COMPARISON OF REGULAR AND NON-REGULAR WORKERS' ECONOMIC ACTIVITY AFTER WORK-RELATED INJURY ABSENCE IN KOREA

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In this study, we examined the relationships among regular and non-regular workers' economic activity after work-related injury absence in Korea. A logistic regression analysis of regular and non-regular workers and their economic activity after their work discontinuity showed that regular workers were more likely to be returned to their previous workplace, while non-regular workers were more likely to be unemployed or employed to another workplace. Specifically, we focus on the employment status problem and develop a model of the antecedents and consequences of non-regular worker stigmatization in Korea.

Introduction

During the past decade, South Korea has experienced vast changes in employment relations patterns in the global economy. Employers have responded to the growing global competition by making employer-employee relations more flexible. In particular, expanding the use of independent contractors and part-time, temporary, seasonal, and leased workers popularly known as non-regular workers has increased tremendously in order to seek cost reductions, more flexibility, and sometimes to avoid the organizational reach of existing unions (Kalleberg 2003). Under the issue of regular and non-regular employment relations, this study examines the relationship between the economic activity of workers before and after work-related injury absence due to occupational accidents. Occupational accidents are reported to result in thousands of deaths and permanent disabilities each year in South Korea, as well as increased accident related costs. Moreover, the labor statistics of Korea reported that more than 90,000 workers suffer from occupational accidents each year for the past 10

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years.

Although the antecedents of occupational accidents and its consequences had been studied for a long time (Christian et al., 2009[3]), focusing on workers' economic activity after returning from the injury absence have not been studied enough yet. One of the reasons for the lack of research on this area was because it was hard to track each injured worker's economic activity after his or her worker's compensation program. In particular, we focus exclusively on the attribute of work discontinuity that caused by occupational accidents rather than the antecedent or consequences of the accident itself. In particular, we specifically look at the effect of non-regular workers' stigmatization effect from occupational accidents as a work discontinuity which hinders non-regular workers to return to their workplace or more likely to lose their previous job. By using the South Korean Panel Study of Worker's Compensation Insurance (PSWCI) data of 2,000 workers, we were able to measure this topic. We first divided the employment status of workers (before work-related injury absence) into two categories: regular and non-regular. Then we compared their rate of returning to the original workplace, or hired to a new workplace after the work discontinuity. Indeed, the workers' compensation system provides cash benefits, medical care, and rehabilitation services to workers who are disabled by work-related injuries or diseases. It also aids workers to return to their workplaces, whether to the original workplace or to a new workplace. However, we found that the initial form of employment status alone affected workers' economic activity after the discontinuity such as returning to their previous workplace or finding a new job even after controlling for other factors. For example, not only regular workers were more likely to return to their workplace than non-regular workers, but regular workers were able to find a new workplace easier than non-regular workers. Thus, we found

[3] To find the meta-analysis on workplace safety and accidents, please refer to this article

that non-regular workers whom undergone occupational accidents and experienced career discontinuity would more likely to be unemployed after the return.

Background of Non-Regular Workers in Korea

Continuing Growth of Non-regular workers in Korea

The initial purpose of using non-regular workers was to allow companies to modify the number of workers according to the variations in environmental demand (Cardon, 2003; Harrison & Kelley, 1993), and to acquire external skills in certain circumstances. Given these potential benefits, researchers such as Cardon (2003), Lepak and Snell (1999, 2002), and Wright and Snell (1998), have suggested that firms may benefit from mixing contingent workers and standard employees simultaneously. Similarly, Korea experienced rapid growth in the non-regular labor force, representing an externalizing trend in employment relations. In general, regular workers have been understood as full time, under one employer, and permanent (Kalleberg, 2000). Although past studies have focused on the definition and the boundary of non-regular workers, less attention has been paid to the specific context of Korea. The percentage of non-regular workers is growing rapidly each year. <Table 1> shows the number of regular and non-regular workers in Korea from (2001-2014). As the table shows, the percentage of non-regular workers increased drastically from 26.8% to 32.4%.

Insert Table 1 Here

The definition of non-regular workers used in this study must satisfy two criteria: workers' contractual duration of one year or less and do not receive a retirement grant or bonus on the

completion of their contract. The term non-regular workers can be broken down into temporary workers and daily hired workers. Temporary workers are those with contractual duration periods of less than a year. Daily hired workers are workers with contractual duration periods less than a month, or paid in a daily basis. In particular, ILO's (International Labor Organization) definition of non-regular workers is defined at International Conference of Labor Statistics in 1993. ILO defined that non-regular worker and precarious employment is casual workers, short-term workers, seasonal workers, temporary workers, and own account workers.

The employment arrangement can also be divided into direct and indirect employment. Whereas the direct employment arrangement is the traditional employment practice, the indirect employment arrangement is an arrangement that the actual user of the labor is not the employer. Thus, there is a triangular relationship among the user, the employer, and the employee. The indirect employment arrangement is also known as subcontract workers and dispatched workers. Those workers who are employed by one subcontractor company then assigned to work under contract at a user's worksite. In our data, we sum up these types of workers as non-regular workers to understand our objective more clearly.

In 1997, South Korea faced severe financial crisis, following with Asian financial crisis. Since then, the Korean government has imposed its policy on creating jobs and aided lowered income workers in a short-term manner. Before the financial crisis, traditional Korean culture was commonly identified as lifetime employment called 'senioritysism', which was the key factor of Korean HRM (Bae & Rowley 2002). In other words, a system of lifetime employment and job security existed before the financial crisis. Post-1997 economic problems led vast change in organizations, such as legal change allowing dismissals for employment adjustment and the transference of flexible labor markets. During this period,

usage of every dimension of non-regular workers seemingly increased (Rowley & Bae 2002). Moreover, globalization led employers to hire more non-regular workers than regular workers. The number of non-regular workers increased from 7.57 million to 8.55 million, which is about one million more within the period of 2000 to 2010. Consequently, the rate of non-regular workers became the dominant employment type.

Also, increase of unemployment rate contributed to boost the use of non-regular workers. Prior to the financial crisis in 1997, unemployment rate of Korea was low as 2.6%, but massive lay-off by the major companies was inevitable since they had undergone severe budget deficit. As the majority of bigger companies of Korea decided downsizing and restructuring, unemployment rate increased dramatically. Thus, the unemployment rate went up to 8.4%, which was more than three times as much as prior to the financial crisis. It created numerous discouraged workers, who are not willing to seek for another job. In particular, massive discouraged workers perceived their situation as despair because of the deterioration of labor market that accelerated income inequality.

Insert Table 2 Here

The point we want to make from the <Table 2> is that most non-regular workers are involuntary, regardless of their will. According to the Economically Active Population Survey of National Statistical Department of Korea of 2014, the data actually supports our argument. Whereas 76.6% of total regular workers choose their regularly job voluntarily, only 48.8% of non-regular workers choose their contingent job voluntarily. As <Table 2> demonstrates, all types of non-regular labor workers work involuntarily in their position more than 45%,

including 86.6% in daily-work. Thus, the employment arrangement of workers is very much skewed towards non-regular work from regular work.

Stigmatization of Non-regular Workers in Korea

Previous studies have found that there exists wage inequality, discrimination of social insurances, firm's benefits, human capital investments, and difference in union density between regular and non-regular work force (Kalleberg, Reskin, & Hudson, 2000, Houseman, 2001, Boyce et al., 2007).

As we have mentioned, the growth of non-regular workforce is not only applied to certain country, but also in the most of industrialized countries. For example, in the United States, there were approximately 100 temporary-employment agencies in the mid 1980s. Today, there are more than 15,000 and hire more than 11 million individuals each year (Berchem, 2005). In this context, the important consideration of this finding is whether there exists a stereotype or stigmatization of non-regular workers exists. The main focus in this case is the employment status. In this regard, stereotypic conceptions of non-regular workers are mainly toward their low skills, general inferiority, and most importantly, job sustainability (Rogers, 2000; Smith, 1998). However, this stereotypic conception is extended to individuals for those in highly skilled trades and professions workers that the conception does not hold. This stereotype has dominated in Korea so deeply that we can easily find numerous evidences through public media. For example, a popular TV drama called *miseng(2014)* realistically sketched a story of a temporary worker's life going through difficulties and stereotypes. *Miseng* gained massive popularity among Korean workers because of its realism reflected with their experiences in their workplace. Also, another popular movie named *Cart(2014)* dealt with a story of dismissed temporary workers from a supermarket chain. These

temporary workers, mostly women, were replaced with outsourced workers to law-dodge from the regulation of law.

The evidence for the existence of the stereotype toward non-regular workers throughout the society can be found in on-line forums and popular media, as well as in many literatures about social status. The stream of increasing attention on discrimination and stereotype of non-regular workers is significant especially in Korea because more and more people think they are in fact the case.

A key characteristic in the workplace regarding to this issue is employment status, which is due to the hierarchical nature of most organizations. Because the stigma associated with non-regular work stems from a status problem, stigmatization based on this attribute is intractable (Boyce, Ryan, Imus, & Morgeson 2007). For instance, attributes like ethnicity, gender, and disability may relate to stigmatization in work and non-work settings, but work status is mostly associated within work settings. Therefore, stigmatization associated with work status is focused generally on non-regular workers although the differentiation based on status in the workplace is regulated by policy and law. In particular, Boyce, Ryan, Imus, Morgeson, and Hauer (2005) reported that about 20% of temporary employee in industrial positions showed some level of stigmatization.

As we have stated, stigmatization is generally concerned with being treated poorly because one is a non-regular worker. However, just because there is a stereotype does not necessarily mean one is stigmatized in the workplace (Crocker et al., 1998). In other words, stigmatization and stereotype is similar, yet a different construct. Boyce et al. (2007) theorized three factors that influence whether an individual is stigmatized. First, stigmatization arises from threats. For regular workers, non-regular workers may be seen as a threat to job security, indicating the organization can easily be substituted to do the same task.

Second, stigmatization arises from legitimizing unequal group status in the society, which is derived from system justification theory (Jost & Banaji, 1994). This theory strongly supports the society's notion of people who work hard obtain regular jobs, that reinforces stereotyping and undermines the value of non-regular workers. Third, social comparison and social identity theories suggest that out casting or discriminating minority group creates a notion of being a non-regular worker is worse off (Tajfel, 1974; Tajfel & Turner, 1986). In this regard, Wills (1981) stated that this downward comparison allows regular workers to feel superior to the devalued target (i.e. non-regular workers) and thus strengthens their self-esteem. In support of this argument by Boyce et al., sociological research shows that temporary employees suffer from stigmatizing treatment in both affective and behavioral way (Rogers, 1995; Vosko, 2000).

Economic activity of workers after work-related injury absence

The workers' compensation program is offered for workers who are suffering from work-related injuries, diseases, or disabilities to receive appropriate treatments and benefits. Ultimately, the program is established to help workers to return to their workplace and to enhance the quality of life (Lee 2011). Previous studies on workers' compensation program have focused more on disabled workers from the accidents (Park 1999), job stress and job satisfaction of case managers (Kim & Nam 2009), and significance of introducing workers' compensation insurance program as a government welfare policy (Woo 2007).

However, a problem that we want to focus in this study is the various aspects of economic activity of workers after work-related injury. The result of individual worker's economic activity and the length of absence period differ among injured workers even if he or she had

gone through the same level of injury or disease. Unfortunately, insufficient data of longitudinal observation did not allow tracking injured workers' economic activity after the work discontinuity. However, it is not hard to find studies on effect of maternity leave on the period of mothers away from the workplace (i.e. Baker & Milligan 2008). Since research on this topic has been studied for a long period of time, most countries typically mandate by legislation to provide female workers with the option of taking a leave in the period surrounding the birth of a child. A difference between maternity leave and absence from occupational accidents is whether the work discontinuity is voluntary or involuntary. Almost all workers who suffer from occupational accidents and discharged from a job are involuntary. Since the occupational accidents occur involuntarily, these workers should be protected even more than any other workers with work discontinuity. We found in the data that most workers gone through workers' compensation program with work discontinuity try to be engaged in economic activity, regardless of their job status. Thus, it would be a meaningful finding if we can identify the discrimination of job acquisition by their previous work status. From the theories that were derived from stigmatization on non-regular workers we discussed earlier, we predict that the status difference between regular and non-regular workers of their previous job affects the way of economic activity after the return, which is the following:

Hypothesis 1: Regular workers are more likely to return to their original workplace after work discontinuity than non-regular workers.

In the earlier section, we argued that the key characteristics in the workplace stigmatization originate from employment status. Because the stigma associated with non-regular work is derived from a lack of stableness of the status, employers prefer re-hiring regular workers over non-regular workers. Indeed, it is essential to control all of the possible factors that would create noise when testing our hypothesis. For example, we would have to

control demographic factors such as gender, age, education, tenure, and length of the absence period carefully as well as organization factors such as the firm size and the type of industry. Also, it would be important to exclude workers who are disabled, in order to differentiate workers who are able or unable to return to work. Thus, we predict that workers who were involved in non-regular work status will more likely experience unemployment and to find another job than former-regular workers as the following:

Hypothesis 2a: Non-regular workers are more likely to be unemployed after work discontinuity than regular workers.

Hypothesis 2b: Non-regular workers are more likely to be employed to another job after work discontinuity than regular workers.

To test our hypotheses, we separated *economic activity after work discontinuity* variable into three categories: returning to original workplace (*H1*), unemployed (*H2a*), or finding a new job (*H2b*). An important assumption we made here in our model is that all workers are pursuing to be engaged on any form of economic activity through finding a job. Without this assumption, we would count workers who were re-hired involuntarily, or workers who are disabled and unable to work.

Moreover, it is reasonable to question whether there exist a union effect on returning to original workplace, unemployed, or finding a new job. Previous study showed positive union effect on the topic of workers' compensation research. For example, Hirsch, Macpherson, and Dumond (1997) found that union members were substantially more likely to receive workers' compensation benefits than non-union workers. The authors suggested that the evidence on union-nonunion differences in the benefit claim and the protection supports a view that the likelihood of claims is sensitive to information available to workers and the expected

response of employers to worker claims. We hypothesize that unions provide workers who are suffering from work discontinuity with information about the availability of legal supports, benefits, and job opportunity to prevent workers to fall into the category of 'discouraged worker'. In this vein, we can also hypothesize that being a union member in the previous workplace would moderate the probability of returning to original workplace, or finding a new job.

Hypothesis 3: Union status positively moderates the relationship of former-employment status and economic activity after work discontinuity (Being a union member prevents being unemployed after work discontinuity).

Thus, our conceptual model looks like the <Figure 1> below. In our sample, there was almost no non-regular worker who was a union member, so we only had to include union members from regular workers. As the model represents, our independent variable is former-employment status which are regular and non-regular, and the dependent variable is the economic activity after work discontinuity which was separated to three categories.

Insert Figure 1 Here

Method

Sample and Data

To test our hypotheses empirically, we analyzed South Korean Panel Study of Worker's Compensation Insurance (PSWCI) data of 2,000 workers collected in 2013. The data was

collected by a government institution called Korea Workers' Compensation & Welfare Service from 2012 to current period. The sample consists of 2,000 workers who have gone through workers' compensation program in Korea. The data is designed into two separate areas: common and individual. Common area consists of demographics, types of workers' compensation service program, accident-occurred workplace, economic activity after work discontinuity, and other individual factors like family backgrounds. Individual area is subdivided into three parts: returned to previous workplace, employed to another workplace, or unemployed. These three subdivided areas are then investigated more in detail on how and why they returned, or not returned to their previous workplace. It was necessary to exclude samples who voluntarily exited from their previous workplace, self-employed, and samples who were disabled to continue working.

Insert Table 3 Here

As shown in <Table 3>, we first took a part of the sample of workers' employment status (before work-related injury absence) as our independent variable, and then divided into two categories: regular and non-regular. There were 1,100 workers who were regular workers, whereas 268 workers who were temporary, and 625 workers who were daily workers. We define those latter two categories as non-regular workers which sum up to 893. Since the purpose of this study is to find the factor that influence economic activity of regular and non-regular workers, we excluded seven self-employed workers and employers. In analyzing the data, there was an assumption we made of workers' preference which is: all workers will try their best to get the permanent job; all workers will want to return to previous workplace.

Analysis

Workers' *economic activity after work discontinuity* (dependent variable) is a dichotomy variable in testing each hypothesis. In testing hypothesis 1, the dependent variable would be return to previous workplace (coded as 1), and others (coded as 0). In testing hypothesis 2a, the dependent variable would be unemployed (coded as 1), and employed (coded as 0). In testing hypothesis 2b, the dependent variable would be employed to another workplace (coded as 1), and others (coded as 0). The *previous employment status* (independent variable) is also a dichotomy variable which were regular workers (coded as 1), and non-regular workers (coded as 0). We also coded other control variables such as gender (male=1, female=0), age, and education as our demographic factors, and individual characteristics such as organization tenure, absence period, and union membership (yes=1, no=0). Each of the individual characteristics and education were dummy coded, because the initial data did not have same interval on education, organizational tenure, and absence period. We separated education into five dummy variables (no education, elementary graduate, middle school graduate, high school graduate, and college degree or higher), and organization tenure, into five variables (1~3 months, 4~6 months, 6months~1year, 1~2years, and more than 2 years), and absence period (0~3 months, 3~6 months, 6~9 months, 9~12 months, 1~2 years, and more than 2 years). The organizational characteristics include industry type and the firm size of where the accident occurred. We divided industry types into four categories: agriculture, forestry, fishery, and mining as one category, manufacturing, construction, and service industry. We also dummy coded each industry type. Due to the different interval of firm size on the survey, we also had to dummy code the firm size (0~5 people, 5~9, 10~29, 30~99, more than 100). Given our use of a dichotomous dependent variable and a series of control variables and the nature of the independent variables, we relied on logistic regression analysis

for our hypotheses testing. The coded variables are shown in <Table 4>, and descriptive statistics and correlations of variables are shown in <Table 5>. We excluded some control variables that were dummy coded to show representative variables easier. Excluded variables include Education, Organization Tenure, Absence Period, and Firm Size. We demonstrated means and standard deviations of these variables separately on <Table 6>. Employment status was significantly related to age, education, union membership, and current economic activity. The correlation analysis show that a former-regular worker tends to be younger, more educated, a member of union, and currently involved in economic activity. In terms of industry type, a former-regular worker tended to be in manufacturing industry whereas most non-regular workers are positioned in construction industry.

Insert Table 4 Here

Insert Table 5 Here

Insert Table 6 Here

Result

The results of logistic regression analysis are shows in <Table 7>, <Table 8>, and <Table 9>. Hypothesis 1 holds that, former-regular workers are more likely to return to their original workplace after work discontinuity than non-regular workers. In support of Hypothesis 1, previous employment status was significantly related to returning to their original work place.

Insert Table 7 Here

The coefficient of previous employment status is .916, which shows that regular workers are more likely to be returned to their original work place than non-regular workers. Interestingly, union membership is also significantly related to returning to previous work place, which implies union effect of job security. As shown in equation 2 of <Table 7>, the interaction effect of previous work status and union membership also show that there is a moderation effect of union membership on the relationship between previous employment status and returning to previous workplace. Thus, Hypothesis 1 and Hypothesis 3 are supported.

Insert Table 8 Here

Also, as shown in <Table 8>, the significant coefficient value of previous employment status is -.323, which tells us that non-regular workers are more likely to be unemployed after the work discontinuity. This also supports our Hypothesis 2a, supporting our theory of stigmatization on non-regular workers on pursuing economic activity. In particular,

coefficient value of gender was -.630, which tells us that female workers suffer from unemployment than male workers after work discontinuity. This result can be another interesting subject that we can discuss about the problem of discrimination. Finally, <Table 9> shows the result of regression analysis on Hypothesis 2b. The result also supports our Hypothesis 2b, that non-regular workers are more likely to find another job than regular workers. The result is interesting in a way that male workers were more likely to be employed to another job than female workers whereas in <Table 8>, female workers were more likely to be unemployed. Thus, even among non-regular workers, we found that female workers suffer even more than male workers.

Insert Table 9 Here

Discussion

This study aimed to expand the understanding of discrimination between regular and non-regular workers of Korea. First, we found that regular workers tend to be engaged in economic activity after work discontinuity than non-regular workers, and regular workers are more likely to be returned to their previous workplaces. This shows labor market dualism that is prevalent in Korea. Assuming that all workers pursue returning to their previous work place and engage in any form of economic activity, being a non-regular worker is certainly a stigmatization of hindrance. This idea is even more supported by Hypothesis 2. The result of our analysis shows that non-regular workers look for another job and more likely to be unemployed than regular workers. Another important implication we found was that female and non-regular workers suffer the most out of all types of employment status. Female

workers have hard time finding a job or returning to previous workplace after work discontinuity. This dual structure of employment relations exist in Korea, and we empirically supported this phenomenon. There is another contribution of this study in terms of union effect. In hypothesis 3, we found that union members were benefitted from employment security more than non-union members. However, non-regular workers who are union members are only 7.8% of total union workers in Korea. In this regard, we can also presume that existence of union or other kinds of protective association is necessary for non-regular workers.

In the context of our study, work discontinuity is a prominent factor. There were not many studies on finding relationship between work discontinuity and non-regular workers. This study therefore contributes to future research on constructing appropriate policy or practice for the government and organizations. However, we noted three particular limitations of this study. First is the limitation of the samples we used. The population of our sample only consists of injured workers after work discontinuity. One might argue that the stigmatization effect is whether on the injured workers in general, or to non-regular workers. We understand that the sample does not consist of workers who had not injured and gone through work discontinuity, but our initial goal was to argue that non-regular workers are indeed in a weaker social status and need to be protected. In particular, since workers' compensation program was designed to protect workers to return to their original workplace after injury-absence, job security should be guaranteed. The result shows that non-regular workers still suffer from job insecurity and despair. Our second limitation is that we did not concern any disabled workers. Considering disabled workers is important under the context of workplace safety. However, our purpose of this study was not particularly on the occupational accidents, but work discontinuity and non-regular workers. Last limitation is that no single psychology

variable is used. For example, workers' social network or measuring their effort of getting a job was not considered. Also, information asymmetry can also affect workers economic activity after work discontinuity. In our view, future research on self-efficacy or confidence of workers that might influence our result would be very interesting. In conclusion, we argue that protective plan for female workers and non-regular workers are necessary within organizations in Korea. The Korean government has addressed to resolve dualism of labor structure by limiting the use of non-regular workers, as well as by strengthening the social safety and encouraging equal treatment for non-regular workers. This problem of employment status requires a longitudinal and comprehensive strategy to encourage organizations to execute protective policies for non-regular workers.

<Table 1> Number of regular and non-regualr workers in Korea from 2001-2014 (In thousands)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Workers	13,540	14,030	14,149	14,584	14,968	15,351	15,882	16,104	16,479	17,048	17,510	17,734	18,240	18,776
Regular	9,905 (73.2%)	10,191 (72.6%)	9,542 (67.4%)	9,190 (63%)	9,486 (63.4%)	9,894 (64.5%)	10,180 (64.1%)	10,658 (66.2%)	10,725 (65.1%)	11,362 (66.6%)	11,515 (65.8%)	11,823 (66.7%)	12,295 (67.4%)	12,699 (67.6%)
Non-Regular	3,635 (26.8%)	3,839 (27.4%)	4,606 (32.6%)	5,394 (37%)	5,483 (36.6%)	5,457 (35.5%)	5,703 (35.9%)	5,445 (33.8%)	5,754 (34.9%)	5,685 (33.3%)	5,995 (34.2%)	5,911 (33.3%)	5,946 (32.6%)	6,077 (32.4%)

Source: Employment and Labor Statistics of Korea 2014

<Table 2> Percentage of voluntary and involuntary workers in different employment status

	Wage Earners	Regular Workers	Non-Regular Workers	Temporary Workers	Part-time Workers	Dispatched Workers	Daily Workers
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Voluntary (%)	67.6	76.6	48.8	55.1	44.4	53.3	13.4
Involuntary (%)	32.4	23.4	51.2	44.9	55.6	46.7	86.6

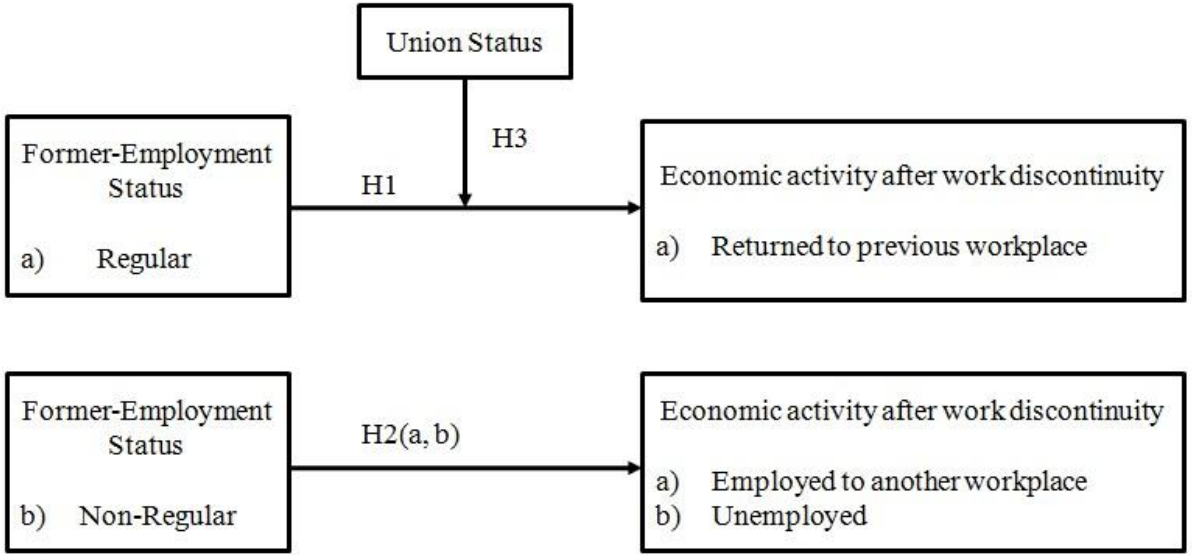
Source: Economically Active Population Survey of National Statistical Department of Korea 2014

Note: Wage Earner = Economic active population – unemployed – self-employed,

Non-Regular Workers = Temporary + Part-time + Dispatched + Daily workers

Temporary Workers = Contract workers under one year

<Figure 1> Conceptual model liking former-employment status to economic activity after work discontinuity



<Table 3> Employment Status of workers prior to work discontinuity

Employment Status	Frequency	Percent (%)
Regular	1100	55
Non-Regular	268	13.4
Daily	625	31.3
Self-employed / Employer	7	0.4
Total	2000	100

<Table 4> Variables

	Variable	n	Coded
Independent Variable	1. Previous Employment Status	1993	1= Regular / 0= Non-Regular
Demographics	2. Gender	2000	1= Male / 0= Female
	3. Age*	2000	1= 20~29 / 2= 30~39 / 3= 40~49 / 4= 50~59 / 5=60~
	4. Education**	2000	1= No Education / 2= Elementary Graduate / 3= Middle School Graduate / 4= High School Graduate / 5= College Degree
Individual Characteristics	5. Tenure**	2000	1= 1~3month / 2= 4~6month / 3= 6month~1yr / 4= 1~2yr / 5= 2yr~
	6. Absence Period**	2000	1= ~3month / 2= 3~6month / 3= 6~9month / 4= 9~12month / 5= 1~2yr / 6= 2yr~
	7. Union Membership	2000	1= yes / 0= no
Organization Characteristics	8. Industry type (Agriculture, Forestry, Fishery, Mining)	2000	1= yes / 0= no
	9. Industry type (Manufacturing)	2000	1= yes / 0= no
	10. Industry type (Construction)	2000	1= yes / 0= no
	11. Industry type (Service)	2000	1= yes / 0= no
	12. Firm Size**	2000	1= ~5 / 2= 5~9 / 3= 10~29 / 4= 30~99 / 5= 100~
Dependent Variable H1	14. Returned to Previous Workplace	1412	1= yes / 0= no
Dependent Variable H2b	15. Employed to Another Workplace	1925	1= yes / 0= no
Dependent Variable H2a	16. Unemployed	1925	1= yes / 0= no

Note: *Age: continuous variable; **Education, Tenure, Absent Period, and Firm Size were dummy coded due to their irregular interval

<Table 5> Means, Standard Deviations, and Correlations Table

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11
1. Previous Employment Status	0.55	0.5											
2. Gender	0.84	0.36	-.040										
3. Age	3.45	1.12	-.244**	-.111**									
4. Union Membership	0.07	0.26	.218**	.072**	-.050*								
5. Industry type (Agriculture, Forestry, Fishery, Mining)	0.03	0.17	-.111**	.067**	.070**	-.003							
6. Industry type (Manufacturing)	0.38	0.49	.389**	.013	-.142**	.058**	-.137**						
7. Industry type (Construction)	0.28	0.45	-.533**	.237**	.180**	-.143**	-.109**	-.491**					
8. Industry type (Service)	0.31	0.46	.151**	-.268**	-.052*	.079**	-.116**	-.523**	-.418**				
9. Currently Involved in Economic Activity	0.71	0.46	.166**	.090**	-.144**	.111**	.002	.033	-.077**	.039			
10. Returned to Previous Workplace	0.5	0.5	.432**	-.056*	-.089**	.250**	-.039	.213**	-.337**	.108**	.[a]		
11. Employed to Another Workplace	0.33	0.47	-.238**	.076**	-.001	-.155**	.011	-.149**	.221**	-.063**	.469**	-1.000**	
12. Unemployed	0.31	0.46	-.174**	-.087**	.146**	-.115**	.008	-.035	.076**	-.041	-1.000**	.[a]	-.469**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. Cannot be computed because self-employed and employer variable (7 samples) was eliminated.

<Table 6> Variables excluded in the correlation table

Variables	Mean	s.d.
Education : No Education	.04	.19
Education : Elementary Graduate	.17	.37
Education : Middle School Graduate	.19	.39
Education : High School Graduate	.45	.50
Education : College Degree or Higher	.15	.36
Organization Tenure : 1~3months	.47	.50
Organization Tenure : 4~6months	.08	.28
Organization Tenure : 6months~1year	.11	.31
Organization Tenure : 1~2years	.09	.28
Organization Tenure : 2 years or more	.26	.44
Absence Period : 0~3months	.16	.37
Absence Period : 3~6months	.41	.49
Absence Period : 6~9months	.24	.43
Absence Period : 9months~1year	.08	.27
Absence Period : 1~2year	.08	.26
Absence Period : 2 years or more	.03	.16
Firm Size : 0~5 workers	.23	.42
Firm Size : 5~9 workers	.25	.43
Firm Size : 10~29 workers	.26	.44
Firm Size : 30~99 workers	.16	.37
Firm Size : more than 100 workers	.10	.30

<Table 7> Results of Logistic Regression Analysis on Hypothesis 1 and 3

Predictors	Returned to Previous Workplace					
	Equation 1			Equation 2		
	B	Wald	Exp(B)	B	Wald	Exp(B)
Previous Employment Status	.935***	30.540	2.547	.909***	28.705	2.482
Gender	-.055	.079	.947	-.069	.125	.934
Age	.097	1.828	1.102	.097	1.796	1.101
Union Membership	1.028**	9.360	2.795	-.412	.138	.662
Industry type (Agriculture, Forestry, Fishery, Mining)	.140	.127	1.150	.125	.102	1.133
Industry type (Manufacturing)	.149	.921	1.16	.157	1.022	1.170
Industry type (Construction)	-.295	1.972	.744	-.281	1.790	.755
Constant	.098	.014	1.103	.073	.008	1.075
Previous Work Status x Union Membership				1.697	2.066	5.455
-2 Log likelihood	1483.274			1480.625		
Cox & Snell R Square	.282			.283		
Nagelkerke R Square	.376			.378		
Hosmer and Lemeshow Test	.306			.378		

* p<.05
**p<.01
***p<.001

<Table 8> Results of Logistic Regression Analysis on Hypothesis 2a

	Unemployed		
	Equation 1		
Predictors	**B**	**Wald**	**Exp(B)**
Previous Employment Status	-.323*	5.021	.724
Gender	-.630***	16.258	.533
Age	.111	3.380	1.118
Union Membership	-.644*	4.150	.525
Industry type (Agriculture, Forestry, Fishery, Mining)	-.192	.306	.825
Industry type (Manufacturing)	.253	3.136	1.288
Industry type (Construction)	-.235	1.896	.790
Constant	.874	2.801	2.397
-2 Log likelihood	2050.301		
Cox & Snell R Square	.151		
Nagelkerke R Square	.213		
Hosmer and Lemeshow Test	.064		

* p<.05
**p<.01
***p<.001

<Table 9> Results of Logistic Regression Analysis on Hypothesis 2b

	Employed to Another Workplace		
	Equation 1		
Predictors	**B**	**Wald**	**Exp(B)**
Previous Employment Status	-.462***	11.349	.630
Gender	.401*	6.219	1.494
Age	-.059	1.092	.943
Union Membership	-1.019**	8.100	.361
Industry type (Agriculture, Forestry, Fishery, Mining)	-.187	.327	.830
Industry type (Manufacturing)	-.263	3.685	.769
Industry type (Construction)	.251	2.496	1.285
Constant	-3.244***	25.309	.039
-2 Log likelihood	2183.589		
Cox & Snell R Square	.127		
Nagelkerke R Square	.176		
Hosmer and Lemeshow Test	.209		

* p<.05
**p<.01
***p<.00

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