married men had lower job separation risk compared to single men. Women, on the other hand, had much higher job separation risk if they were married. This implies that marriage, household work, child birth, and childcare are factors that affect women's employment stability.⁷⁾

Fourth, commonly for both men and women, higher total household income meant higher job separation risk. This implies that if the household is financially stable, the youth wage earner would find it easier to leave his job if he was dissatisfied with the workplace.

⁷⁾ It may be that women gain stable income after marriage and this leads to higher job separation risk.

Table 5 Estimation Results of Turnover Determinants

Explanatory Variable	Total	Male	Female
	0.02133(0.671)		
	0.02489(0.014)	0.02133(0.054)	0.01918(0.154)
	-0.03980(0.003)	0.02489(0.000)	-0.00858(0.641)
Gender (default male)			
Age			
Years of education (years)	0.11812(0.252)	-0.03980(0.085)	-0.26418(0.089)
Relationship to household head	-0.47060(0.000)	0.11811(0.000)	-0.51105(0.000)
Spouse	-0.73332(0.000)	-0.47060(0.000)	-0.77604(0.000)
Child			
Relative	-0.10676(0.237)	-0.73332(0.070)	0.32180(0.041)
Marital status (default single)	0.00834(0.972)	-0.10676(0.341)	-0.14547(0.640)
Married	0.14964(0.000)	0.00834(0.000)	0.10054(0.030)
Divorced, separated, widowed	-0.06911(0.000)	0.14964(0.000)	-0.06355(0.000)
Natural logarithm of household income	-0.99639(0.000)	-0.06911(0.000)	-0.84420(0.000)
Years in service (years)	-0.23853(0.000)	-0.99639(0.010)	-0.23494(0.001)
Natural logarithm of average monthly wage	-0.59614(0.000)	-0.23853(0.001)	-0.58446(0.000)
Regular worker Y/N (1: regular)			
Business Type (0: private & others 1: public)			
Business size (1-4 employees)	-0.03883(0.558)	-0.59614(0.951)	-0.08598(0.315)
5-9 employees	-0.06339(0.362)	-0.03883(0.375)	-0.18681(0.044)
10-29 employees	-0.02012(0.790)	-0.06339(0.304)	-0.13689(0.175)
30-99 employees	-0.14708(0.114)	-0.02012(0.643)	-0.19386(0.114)
100-299 employees	-0.24574(0.002)	-0.14708(0.283)	-0.28766(0.004)
300 employees or more	-0.28951(0.000)	-0.24574(0.038)	-0.31284(0.004)
Labor union within company (0: no 1: yes)	-0.05942(0.540)	-0.28952(0.430)	-0.00633(0.958)
National Pension (0: No 1: Yes)	-0.30575(0.002)	-0.05942(0.106)	-0.33660(0.006)
Employment Insurance (0: No 1: Yes)			
Year effect (as of 1999)			
2001			
2002	1.02455(0.000)	-0.30575(0.000)	1.05538(0.000)
2003	1.22212(0.000)	1.02455(0.000)	1.28023(0.000)
2004	1.09568(0.000)	1.22212(0.000)	1.18669(0.000)
2005	1.11442(0.000)	1.09568(0.000)	1.03177(0.000)
2006	1.14131(0.000)	1.11442(0.000)	1.11475(0.000)
2007	1.25288(0.000)	1.14131(0.000)	1.19523(0.000)
2008	1.17584(0.000)	1.25288(0.000)	1.16563(0.000)
2009	1.07069(0.000)	1.17584(0.000)	1.01200(0.000)
2010	0.96637(0.000)	1.07069(0.000)	0.82406(0.000)
2011	1.18786(0.000)	0.96637(0.000)	1.19970(0.000)
2012	1.14438(0.000)	1.18786(0.000)	1.07299(0.000)
2013	1.07597(0.000)	1.14438(0.000)	1.01886(0.000)
2014	1.04237(0.000)	1.07597(0.000)	1.10024(0.000)
Constant Term	0.83974(0.000)	1.04237(0.000)	0.74521(0.000)
	2.65391(0.000)	0.83974(0.000)	1.97237(0.000)
Sample Size	13,339	5,871	7,468
LR chi2	1,087.7	531.2	609.7
Pseudo R2	0.0754	0.0857	0.0742

Note: Value in parenthesis is $P > |z|$.

Fifth, longer consecutive years in service and higher wage indicated lower job separation risk. This was common for both men and women, but men were affected more by the working period and the wage. However, the causation effect from wage to job separation need to be interpreted carefully, because there may be endogeneity problem of wages and job separation.

Sixth, for both men and women, they had lower job separation risk when they were regular workers. Workers in public enterprises had lower job separation risk compared to those in private enterprises. However, business size did not seem to affect the job separation risk for either men or women.

Seventh, if there was a labor union in the workplace, or if workers had employment insurance, both men and women workers had lower job separation risk. However, National Pension coverage made little difference. Ninth, as shown in figure 3, after 2000, there was a general decline in the overall job separation risk although with some fluctuations.

4. RE-EMPLOYMENT AND CHANGE IN REAL WAGES

In this chapter, we analyze the determining factors for change in employment type as well as changes in wage (or income) when young workers change jobs, using KLIPS data.⁸⁾

4.1. Changes in Work Status

Among all full-time workers in the previous workplace, 75.0% found new full-time jobs. In case of temporary or daily workers, 57.3% found full-time employment. The difference between men and women was negligible. Some 8.6% of youths who had previously been wage earners moved to starting their own businesses.

⁸⁾ We analyze only cases where information about both the previous and the new jobs were available.

Table 6 Change in Work Status for Youths

(unit: %, persons)

			New Job					Total
			Full-time	Temporary	Day Jobs	Business Owners	Non-paying Family Business	
Previous Jobs	Female	Full-time	74.3	14.6	2.1	6.8	2.4	100.0(1,449)
		Temporary	56.6	33.0	4.0	5.3	1.1	100.0(528)
		Total	69.6	19.5	2.6	6.4	2.0	100.0(1,977)
	Male	Full-time	75.9	9.7	4.1	9.2	1.1	100.0(1,147)
		Temporary	58.2	26.4	9.9	4.4	1.1	100.0(454)
		Total	70.9	14.4	5.8	7.8	1.1	100.0(1,601)
	Total	Full-time	75.0	12.4	3.0	7.8	1.8	100.0(2,596)
		Temporary	57.3	29.9	6.7	4.9	1.1	100.0(982)
		Total	70.2	17.2	4.0	7.0	1.6	100.0(3,578)

Note: Numbers inside parentheses are number of samples.

Source: Korea Labor Institute, "Korean Labor & Income Panel Study," 1999-2014.

Table 7 Demographic Categorization of Respondents and Change in Work Status

(unit: %)

Categorization		Female		Male		Total	
		F→F ²⁾	T·D→F ²⁾	F→F ²⁾	T·D→F ²⁾	F→F ²⁾	T·D→F ²⁾
Age	18-20	72.7	43.4	76.2	40.0	74.1	41.9
	21-23	78.5	62.8	76.1	48.5	78.0	58.2
	24-26	75.9	60.4	78.0	64.3	76.8	62.3
	27-29	70.1	50.4	74.8	60.0	72.7	55.7
High school diploma or no diploma		71.8	49.8	71.8	51.0	71.8	50.5
Technical college degree		77.0	63.1	81.1	68.8	78.6	65.4
University degree or higher		74.9	59.9	81.0	73.5	77.1	63.8

Notes: 1) Age and education level data are as of responses given at the time.

2) F→F: Full-time → Full-time, T·D→F: Temporary·Day→ Full-time,

Source: Korea Labor Institute, "Korean Labor & Income Panel Study," 1999-2014.

Table 7 shows how work status changes, according to the demographic categorization of youth. Moving from full-time employment to another full-time job was difficult for women when they reached the age bracket of 27 to

29. The percentage of women who quit a temporary or day job and found full-time employment also decreased significantly, the closer they got to the age of 30. Men in the age bracket of 24 to 26 had a high probability of moving to a full-time job. On the other hand, for both men and women who were employed in temporary or day jobs, the percentage of finding another temporary or day job increased with age from 24. This shows that as the individual became older, the more difficult it was for him or her to find full-time employment.

The importance of education in improving work status is shown in the fact that, regardless of gender, those with at least a technical college degree, had a higher chance to move from one full-time job to another, compared to those with only a high school diploma or no diploma at all. Also, even when working in temporary employment at first, both men and women with at least a technical college degree had a higher possibility to find full-time work in their next workplace.

4.2. Change in Employment Type

Table 8 shows changes in employment type for youths as they move to a new job. 77.0% of wage earners who worked as regular employees in their previous job were able to find regular employment when changing jobs. Only 53.5% of non-regular employees were able to transition into regular position in their next job. The percentages of moving from regular to regular employment and from non-regular to regular employment were both higher for men than women, showing that women had a harder time finding regular employment when changing jobs. These findings show that a considerable portion of youths are advancing their economic status, i.e., becoming regular employees, by changing jobs. On the other hand, 46.6% of non-regular wage earners became non-regular workers in their next job. When comparing men and women, the percentage of moving from one non-regular employment to another was 44.3% for men and 50.5% for women. Thus, more men were transitioning to regular employment by changing jobs than women.

Table 8 Change in Employment Type among Youths⁹⁾

(unit: %, persons)

			New Job				Total
			Wage Earner		Business Owner		
			Regular	Non-regular	Business Owner	Non-paying Family	
Previous Jobs	Female	Regular	72.2	27.8	6.5	2.0	100.0(873)
		Non-regular	49.5	50.5	6.6	1.9	100.0(530)
		Total	64.8	35.2	6.6	2.0	100.0(1,403)
	Male	Regular	79.9	20.1	8.6	1.3	100.0(1,117)
		Non-regular	55.7	44.3	5.7	0.8	100.0(519)
		Total	71.6	28.5	7.6	1.1	100.0(1,636)
	Total	Regular	77.0	23.0	7.4	1.7	100.0(2,657)
		Non-regular	53.5	46.6	6.1	1.4	100.0(1,481)
		Total	69.1	30.9	7.0	1.6	100.0(4,138)

Note: Numbers inside parentheses are number of samples.

Source: Korea Labor Institute, "Korean Labor & Income Panel Study," 1999-2014.

Table 9 shows changes in employment type according to the demographic categorization of youth. For women, in their 20s and onward, the probability of maintaining regular employment remained consistent regardless of age. For men over 24, however, the probability of moving from one regular job to another grew higher with age.

On the other hand, the probability of moving out of a non-regular job into a regular job became lower for women when they reached their late 20s. As women age, they had a higher risk of getting trapped in non-regular employment. Meanwhile, men with at least a technical college degree had a higher probability of finding new employment as a regular employee. Also, education level had a positive correlation with the probability of moving out of non-regular employment. For women, however, the probability of moving from one regular job to another was lower than men in at all education levels.

⁹⁾ KLIPS did not check if youths were regular workers in the 2000 survey. Therefore, there are fewer samples.

Table 9 Demographic Categorization of Respondents and Change in Employment Type

(unit: %)

Categorization		Women		Men		Total	
		Regular→ Regular	Non-regular→ Non-regular	Regular → Regular	Non-regular → Non-regular	Regular → Regular	Non-regular → Non-regular
Age	18-20	69.1	55.6	53.9	61.8	63.0	58.2
	21-23	75.4	43.3	70.2	49.3	75.6	45.2
	24-26	75.6	46.5	80.9	41.6	77.7	44.2
	27-29	74.3	53.7	81.7	41.4	78.5	47.1
High school or no diploma		72.2	50.5	76.3	52.5	74.3	51.6
Technical college		78.4	44.6	84.2	37.5	80.6	41.5
University or higher		74.0	49.4	83.7	24.6	77.7	42.0
Voluntary		76.3	45.9	81.0	44.4	78.3	45.2
Non-voluntary		62.9	60.7	74.2	43.9	68.8	54.1

Note: Age and education level data are as of responses given at the time.

Source: Korea Labor Institute, "Korean Labor & Income Panel Study," 1999-2014.

The probability of women of all education level moving out of a non-regular job into a regular job was significantly lower than their male counterparts. Even women with a university degree had a hard time transitioning from non-regular to regular jobs, with only half of them being able to exit non-regular jobs.

Men over 24 had a better chance than women of moving from a regular job to another regular job or moving out of a non-regular into a regular job. However, even for them, 40% were still able to find non-regular employment when changing jobs, indicating a considerable level of job insecurity and obstacles that remain in their future development.

The last line of table 12 shows that for women, voluntarily leaving a job led to a higher possibility of moving out of non-regular employment, while for men, the probability of moving out of non-regular employment was similar between voluntary and non-voluntary turnover, at 43.9% and 44.45% respectively.

4.3. Re-employment and Change in Real Wage

As illustrated in the summary of changes in real wage that occur with re-employment, there was an overall wage increase effect of 132,000 won in terms of real wage (see table 10). The wage increase following re-employment was greatest for those aged 18 to 29. Afterwards, real wage diminished with age, with those in their 50s seeing a 46,000 won decrease and those in their 60s, a 139,000 won decrease. When moving from regular to regular employment both men and women saw their wage increase but the opposite was true when going from regular to non-regular employment. One change worthy of note is that even when moving from one non-regular job to another, wage increased by 58,000 won on average.

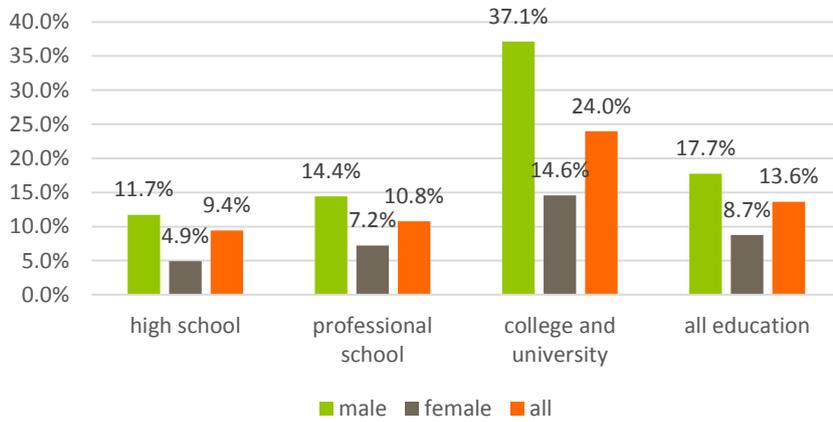
In all types of re-employment, the wage increase was greater for men than women. Specifically, men moving from regular employment to another regular job could expect an increase by 187,000 won in wage, but for their female counterparts, the wage increase stopped at 98,000 won. Even when

Table 10 Change in Real Wages Following Re-employment

(unit: 10,000 won)

		Change in Wages				
		Regular →Regular	Regular→ Non-regular	Non-regular→ Regular	Non-regular→ Non-regular	Total
Age	18-29	19.8	-6.1	51.4	15.0	22.3
	30-39	19.1	-16.5	30.1	7.6	13.2
	40-49	8.5	-21.5	33.0	6.0	7.1
	50-59	1.9	-37.7	15.5	0.3	-4.6
	60 or above	-13.1	-51.4	7.8	-4.8	-13.9
	Total	15.3	-20.8	38.0	5.8	13.2
Gender	Male	28.9	-4.0	39.4	12.1	23.8
	Female	11.3	-11.8	35.1	10.7	11.7
Education Level	High school diploma or no diploma	11.9	-5.3	23.7	7.3	10.2
	Technical college degree	13.2	-15.7	38.2	16.9	14.8
	University degree or higher	42.5	-9.2	58.4	15.3	34.7
Cause for Moving Jobs	Voluntary	20.3	-9.0	39.7	12.6	18.5
	Non-voluntary	12.8	-8.0	20.6	5.4	9.1
Years in Employment	0-<1 year	14.8	2.5	38.3	10.7	17.8
	1-<2 years	15.2	-7.0	34.9	12.8	14.9
	2-<5 years	30.8	-16.3	36.6	10.2	21.9
	5 years or longer	8.4	-56.3	27.3	8.0	-2.7
Months in Unemployment	0-<3 months	23.7	-3.1	36.9	11.5	21.0
	3-<6 months	14.8	1.0	34.4	13.0	18.5
	6-<1 year	8.9	-9.1	32.5	6.4	9.6
	1 year or longer	18.6	-15.6	42.5	12.7	14.7
	Average	19.0	-8.6	36.4	11.8	17.0

Notes: Wage has been adjusted using the 2010 consumer price index as 100. Age and education level data are as of responses given at the time.
Source: Korea Labor Institute, "Korean Labor & Income Panel Study," 1999-2014.

Figure 4 Wage Increase Following Re-employment for Youths

Source: Korea Labor Institute, “Korean Labor & Income Panel Study,” 1999-2014.

limiting the analysis to youths aged 18 to 29 who have graduated or dropped out of school, men saw an increase of 289,000 won when moving from one regular position to another but women in the same situation could only expect a 118,000 won increase. Education level had a positive correlation with wage increase following a job change. In case of youths aged 18 to 29 who had a university degree, the expected wage increase was 347,000 won while for those with a technical college degree, it was 148,000 won, and for those with a high school diploma or no diploma, the number fell to 102,000 won.

When comparing wage increase rates, as shown in figure 4, men could expect a 17.7% increase when moving to new employment. But for women, the rate stood at 8.7%. Wage increase was greater for men than women at all education levels and the higher the education level, the bigger the wage increase. To compare two extremes, the wage increase for men with a university degree was 37.1%, while for women with a high school diploma or no diploma, it was 4.9%.

The wage increase following voluntary re-employment was higher than that for involuntary re-employment. In case of those who sought re-employment voluntarily, the wage increase was 185,000 won while for those

forced to seek new jobs involuntarily, the wage increase stopped at 91,000 won. In terms of how long one stayed in continuous employment, young workers who worked less than a year could expect a wage increase of 178,000 won when finding re-employment but for those who worked for over 5 years, wage actually fell by 27,000 won. Although not included in table 10, review of all age groups yields such conclusion. One explanation for this is that the longer one has stayed unemployed, the more likely the wage from the previous job would be low, thus leading to a big increase when finding the next job. Empirical evidence also demonstrates that low-wage employees spend longer time in a state of unemployment. Another possibility is that unemployed job-seekers took the time off work to go to school or get vocational training, thus accumulating their human capital. More in-depth analysis would be needed to draw final conclusions.

5. CONCLUSION AND POLICY IMPLICATIONS

We tried to find out the determinants of youth job separation and how youth employment was influenced through job separation. For time-series analysis on job separation among youths, we use raw data compiled by Statistics Korea from 2005 to 2015 in the Economically Active Population Survey: Supplementary Survey by Employment Type and the Korean Labor & Income Panel Study from 1999 to 2014. According to data on youths who have graduated or dropped out of school, unlike initial concerns, as of May 2015 only 13.7% of individuals aged 18 to 29 had no job experience and the percentage of women with job experience was higher than men consistently since 2005. However, more than half of the young people with job experience also had the experience of changing jobs at least once. About 81.9% of those who changed jobs in May 2015 did it voluntarily while only 15.9% did so for reasons that could be deemed involuntary.

We analyzed the youth job separation situation using the concept of “job separation risk” which is the probability that an individual could experience

job separation in the time frame between the previous survey and the current one. The survey covered youth wage-earners aged 18 to 29 who graduated or dropped out of school in the years from 1999 to 2014.

Although empirical analysis showed that since 1999, job separation risk for both men and women are steadily declining, a more in-depth analysis using Logit model showed that the older the youth, the higher the job separation risk. In case of men, the longer their duration in education, the lower their job separation risk. For women, however, education level had little effect in alleviating their job separation risk. Higher aggregate household income, longer employment duration, regular employment, workplace unionization and employment insurance were all factors that lowered job separation risk for youths.

With regards to youth re-employment, 75.0% of those who had previously held full-time jobs also found full-time jobs the next time. Those with higher education degrees had a higher likelihood of moving from one full-time job to another. But it was found that it became harder with age for workers to get away from temporary and day jobs by seeking another job, a tendency that was stronger for women. Although men were more likely to transition to regular employment by changing jobs, 40% of men over 24 in non-regular employment remained in non-regular employment even after changing jobs.

Change in work status, education level, and gender had definite effects on how the wage level changed when moving to a new job. When a male aged 18 to 29 moved from regular employment to regular employment, there was a wage increase of 289,000 won. On the other hand, their female counterparts only saw a 118,000 won increase. For men with a university degree, it increased by 37.1%, while for women with a high school diploma or no diploma, it increased by only 4.9%.

The longer one stayed in a job before changing workplaces, the less likely one was to expect a wage increase. The longer one had stayed unemployed, the bigger the wage increase when finding the next job. Empirical evidence showing that low-wage employees spend longer time in a state of unemployment indicates the possibility that this time is spent in school or

vocational training with the objective of accumulating human capital.

This paper, by using data from a time-series panel over a long period, concluded that a considerable number of youths moved to better-quality jobs through re-employment and with the exception of cases where workers moved from regular to non-regular work, changing jobs led to a wage increase. For young people, changing jobs was in most cases a voluntary act seeking to advance one's socio-economic status. However, the frequent turnover by youths, while being the most rational decision at an individual level, could be a reflection of a structural weakness in the nation's labor market. If youths were given the choice to go to a workplace where they can perform to the fullest of their abilities right out of school, the job separation rate would decrease significantly. Youth job separation, whether rational or irrational from the individual's point of view, generates the cost of unemployment to both the individual and society. There is also the possibility of eroding the human capital accumulated during employment.

Based on the discussion so far, this paper offers the following policy implications. First, it is necessary to improve job compatibility to help alleviate the serious issue of youth unemployment. Providing more and better career counseling, strengthening youth job matching services for both private and public sectors, expanding the information system, and reducing information asymmetry could shorten the time youth spend seeking jobs and prevent unnecessary job separation. Second, it is important to provide not only job-seeking support but also post-employment support. Currently employment service for youth focus on the job-seeking process while none are provided for easing successfully into a new job. Albeit a difficult task, counseling and information services for life at work should be gradually provided to the youth, a demographic group with a high job separation risk.

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