Separation & Satisfaction: Evidence from Korea

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Using longitudinal data from South Korea from 2000-2007, I estimate the impact of different measures of workplace satisfaction on job separation rates. I employ two different econometric models to conclusively establish this relationship while using an extensive set of controls, including a control for overall satisfaction with life to account for possible endogeneity issues in earlier studies. My results show that dissatisfied workers are 50% more likely to separate than an average worker. I also find evidence that dissatisfied workers are more likely to separate with a wage gain and that the presence of unions does not lower the odds of separation for dissatisfied workers. Lastly, I find evidence of the 'honeymoon-hangover' effect – workers report an increase in satisfaction levels immediately following separation, but this jump in satisfaction goes down after three years post-separation.

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1. Introduction

An unhappy individual has two choices – either passively wait for things to get better, or do something about it. In the context of unhappy workers at a firm, Hirschman (1970) splits up the latter into three distinct actions – exit, voice, or neglect. An unhappy worker can choose to leave the firm ("exit"); can choose to "voice" his/her unhappiness (either individually or collectively through a union); or "neglect" his/her work, shirk from responsibilities and hinder productivity at work. The exit and neglect approaches should result in higher job separation rates – unhappy individual leaves or is forcefully laid off because the presence of such a worker in a workplace will produce negative, inefficient outcomes for a firm in terms of loss in productivity generated either directly by this employee, or indirectly through the creation of an adverse work environment around this unsatisfied worker. If an effective mechanism for voicing discontent is present, e.g. the exit-voice framework for unions (Freeman, 1976), then the second option should reduce job separation rates.

Why should one care about job separations? Understanding the determinants of job separations is important because these separations entail more than just the urgency of finding a replacement worker or the stress of finding a new job. For a firm, this separation means an interruption in an otherwise smooth operation. It also involves a loss in the investments (in terms of time or money) made, while training this separating individual. So, this separation produces economic losses for the firm. For an individual, in addition to potential losses in wages, leaving the firm could also mean foregoing the returns on the specific human capital acquired over his/her tenure (Hashimoto, 1981). Therefore, the importance of studying the factors affecting job separation rates is not overrated.

While individuals are always on the lookout for higher wages, empirical evidence suggests that job separation is also determined by factors other than wages. These may include demographic differences (e.g. Blau and Kahn, 1981; Lynch, 1992; Sicherman, 1996) or certain workplace characteristics that make a job appealing to an individual (e.g. Anderson and Meyer, 1994; Frick, 1996; Addison *et al.,* 2001; Addison and Teixeira, 2006; Bockerman & Ilmakunnas, 2009; Cottini, Kato, & Nielsen, 2009; Grund & Schmitt, 2013). These may include features such as inclusiveness and representation (e.g. presence of shop-floor organizations), safety (e.g. the amount of exposure to adverse, hazardous environments), better work hours or favorable policies towards a specific group of individuals (e.g. maternity leaves for women).

Job satisfaction is a subjective measure. It can be determined by a variety of factors – observed or unobserved. When some of the observed determinants of job satisfaction, such as wages, promotion, work hours, stability of job etc, are controlled for, job satisfaction serves as a proxy for unobserved factors such as relationship with supervisors or relationship with co-workers. Unions have the potential to help improve discontent with observed as well as unobserved factors. Therefore, it is important to study the effect of job satisfaction in association with union effects.

There is a significant amount of research on the effect of perceived job satisfaction levels on job separation (Akerlof *et al.,* 1988; Clark, 2001; Kristensen & Westergard-Nielsen, 2004; Chadi & Hetschko, 2014). Evidence from these models (with varying degree of controls) suggests

that job satisfaction leads to a lower job separation rate. Some studies go a step further and look at how job satisfaction levels change after a separation has occurred and demonstrate the presence of 'honeymoon-hangover' effect – a jump in job satisfaction (usually triggered by a new workplace) and then a subsequent decline (the "hangover") in job satisfaction levels as an individual spends more time at the firm (Boswell *et al.*, 2005; Chadi & Hetschko, 2014).

In this paper, I build upon this literature linking job satisfaction to job separation using an extensive set of controls to address potential endogeneity in the way job satisfaction affects job separation. Simultaneously, I estimate the extent of the ability of unions to address grievances of dissatisfied workers. Specifically, I investigate if unions are able to reduce the job separation rates of dissatisfied workers. These are the main hypotheses tested in this paper:

Hypothesis I (H1): Dissatisfaction at work leads to job separations.

Without fussing over the specifics of this separation, I hypothesize that if an employee is dissatisfied, job separation is more likely to occur. While the more apparent path for this separation is indeed a voluntary quit, job dissatisfaction could also result in a layoff, in case this worker chooses to neglect his work. In order to address the inefficiencies generated by such an attitude, the firm will choose to get rid of this employee.

Hypothesis II (H3): If firms are truly cognizant of dissatisfied workers, job separations should take place regardless of the relative change in wages for these workers post-separation.

For a dissatisfied worker who is voluntarily quitting, it is likely that this worker will wait around until he/she has the opportunity to switch to a better paying job. But if firms are also determining the fate of dissatisfied workers, which should be happening if dissatisfied workers are choosing to neglect their work, we should see evidence of dissatisfied workers separating with a loss in wages – i.e. a dissatisfied worker should be more likely to separate from the firm, regardless of whether he/she is going to earn more at the new job.

Hypothesis III (H3): If dissatisfaction at work leads to job separations, then immediately following a separation, a separating individual must be less dissatisfied.

This prediction is in line with other studies which have shown the 'honeymoon-hangover' effect. First few months at a new job are full of optimism about the opportunities that lie ahead. Therefore, it is reasonable to assume that individuals will report a high level of satisfaction at a new job right after separation.

Hypothesis IV (H4): Dissatisfied workers at unionized firms are less likely to separate

Assuming separation rate is a healthy combination of quits and layoffs, the rate of quits due to dissatisfaction should go down if there exists a mechanism to address this dissatisfaction e.g. unions, thus leading to lower overall job separation rates.

In the following sections, I describe the data set used in this study, explain the two econometric models used in my estimations, and present my results.

2. Data

The data set used in subsequent empirical analysis is the Korean Labor and Income Panel Study (KLIPS), a longitudinal survey of households and individuals living in urban areas in South Korea, conducted by Korea Labor Institute (KLI). This data set contains a wealth of information on household characteristics as well as individual characteristics including information on level of education, job training, employment spells, income, labor movement etc. KLIPS was launched in 1998 and has been carried out every subsequent year. The original sample consisted of 13,321 individuals and 5,000 households with low non-response bias (75.5% initial contact rate). In the following waves, the number of individuals in the sample has remained above 10,000 with a high re-contact rate in each wave (> 75%).

While this data is publicly available for download for years 1998-2007, this paper only uses longitudinal data from 2000 to 2007. There are two reasons for this choice. First, information on a lot of the variables, many of which are key to the analysis in this paper, which can potentially drive labor supply decisions was not gathered in the first wave of this survey. Second, the Asian Financial Crisis of 1997 resulted in a negative GDP growth rate for South Korea in 1998, which is bound to have impacted labor demand and labor supply decisions. While this crisis can be treated as an exogenous shock, there is a substantive reason to believe in a correlation between the unobserved factors that determine labor demand and a crisis such as this one, keeping in mind that this crisis was driven by the aggressive expansion of the corporate sector in South Korea. At the end of 1999, South Korea's GDP growth rate was positive once again (>10%).

These are some of the main variables used in this paper that are constructed using the information from KLIPS:

(i) *Tenure* is defined as the number of years a respondent has been working for his/her current firm. Using information on the start date of the current job reported by individuals, I was able to determine the number of years a respondent had spent at his/her current job at the time of the interview.

(ii) *Job Separation* is defined as the end of an employment spell with the current firm. This separation can be the result of a voluntary quit or a layoff by the firm. This is a dummy variable derived inductively from tenure in two consecutive waves of the survey. This variable takes a value 1 in $time(t)$ if *Tenure* goes from a positive value in $time(t)$ to a smaller positive value (or zero) in $time(t+1)$. Effectively, I have a situation where $Tenure\ (t) - Tenure\ (t+1) > 0$. Intuitively, this implies that a job separation took place after the current survey and before the next survey. Since the survey is carried out on a yearly basis, I lose information on employment spells that last for just a few months.

(iii) *Dissatisfaction Dummies (Work)* are a set of dummies representing discontent with different aspects of work such as promotion opportunities, wages, work hours etc.. In the survey, each individual responded to questions about their level of satisfaction on a scale of 1-5, where 1 corresponds to "Very Satisfied", 3 corresponds to "Neither Satisfied nor Dissatisfied" and 5 corresponds to "Very Dissatisfied". The *Dissatisfaction Dummies*

take the value 1 if an individual responds 4 or 5 to these questions regarding satisfaction levels.

(iv) *Dissatisfied With Life* is a dummy for individuals who responded with a 4 or 5 to a specific survey question about overall life satisfaction. This is a valuable control used in every model estimated in this paper. By controlling for overall dissatisfaction with life, I am able to account for an individual's general outlook on life. This allows me to address unobserved variables that determine one's satisfaction with job and one's job separation decisions. This is also a distinguishing feature of this paper.

(v) *Degree Dummies* are a set of variables that correspond to the highest level of educational attainment for each working individual. These represent high school dropouts, high school graduates, junior college graduates, university graduates and graduates from a Master's or PhD program.

(vi) *Existence of a Union* is a dummy variable which takes the value 1 if the current firm of a respondent has a labor union. Other variables of interest control for marital status, part-time work, a variety of age brackets and all possible occupations and industries.

One weakness of this data set is the limited amount of information about firm characteristics. While there exist standalone surveys that collect information on some important variables defining several features of individual workplaces, this information is not collected in every wave. As such, there are few controls for unobserved heterogeneity in the workplaces of these respondents. While satisfaction variables account for how individuals perceive their workplace, the endogeneity in these variables make them imperfect proxies for workplace characteristics. Nevertheless, I am at least able to address the unobserved heterogeneity in different sectors and types of jobs by exploiting the detailed information on industries and occupations in these surveys.

This dataset is trimmed down to include only individuals between the ages 24-60 that are not currently enrolled in a course. In addition, only individuals that are currently employed with positive wages are considered here. Therefore, my focus is on individuals who switch from employment-to-employment in the case of a separation, instead of from employment-to-unemployment. However, it is possible that some of the individuals in my subsample underwent an employment-to-unemployment transition, but this unemployment spell only lasted for a few months, and therefore, not captured in this yearly survey.

Given the immense possibilities for analysis with this data, I decided to split up my analysis into two components. Subsequently, the data used for each component is structured differently depending on the demands of the analysis

2.1 Probit Model

To estimate linear binary and multiclass models, I decided to use a strongly balanced subset of the KLIPS dataset i.e. I only kept employed, currently working individuals that appeared in every single wave from 2000 to 2007. This reduced my already trimmed-down data set further, leaving me with only 4,760 observations to analyze. Tables 1 and 2 (Appendix) give a summary of this

dataset for key variables. I chose to use a strongly balanced panel as it allowed me to follow the same individuals before and after job separations, or for their entire spell of employment at the current firm for eight years if no job separation takes place. For a total of 4,760 observations in this panel, I observe 190 job separations. So, the average job separation in this dataset is about 4%.

2.2 Discrete-time Proportional Hazards Analysis

Since duration analysis is concerned largely with the time until failure or censoring, I had the opportunity to analyze observations that were not necessarily followed for all eight years. To create my ideal dataset, I organized the data by Individual ID and year, and kept the longest consecutive runs for each individual. Data from consecutive waves is important to determine the time at which job separation occurred. With the *Job Separation* dummy defined, I kept only those observations with *Job Separation* = 1 or those that were observed in the very last year of this consecutive spell, at which point their duration becomes censored. Table 3 summarizes this data.

It is important to realize that this summary table cannot be compared directly with Tables 1 and 2. For 5,321 observations, I observe a job separation rate of 18%. This number is significantly higher than 4% because I purposefully discarded observations for years where no job separation occurred (other than the censored time period). In order to perform duration analysis, I expanded the data by tenure, so that each individual is observed for t time periods, where t equals the number of time-periods until failure (which is the tenure right before job separation takes place) or the number of time-periods until censoring (which is the tenure in the last year of observation). This expansion is necessary for a discrete-time proportional hazards analysis, which is done using a complementary log-log link in this paper. Table 4 gives summary statistics for this expanded data. Here, the job separation rate is about 11 % on average.

Figure 1 gives the Kaplan-Meier Survival Function for this subset of the overall data set as well as for the two groups of workers defined by the *Dissatisfied with Job* dummy. The Survivor function for dissatisfied workers drops much more sharply than the function for "not dissatisfied" workers. About half of those characterized as dissatisfied experience a failure event, which is a job separation in this analysis, before 6 years of tenure, and more than 75% experience job separation before 20 years of tenure. This is in contrast to "not dissatisfied" workers, more than 50% of which survive until 40 years of tenure. This figure serves as a strong motivation for duration analysis to test for the impact of job dissatisfaction on job separation rates.

3. Econometric Methods

In order to conclusively estimate the determinants of job separation, I analyze the KLIPS data using two popular econometric approaches.

`3.1 Probit Model

Consider a continuous variable $z_{it}{}^*$, the latent (unobserved) variable for job separation for individual i.

$z_i{}^* = \gamma_i\alpha + (\gamma_i \times \rho_i)\delta + \tau_i\phi + X'_i\beta + \varepsilon_i$ (1)

We observe the binary measure of job separation, z_i, where $z_i = 1$ if $z_i{}^* > 0$ and $z_i = 0$ otherwise; γ_i belongs to a set of dissatisfaction dummies, namely dummies for dissatisfaction with job, dissatisfaction with wages, dissatisfaction with promotion, dissatisfaction with personal development and dissatisfaction with work hours; $\gamma_i \times \rho_i$ represent interaction terms between dissatisfaction dummies and a dummy indicating the existence of a labor union (ρ_i); τ_i is a dummy variable for dissatisfaction with life; and, X'_i contains a large set of controls including individual characteristics as well as year, industry and occupation dummies.

The above equation was estimated five times, once for each dissatisfaction dummy γ_i, using a probit link. The coefficient α is of interest here in determining the impact of dissatisfaction at workplace on the probability of job separation. The coefficient δ gives a measure of the probability of separation for dissatisfied workers at firms with a labor union. The true strength of this model lies in the vast number of controls, X'_i, used here. These extensive set of controls ensure robust results, which would help conclusively establish the first hypothesis (H1). It should be noted that in order to resolve concavity issues while converging this model, I cross-tabulated each dummy with job separation dummy and dropped anything that perfectly predicted job separation.

After estimating all five variations of the above model, I generated two more dummies:

(i) *Separation with Wage Gain*: This variable takes a value 1 if $Wage_t - Wage_{t-1}$ is a positive quantity and $Job\ Separation_{t-1} = 1$. Otherwise, this variable is 0.

(ii) *Separation with Wage Loss*: This variable takes a value 1 if $Wage_t - Wage_{t-1}$ is a negative quantity and $Job\ Separation_{t-1} = 1$. Otherwise, this variable is 0.

Now, instead of estimating a binary outcome, I estimated three outcomes simultaneously using a multinomial logit setup where the three outcomes are 1) No Job Separation, 2) Job Separation with Wage Gain, and 3) Job Separation with Wage Loss. The independent variables in this estimation come from Equation (1). This multinomial logit setup was estimated twice, once with job dissatisfaction dummy and again, with promotion dissatisfaction dummy.

The third part of this analysis involved generating the following variables:

(i) *Change in Job Dissatisfaction Variables:* three variables for the change in the value of the job satisfaction question on the survey from time $(t-1)$ to time (t), from $(t-2)$ to (t), and from $(t-3)$ to (t).

(ii) *Change in Log (Real Monthly Wages):* three variables for the change in the logged real monthly wages from time $(t-1)$ to time (t), from $(t-2)$ to (t), and from $(t-3)$ to (t).

(iii) *Lagged dummies for Job Separation:* three variables representing job separation in times $(t-1)$, $(t-2)$ and $(t-3)$

Using these variables, I estimated three OLS regressions with the three different change in job dissatisfaction variables as the dependent variables. For each dependent variable, I included corresponding change in wages variable and the corresponding lagged dummy for job separation as covariates. In addition, I included a full set of controls including individual characteristics, year dummies, and industry and occupation dummies.

3.2 Discrete-Time Proportional Hazards Model

Over the last decade or so, survival analysis has emerged as one of the most popular techniques for evaluating the probability of separation. (e.g. Booth *et al.,* 1999; Bachmann *et al.,* 2009; Boockmann & Steffes, 2010; Hirsch *et al.,* 2010; Hirsch & Schnabel, 2012;). This is not surprising because it is easy to treat firm tenure as the time an individual is at risk of a "failure" – i.e. job separation and then determine the hazard of separation at a given time *t*, conditional on survival until this time. The studies using this methodology contain a mixed bag of stock sample and inflow sample data sets. The stock sample studies suffer from left truncation bias because the entire duration of the current employment spell is not known (only the time of failure/censoring is known) but this allows for a much richer data set (e.g. Bergemann, 2004). Inflow sample data sets suffer from right censoring bias because not everyone in the data set is observed to *fail* during the time under observation.

In a proportional hazards model, covariates have a multiplicative effect on this hazard rate. The most popular survival analysis technique is the Cox Proportional Hazard (PH) Model, which is a continuous-time PH model. The Cox Model is popular because it is a semi-parametric, partial likelihood approach that leaves the baseline hazard unspecified (Cameron & Trivedi, 2005). A parametric approach such as a Weibull distribution, makes a degree of assumption about how the underlying hazard function is distributed, which is not the case in the Cox Model. The Cox PH Model is also often stratified to control for unobserved heterogeneity between different groups of individuals or types of workplaces. In addition, this can be extended to a competing risk analysis where more than one destination states are modeled – employment-to-employment or employment-to-unemployment (Boockmann & Steffes, 2010; Hirsch *et al.,* 2010).

However, the data sets used in Cox PH models are very different from the one used in this paper in a crucial manner. Since the observation time is assumed to be continuous, failure occurs continuously, and exactly at time *t*, instead of in an interval [*t*, *t+1*). A continuous time model would make sense if observations are recorded more frequently e.g. every week or every month.

In the case of KLIPS data set, observations are recorded on a yearly basis. Therefore, separation could have occurred any time during this year.

In order to address this issue, instead of a continuous time PH Model, I estimate a discrete-time PH Model which assumes that separation can take place at any point during intervals $[t_0\ t_1)$, $[t_1, t_2)$, $[t_2, t_3)\ldots[t_{k-1}\ t_k)$, $[t_k\ t_\infty)$. Consider the following equation for hazard of job separation:

$$\theta(t, \psi') = \theta_o(t)e^{\eta\psi'} = \theta_o(t)\lambda \quad (2)$$

where $\eta\psi' = \gamma_i\alpha + (\gamma_i \times \rho_i)\delta + \tau_i\phi + X'_i\beta \quad (3)$

Here, $\theta_o(t)$ is the baseline hazard of separation for the entire sample. Total hazard of separation for an individual i is just $\theta_o(t)$, scaled by λ. This scaling factor λ is determined by the covariates here - $\gamma_i, (\gamma_i \times \rho_i), \tau_i$ and X'_i, which are defined exactly as in Equation (1) above.

Analogous to the Cox PH model, the general linear model with a complementary log-log link gives proportional hazards in a discrete-time setting. For my estimation, I use the same equation as (1) and include time-periods representing all possible years of tenure as covariates in the model. Then, I exponentiate the coefficients to obtain my hazard ratios. While the estimation equations may be similar, these approaches are very different because of the way the analyzed data is structured and because of how the relationship of tenure with job separation is treated. In the probit model, the probability of job separation is treated as a linear function of tenure. However, by including every single year of tenure in my model, I allow the estimation technique to determine how change in tenure affects separation rate i.e. I make no assumption about the underlying relationship between the two variables.

Since all workers report their start date with the current employer in the KLIPS data set, I am able to extract the beginning of each employment spell. Therefore, there is no left-truncation since my sample of at risk employees includes only individuals which are observed from the beginning of their spell until failure or censoring, which occurs when they are last observed in a consecutive spell. For my controls, I use the values observed at time *t*, while assuming that separation takes place somewhere in the interval ($t\ t$+1).

4. Results

Tables 5 – 8 containing all the estimates for all the models estimated in this paper can be found in the Appendix.

Table 5 reports the average marginal effects of the covariates from the probit estimation. All five models give highly significant results for the impact of wages and tenure on the probability of job separation. Higher monthly wages, as well as a higher tenure, are associated with lower job separation rates. Similarly, presence of unions is negatively associated with job separation.

My main variables of interest are the dummies representing dissatisfaction with job, wages, promotion opportunities, personal development opportunities and work hours. Controlling for general dissatisfaction with life, I estimate that an individual who reports being dissatisfied with his/her firm is 2.18 percentage points more likely to separate. Given that average rate of separation is about 4%, my estimates suggest that a dissatisfied individual is about 54% more likely to undergo job separation. Despite the extensive set of controls, his estimate is significant at the 5% level. Dissatisfaction with wages is not found to be significant in this table, but this can be explained by multicollinearity. I ran the same model without log of monthly real wages, and marginal effect of discontent with wages on job separation was found to be significant and positive. Dissatisfaction with promotion opportunities has a highly significant (<1%) and large impact on the probability of separation. I estimate that if an individual is dissatisfied with promotion, he/she is about 60% more likely to separate than an average individual. Similarly, dissatisfaction with work hours increases the likelihood of separation by 31%.

None of the coefficients for the interaction terms (dissatisfaction dummy $\times$ existence of a union) are found to be significant. However, the negative sign of these coefficients indicate towards a negative relationship between job separation and dissatisfaction of an individual at a unionized firm.

Moving on to change in dissatisfaction levels x years after separation, Table 6 reports OLS estimates for three models with $x = 1, 2, 3$. The first column reports change in Job dissatisfaction from year $t - 1$ to year t. As one would expect, my estimates suggest that an increase in real wages makes the difference between job satisfaction levels more negative (highly significant). To better grasp this idea, consider this: suppose one's dissatisfaction level goes down from 5 to 3 in two consecutive years. The difference in dissatisfaction levels is, therefore, -2. This difference becomes more negative as wages go up, so instead of ending up at 3 after a year, one will end up being even more satisfied (< 3). To be more precise, a 10% increase in the difference between real monthly wages in two consecutive years, reduces the change in dissatisfaction level by 1.5 units. This effect goes up to 1.71 and 2.26 units if we look at the models with changes over a two-year and three-year period respectively.

The most interesting results from this table correspond to the lagged variables representing job separation that took place a year ago, two years ago and three years ago. Looking at the first column again, my estimates suggest that the difference in job dissatisfaction between two consecutive years becomes more negative if a separation occurred in time $t - 1$. Specifically, I estimate that a job separation in time $t - 1$ leads to a decline of 0.18 units in change in job dissatisfaction between year t and year $t - 1$. When looking at differences over three years, this effect is about 0.13 units. However, the estimated impact of a job separation on the difference in job dissatisfaction over two years is very puzzling. Not only is this estimate not significant statistically, its magnitude is also relatively small. Since the same group of individuals is analyzed in all three models estimated in this table, it is hard to pinpoint the cause behind this insignificant result. Perhaps multicollinearity is the reason behind this unsatisfactory result, but I could not

determine exactly which variables are causing this phenomenon. After running the same regression without the variable for two year difference in real monthly wages, two years lagged variable for job separation is still found to be insignificant.

Table 7 reports relative risk ratios for two different multinomial regressions. In the first regression, the effect of dissatisfaction with job is estimated on three different outcomes, namely, (i) no job separation; (ii) separation with wage gain; and, (iii) separation with wage loss. I estimate that if an individual is dissatisfied with work, he/she is 80% more likely to separate with a wage gain. In the second regression, I look at the effect of dissatisfaction with promotion on the same set of outcomes and estimate that if an individual is dissatisfied with promotion at his/her current job, he/she is 122% more likely to separate with a gain in monthly wages. The relative risk ratios for the same two variables are not significant when estimating the probability of separation with a loss in monthly wages. Tenure and Union are significant in both models, across both outcomes. Effectively, higher tenure and the presence of a union decrease the likelihood of separation with wage gain as well as the likelihood of separation with wage loss. Once again, interaction terms representing dissatisfied workers at unionized firms give insignificant coefficients. However, here, the magnitude of these coefficients seems to suggest that despite the presence of a firm, dissatisfied workers are more likely to separate with a wage gain.

Table 8 provides results for the same five models analyzed in Table 5, but using a discrete-time proportional hazards approach. The coefficients for wages and existence of a union dummy are as expected – hazard of separation goes down with higher wages and in unionized firms. Turning the attention to satisfaction dummies, my estimates suggest that an individual dissatisfied with work is about 50% more at risk of separating from his/her current firm, than an average individual. If one is dissatisfied with wages, this hazard is 20% more. Similarly, for dissatisfaction with promotion, personal development and work hours, this hazard is 41%, 36% and 38% higher respectively. The interaction terms of interest, (dissatisfaction dummy $\times$ existence of a union) are insignificant in this model, as well.

5. Concluding Remarks

My objective in this study was to conclusively determine the impact of dissatisfaction at workplace on job separation rates. Simultaneously, I also attempted to understand the role played by unions in potentially lowering job separation rates. In line with popular methods for estimating this relationship, I used a probit model with a strongly balanced panel subset of my data as well as a discrete-time proportional hazards model on separating individuals (which were not necessarily tracked over all eight years of my data) and on individuals who had a job in 2007. In both instances, I find highly significant results pointing to the strong link between workplace satisfaction and job separation, but insignificant results for the role played by unions in determining the job separation rate of dissatisfied workers.

Hypothesis 1 (H1) is shown to be true in both models used in this paper. Both models predict that dissatisfied workers are about 50% more likely to separate than an average worker. These results are robust after controlling for overall dissatisfaction with life (a possible determinant of job satisfaction) as well as with an extensive set of controls for individual characteristics, industries and occupations.

The estimates from the multinomial logit on the three outcomes (no separation, separation with wage gain, and separation with wage loss) suggest that dissatisfied workers are 80% more likely to separate with a wage gain. This makes a lot of sense if this separation is taking place through voluntary quits – a dissatisfied worker can choose to stay at his/her current firm until a better wage offer comes along and then quit the job. The insignificant results for the odds of a dissatisfied worker separating with a wage loss indicate that firms are either not picking up on dissatisfied workers (perhaps the workers are not visibly displaying it), or they are not firing such workers despite being cognizant of their unhappiness at work. I make this logical jump because if dissatisfied workers are not quitting, they are either voicing their discontent or neglecting work. If they are neglecting work, firms should be firing them and dissatisfied workers should be separating, at a higher rate, with wage losses as well. If they are voicing their discontent through a union, the presence of a union should be lowering the job separation rate for those separating with wage gain, as well as with wage loss. But the relative risk ratio for the interaction term for dissatisfied workers at unionized firms that are separating with a wage gain is not only insignificant, but it is also greater than 1 in magnitude. This indicates that not only are unions *not lowering* the separation rate of dissatisfied workers, dissatisfied workers at unionized firms are more likely to separate (based on the direction of effect/magnitude).

In all estimations in this study, unions do not seem to affect the job separation rates of dissatisfied workers. Instead of challenging the exit-voice framework for unions proposed in Freeman (1976), these results can be explained by the quality of labor unions in South Korea. According to a report assessing workers' rights and their access to these rights, published by the International Trade Union Confederation (ITUC) in 2014, South Korea ranks below most of the countries in the world, with a score of 5 which corresponds to "no guarantee of rights". This report explains that "countries with the rating of 5 are the worst countries in the world to work in. While the legislation may spell out certain rights workers have effectively no access to these rights and are therefore exposed to autocratic regimes and unfair labor practices." (ITUC 2014) If this report is true, it would help explain why dissatisfied workers may not be less likely to separate even if a union is present.

Lastly, Hypothesis III (H3) is also shown to be true. I show that regardless of the reasons for separation, worker report a higher level of satisfaction at their new workplace compared to the old workplace. This makes intuitive sense in the context of workers that are separating from their firms due to workplace dissatisfaction. In line with the 'honeymoon-hangover' effect, I also show that the difference in dissatisfaction level goes down after three years at the new workplace, but is still negative implying that workers are relatively better off at the new workplace.

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Appendix

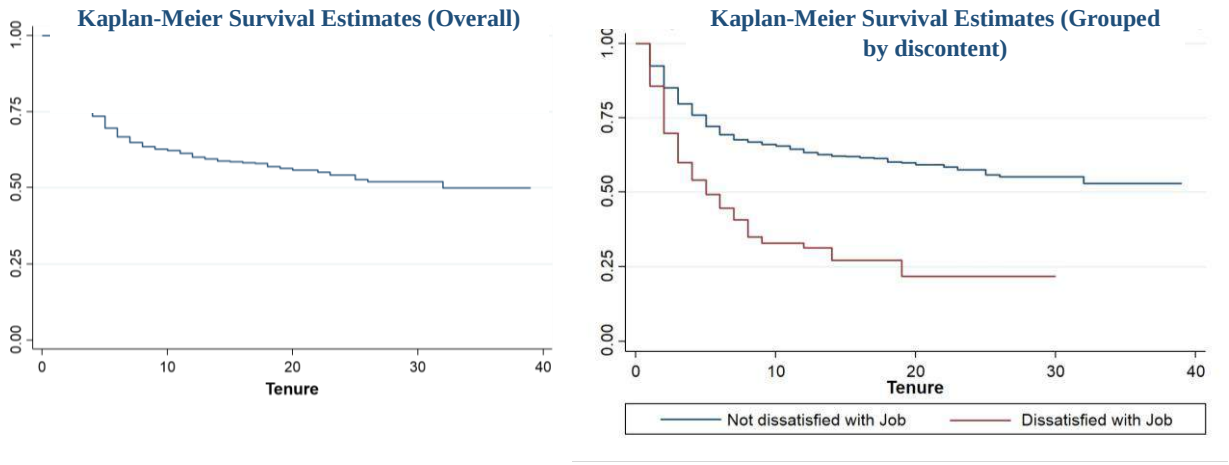

FIGURE 1: KAPLAN MEIER SURVIVOR FUNCTIONS FOR THE SUBSAMPLE

TABLE 1: MEAN AND STANDARD DEVIATIONS OF KEY VARIABLES BY YEAR

	Year							
Variables	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Age	36.79 (7.31)	37.79 (7.31)	38.79 (7.31)	39.79 (7.31)	40.79 (7.31)	41.79 (7.31)	42.79 (7.31)	43.79 (7.31)
Real Monthly Wages	194.56 (85.26)	209.58 (90.56)	229.87 (100.52)	249.98 (114.03)	273.32 (127.85)	293.42 (137.27)	305.46 (156.51)	328.21 (277.30)
Tenure	7.73 (7.36)	8.44 (7.47)	9.13 (7.67)	9.86 (7.86)	10.59 (8.10)	11.20 (8.39)	11.98 (8.60)	12.79 (8.76)
N	595	595	595	595	595	595	595	595

Note: Standard deviations are given in parentheses

TABLE 2: SUMMARY STATISTICS FOR THE ENTIRE PANEL (STRONGLY BALANCED)

Variables	Mean	Std. Dev.	Observations
Age	40.292	8.201	4760
Real Monthly Wages	260.551	154.414	4760
Tenure	10.215	8.201	4760
Job Separation	0.0399	0.196	4760

TABLE 3: SUMMARY STATISTICS FOR SURVIVAL ANALYSIS DATA

Variable	Mean	Std. Dev.	Min	Max	Observations
Age	37.347	8.868	24	60	5321
Real Wage	219.134	178.142	9.967	4651.163	5321
Tenure	5.730	6.449	0	40	5321
Job Separation	0.182	0.386	0	1	5321

TABLE 4: SUMMARY STATISTICS FOR SURVIVAL ANALYSIS DATA (PART II)

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**	**Observations**
Age	41.742	9.349	24	60	30,786
Real Wage	297.489	290.298	9.967	4651.163	30,786
Tenure	12.862	9.315	0	40	30,786
Job Separation	0.112	0.316	0	1	30,786

TABLE 5: AVERAGE MARGINAL EFFECTS FROM PROBIT ESTIMATIONS

	Probability of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Log of Real Monthly Wages	-0.0172**	-0.0178**	-0.0173**	-0.0203**	-0.0200**
	(0.00812)	(0.00832)	(0.00809)	(0.00813)	(0.00806)
Tenure	-0.00173***	-0.00178***	-0.00173***	-0.00181***	-0.00172***
	(0.000588)	(0.000592)	(0.000589)	(0.000592)	(0.000592)
Dissatisfied with Job (Overall)	0.0218**				
	(0.00877)				
(Dissatisfied with Job) X (Existence of a Union)	-0.0222				
	(0.0255)				
Dissatisfied with Wages		0.00922			
		(0.00659)			
(Dissatisfied with Wages) X (Existence of a Union)		-0.0148			
		(0.0156)			
Dissatisfied with Promotion			0.0238***		
			(0.00782)		
(Dissatisfied with Promotion) X (Existence of a Union)			-0.00634		
			(0.0174)		
Dissatisfied with Personal Development at Work				-0.000517	
				(0.00769)	
(Dissatisfied with Personal Development) X (Existence of a Union)				-0.00445	
				(0.0189)	
Dissatisfied with Work Hours					0.0126*
					(0.00697)
(Dissatisfied with Work Hours) X (Existence of a Union)					-0.0122
					(0.0175)
Dissatisfied with Life (Overall)	0.00145	0.00613	0.00448	0.00767	0.00553
	(0.0118)	(0.0115)	(0.0115)	(0.0116)	(0.0115)
Existence of a Union	-0.0280***	-0.0252***	-0.0302***	-0.0294***	-0.0272***
	(0.00842)	(0.00958)	(0.00889)	(0.00875)	(0.00894)
Part Time	-0.00634	-0.00559	-0.00957	-0.00657	-0.00627
	(0.0153)	(0.0153)	(0.0154)	(0.0154)	(0.0153)
Married	-0.00622	-0.00517	-0.00603	-0.00532	-0.00547
	(0.00814)	(0.00816)	(0.00812)	(0.00818)	(0.00814)
High School Degree	0.0106	0.0107	0.0105	0.0126	0.00975
	(0.0164)	(0.0164)	(0.0164)	(0.0164)	(0.0164)
Associate Degree	0.0156	0.0168	0.0164	0.0175	0.0151
	(0.0180)	(0.0180)	(0.0179)	(0.0180)	(0.0180)

	Probability of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
University Degree	0.0179	0.0181	0.0190	0.0192	0.0181
	(0.0171)	(0.0171)	(0.0171)	(0.0171)	(0.0171)
Female	-0.000914	-0.00144	-0.00194	-0.00370	-0.00188
	(0.00872)	(0.00882)	(0.00870)	(0.00870)	(0.00873)
Age Group (27-30)	0.00262	0.00291	0.00378	0.00294	0.00273
	(0.0112)	(0.0113)	(0.0113)	(0.0113)	(0.0113)
Age Group (30-34)	0.0230*	0.0242*	0.0237*	0.0246*	0.0228*
	(0.0129)	(0.0129)	(0.0130)	(0.0130)	(0.0130)
Age Group (35-39)	0.0172	0.0184	0.0180	0.0192	0.0171
	(0.0149)	(0.0150)	(0.0150)	(0.0150)	(0.0150)
Age Group (40-44)	0.0145	0.0167	0.0156	0.0181	0.0154
	(0.0155)	(0.0155)	(0.0155)	(0.0155)	(0.0156)
Age Group (45-52)	0.0122	0.0140	0.0137	0.0140	0.0128
	(0.0165)	(0.0165)	(0.0165)	(0.0165)	(0.0165)
Age Group (53-56)	0.0370*	0.0384*	0.0390*	0.0376*	0.0384*
	(0.0204)	(0.0205)	(0.0204)	(0.0205)	(0.0205)
Age Group (57-60)	0.0286	0.0314	0.0334	0.0310	0.0315
	(0.0400)	(0.0400)	(0.0399)	(0.0401)	(0.0399)
Year 2000	0.316	0.318	0.321	0.311	0.317
	(10.08)	(10.15)	(9.990)	(7.700)	(10.10)
Year 2001	0.324	0.326	0.329	0.319	0.325
	(10.08)	(10.15)	(9.990)	(7.700)	(10.10)
Year 2002	0.324	0.327	0.330	0.318	0.325
	(10.08)	(10.15)	(9.990)	(7.700)	(10.10)
Year 2003	0.328	0.330	0.334	0.323	0.330
	(10.08)	(10.15)	(9.990)	(7.700)	(10.10)
Year 2004	0.333	0.335	0.339	0.328	0.334
	(10.08)	(10.15)	(9.990)	(7.700)	(10.10)
Year 2005	0.320	0.322	0.325	0.315	0.322
	(10.08)	(10.15)	(9.990)	(7.700)	(10.10)
Year 2006	0.308	0.311	0.313	0.304	0.310
	(10.08)	(10.15)	(9.990)	(7.700)	(10.10)
Occupation (Technicians and Associate Professionals)	0.0118	0.0113	0.00996	0.0105	0.0103
	(0.0162)	(0.0162)	(0.0163)	(0.0162)	(0.0162)
Occupation (Clerks)	0.0361	0.0352	0.0368	0.0354	0.0368
	(0.0369)	(0.0371)	(0.0368)	(0.0372)	(0.0370)
Occupation (Service Workers)	0.106	0.0986	0.106	0.103	0.0933
	(0.0686)	(0.0687)	(0.0684)	(0.0690)	(0.0689)

	Probability of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Occupation (Plant, Machine Operators and Assemblers)	0.00658	0.00735	0.00951	0.00790	0.0114
	(0.0470)	(0.0479)	(0.0462)	(0.0471)	(0.0474)
Occupation (Elementary Occupations)	0.105	0.115	0.105	0.119	0.114
	(0.0762)	(0.0760)	(0.0760)	(0.0762)	(0.0761)
Industry (Manufacture of Textiles)	0.0131	0.0114	0.0130	0.00427	0.0129
	(0.0221)	(0.0221)	(0.0222)	(0.0212)	(0.0220)
Industry (Manufacture of Sewn Wearing Apparel)	0.0203	0.0173	0.0207	0.00970	0.0146
	(0.0241)	(0.0239)	(0.0239)	(0.0233)	(0.0240)
Industry (Tanning and Dressing of Leather)	0.0570	0.0532	0.0565	0.0457	0.0522
	(0.0379)	(0.0378)	(0.0372)	(0.0372)	(0.0378)
Industry (Manufacture of Pulp, Paper and Paper Products)	0.0384	0.0313	0.0372	0.0248	0.0363
	(0.0428)	(0.0432)	(0.0424)	(0.0426)	(0.0428)
Industry (Publishing and Printing)	0.0434	0.0412	0.0437	0.0336	0.0410
	(0.0274)	(0.0276)	(0.0274)	(0.0269)	(0.0275)
Industry (Manufacture of Chemicals and Chemical Products)	0.0235	0.0207	0.0229	0.0127	0.0226
	(0.0277)	(0.0277)	(0.0276)	(0.0271)	(0.0277)
Industry (Manufacture of Rubber and Plastic Products)	0.0127	0.0106	0.0105	0.00286	0.0116
	(0.0240)	(0.0239)	(0.0239)	(0.0232)	(0.0240)
Industry (Manufacture of Other Non-metallic Mineral Products)	0.0201	0.0205	0.0237	0.0147	0.0236
	(0.0411)	(0.0404)	(0.0395)	(0.0399)	(0.0400)
Industry (Manufacture of Basic Metals)	0.0315	0.0303	0.0307	0.0221	0.0302
	(0.0212)	(0.0211)	(0.0212)	(0.0202)	(0.0211)
Industry (Manufacture of Fabricated Metal Products)	0.0261	0.0251	0.0245	0.0154	0.0252
	(0.0305)	(0.0305)	(0.0303)	(0.0299)	(0.0305)
Industry (Manufacture of Other Machinery)	0.0363*	0.0328	0.0352*	0.0255	0.0358*
	(0.0213)	(0.0213)	(0.0212)	(0.0205)	(0.0213)
Industry (Manufacturing of Electrical Machinery)	0.0229	0.0206	0.0240	0.0126	0.0202
	(0.0348)	(0.0349)	(0.0347)	(0.0343)	(0.0347)
Industry (Manufacturing of Electronic Components)	0.0381**	0.0357*	0.0385**	0.0280	0.0358*
	(0.0184)	(0.0183)	(0.0184)	(0.0173)	(0.0183)
Industry (Manufacturing of Medical Instruments)	0.0294	0.0250	0.0282	0.0178	0.0275
	(0.0303)	(0.0304)	(0.0302)	(0.0298)	(0.0302)
Industry (Manufacture of Motor Vehicles)	0.0141	0.0116	0.0130	0.00346	0.0120
	(0.0206)	(0.0205)	(0.0205)	(0.0196)	(0.0206)
Industry (Manufacture of Other Transport Equipment)	0.0403**	0.0383*	0.0398*	0.0303	0.0399*
	(0.0205)	(0.0205)	(0.0205)	(0.0196)	(0.0205)
Industry (Manufacturing of Furniture)	0.0113	0.0106	0.0170	0.00587	0.0128
	(0.0407)	(0.0403)	(0.0398)	(0.0400)	(0.0398)

	Probability of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Industry (Electricity, Gas, Steam and Hot Water Supply)	0.0279	0.0260	0.0257	0.0181	0.0268
	(0.0346)	(0.0347)	(0.0344)	(0.0341)	(0.0347)
Industry (General Construction)	0.00611	0.00639	0.00509	-0.000343	0.00564
	(0.0170)	(0.0169)	(0.0170)	(0.0158)	(0.0169)
Industry (Special Trade Construction)	0.0249	0.0236	0.0243	0.0167	0.0249
	(0.0185)	(0.0184)	(0.0184)	(0.0174)	(0.0184)
Industry (Sale of Motor Vehicles)	0.0292	0.0273	0.0296	0.0201	0.0295
	(0.0221)	(0.0222)	(0.0220)	(0.0214)	(0.0221)
Industry (Wholesale Trade and Commission Trade)	0.0316*	0.0297	0.0291	0.0222	0.0298
	(0.0188)	(0.0187)	(0.0188)	(0.0178)	(0.0187)
Industry (Retail Trade)	0.0361**	0.0342**	0.0352**	0.0261	0.0336*
	(0.0174)	(0.0173)	(0.0173)	(0.0162)	(0.0173)
Industry (Hotels and Restaurants)	0.0455**	0.0453**	0.0459**	0.0376**	0.0423**
	(0.0184)	(0.0184)	(0.0184)	(0.0174)	(0.0184)
Industry (Land Transport)	0.0188	0.0185	0.0156	0.0103	0.0173
	(0.0218)	(0.0217)	(0.0219)	(0.0210)	(0.0219)
Industry (Air Transport)	0.0524	0.0531	0.0505	0.0460	0.0489
	(0.0412)	(0.0411)	(0.0411)	(0.0410)	(0.0418)
Industry (Supporting and Auxiliary Transport Activities)	0.00610	0.00377	0.00181	-0.00507	0.00209
	(0.0353)	(0.0353)	(0.0350)	(0.0350)	(0.0359)
Industry (Post and Telecommunications)	0.0154	0.0123	0.0149	0.00443	0.0128
	(0.0235)	(0.0234)	(0.0234)	(0.0228)	(0.0234)
Industry (Financial Institutions)	-0.0213	-0.0228	-0.0230	-0.0319	-0.0238
	(0.0322)	(0.0322)	(0.0321)	(0.0319)	(0.0322)
Industry (Activities Auxiliary to Financial Intermediation)	0.0151	0.0133	0.0169	0.00670	0.0164
	(0.0370)	(0.0373)	(0.0370)	(0.0367)	(0.0370)
Industry (Real Estate Activities)	0.0241	0.0218	0.0238	0.0129	0.0214
	(0.0385)	(0.0386)	(0.0386)	(0.0382)	(0.0384)
Industry (Computer and Related Activities)	0.0618***	0.0584***	0.0603***	0.0515***	0.0592***
	(0.0207)	(0.0207)	(0.0207)	(0.0198)	(0.0206)
Industry (Professional, Scientific and Technical Services)	0.0172	0.0153	0.0160	0.00812	0.0163
	(0.0180)	(0.0178)	(0.0179)	(0.0169)	(0.0179)
Industry (Business Support Services)	-0.00667	-0.00633	-0.00983	-0.0118	-0.00858
	(0.0402)	(0.0394)	(0.0400)	(0.0389)	(0.0397)
Industry (Public Administration and Defense)	-0.0219	-0.0238	-0.0234	-0.0319*	-0.0231
	(0.0198)	(0.0197)	(0.0198)	(0.0188)	(0.0197)
Industry (Education)	-0.0125	-0.0147	-0.0128	-0.0219	-0.0144
	(0.0197)	(0.0196)	(0.0196)	(0.0188)	(0.0197)

	Probability of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Industry (Human Health Activities)	0.00425	0.000326	0.00115	-0.00617	0.00277
	(0.0244)	(0.0244)	(0.0245)	(0.0238)	(0.0244)
Industry (Motion Picture Industries)	0.0472	0.0462	0.0389	0.0385	0.0450
	(0.0336)	(0.0338)	(0.0342)	(0.0333)	(0.0334)
Industry (Other Recreational, Cultural and Sporting Activities)	0.0702**	0.0674*	0.0680**	0.0602*	0.0707**
	(0.0347)	(0.0348)	(0.0344)	(0.0343)	(0.0347)
Industry (Sewage and Refuse Disposal)	0.0448	0.0430	0.0382	0.0344	0.0394
	(0.0331)	(0.0330)	(0.0334)	(0.0326)	(0.0333)
Industry (Membership Organizations N.E.C.)	0.0211	0.0204	0.0211	0.0106	0.0150
	(0.0386)	(0.0389)	(0.0383)	(0.0387)	(0.0394)
Industry (Maintenance and Repair Services)	0.0385	0.0360	0.0389	0.0290	0.0366
	(0.0244)	(0.0243)	(0.0244)	(0.0235)	(0.0243)
Industry (Private Households with Employed Persons)	0.0333	0.0339	0.0318	0.0248	0.0333
	(0.0290)	(0.0292)	(0.0289)	(0.0287)	(0.0291)
Industry (Extra-Territorial Organizations and Bodies)	0.0450	0.0471	0.0513*	0.0482	0.0485
	(0.0317)	(0.0313)	(0.0309)	(0.0310)	(0.0309)
Pseudo R^2	0.1581	0.1556	0.1606	0.1530	0.1563
Observations	4,760	4,760	4,760	4,760	4,760

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

TABLE 6: OLS ESTIMATES FOR CHANGE IN JOB DISSATISFACTION

	$JD_t - JD_{(t-1)}$	$JD_t - JD_{(t-2)}$	$JD_t - JD_{(t-3)}$
Independent Variables	(1)	(2)	(3)
Log (Real Wage)$_t$ – Log (Real Wage)$_{(t-1)}$	-0.150***		
	(0.0496)		
Log (Real Wage)$_t$ – Log (Real Wage)$_{(t-2)}$		-0.171***	
		(0.0477)	
Log (Real Wage)$_t$ – Log (Real Wage)$_{(t-3)}$			-0.226***
			(0.0448)
Job Separation $_{(t-1)}$	-0.178***		
	(0.0626)		
Job Separation $_{(t-2)}$		-0.00268	
		(0.0619)	
Job Separation $_{(t-3)}$			-0.134**
			(0.0630)
Tenure	-0.00168	-0.00186	-0.00674***
	(0.00210)	(0.00218)	(0.00225)
Dissatisfied with Life (Overall)	0.373***	0.367***	0.302***
	(0.0688)	(0.0718)	(0.0738)
Existence of a Union	-0.00469	-0.00580	0.0141
	(0.0296)	(0.0310)	(0.0320)
Part Time	-0.0169	-0.0566	-0.136
	(0.0947)	(0.0989)	(0.102)
Married	0.0346	0.0297	0.0220
	(0.0422)	(0.0441)	(0.0454)
High School Degree	-0.0170	-0.0208	0.00927
	(0.0568)	(0.0592)	(0.0610)
Associate Degree	-0.0386	-0.0845	-0.0918
	(0.0650)	(0.0679)	(0.0699)
University Degree	-0.0471	-0.0733	-0.0632
	(0.0575)	(0.0600)	(0.0617)
Female	0.0118	0.00705	0.0171
	(0.0359)	(0.0375)	(0.0386)
Age Group (27-30)	0.0740	0.103	-0.0123
	(0.0912)	(0.0952)	(0.0980)

	$JD_t - JD_{(t-1)}$	$JD_t - JD_{(t-2)}$	$JD_t - JD_{(t-3)}$
Independent Variables	(1)	(2)	(3)
Age Group (30-34)	0.132	0.205*	0.00255
	(0.116)	(0.121)	(0.125)
Age Group (35-39)	0.0762	0.125	-0.0791
	(0.125)	(0.130)	(0.134)
Age Group (40-44)	0.0774	0.188	-0.00735
	(0.125)	(0.131)	(0.135)
Age Group (45-52)	0.0470	0.127	-0.0443
	(0.127)	(0.132)	(0.136)
Age Group (53-56)	0.120	0.124	-0.0173
	(0.134)	(0.140)	(0.144)
Age Group (57-60)	0.0639	0.220	0.0313
	(0.151)	(0.158)	(0.162)
Year 2003	0.00778	0.00188	0.0523
	(0.0401)	(0.0421)	(0.0433)
Year 2004	0.0628	0.0444	0.0296
	(0.0395)	(0.0413)	(0.0426)
Year 2005	0.0377	0.0656	0.0441
	(0.0391)	(0.0409)	(0.0421)
Year 2006	0.0351	0.0395	0.0655
	(0.0388)	(0.0405)	(0.0417)
Occupation (Technicians and Associate Professionals)	-0.0125	-0.0136	-0.0592
	(0.0807)	(0.0843)	(0.0867)
Occupation (Clerks)	0.0481	0.571**	0.466*
	(0.226)	(0.236)	(0.243)
Occupation (Service Workers)	0.0278	-1.051	-1.223*
	(0.672)	(0.702)	(0.722)
Occupation (Plant, Machine Operators and Assemblers)	-0.199	-0.172	0.0146
	(0.257)	(0.268)	(0.276)
Occupation (Elementary Occupations)	0.0507	0.214	1.252**
	(0.491)	(0.512)	(0.527)
Industry (Manufacture of Textiles)	-0.0494	0.0660	0.138
	(0.0952)	(0.0994)	(0.102)
Industry (Manufacture of Sewn Wearing Apparel)	-0.0331	-0.0590	-0.0839
	(0.123)	(0.129)	(0.132)

	$JD_t - JD_{(t-1)}$	$JD_t - JD_{(t-2)}$	$JD_t - JD_{(t-3)}$
Independent Variables	(1)	(2)	(3)
Industry (Tanning and Dressing of Leather)	0.120	-0.161	-0.352
	(0.258)	(0.269)	(0.277)
Industry (Manufacture of Pulp, Paper and Paper Products)	-0.123	-0.127	-0.181
	(0.218)	(0.228)	(0.234)
Industry (Publishing and Printing)	-0.00936	0.0215	-0.185
	(0.154)	(0.161)	(0.166)
Industry (Manufacture of Chemicals and Chemical Products)	-0.0232	-0.175	-0.166
	(0.117)	(0.122)	(0.126)
Industry (Manufacture of Rubber and Plastic Products)	-0.0362	0.0583	0.0488
	(0.0999)	(0.104)	(0.107)
Industry (Manufacture of Other Non-metallic Mineral Products)	-0.0901	-0.227	-0.312*
	(0.170)	(0.177)	(0.183)
Industry (Manufacture of Basic Metals)	0.0215	0.0138	-0.0284
	(0.0866)	(0.0904)	(0.0930)
Industry (Manufacture of Fabricated Metal Products)	0.0644	0.0432	0.130
	(0.146)	(0.152)	(0.157)
Industry (Manufacture of Other Machinery)	-0.00845	-0.00957	-0.00714
	(0.0991)	(0.104)	(0.106)
Industry (Manufacturing of Electrical Machinery)	-0.0671	-0.0109	-0.00843
	(0.139)	(0.146)	(0.150)
Industry (Manufacturing of Electronic Components)	0.0298	0.0340	0.0465
	(0.0868)	(0.0906)	(0.0932)
Industry (Manufacturing of Medical, Precision and Optical Instruments)	-0.101	-0.141	-0.219
	(0.155)	(0.161)	(0.166)
Industry (Manufacture of Motor Vehicles)	0.0132	-0.0265	-0.0220
	(0.0768)	(0.0802)	(0.0825)
Industry (Manufacture of Other Transport Equipment)	-0.0112	-0.0541	-0.0955
	(0.0867)	(0.0906)	(0.0933)
Industry (Manufacturing of Furniture)	0.0585	0.0138	-0.00774
	(0.185)	(0.194)	(0.199)
Industry (Electricity, Gas, Steam and Hot Water Supply)	-0.0810	-0.0778	-0.123
	(0.134)	(0.139)	(0.143)

	$JD_t - JD_{(t-1)}$	$JD_t - JD_{(t-2)}$	$JD_t - JD_{(t-3)}$
Independent Variables	(1)	(2)	(3)
Industry (General Construction)	-0.00985	-0.00252	0.00918
	(0.0681)	(0.0711)	(0.0733)
Industry (Special Trade Construction)	0.0465	0.0350	-0.00169
	(0.0840)	(0.0878)	(0.0903)
Industry (Sale of Motor Vehicles)	0.0228	0.0527	0.0306
	(0.111)	(0.116)	(0.120)
Industry (Wholesale Trade and Commission Trade)	0.00813	0.0286	0.0406
	(0.0900)	(0.0939)	(0.0965)
Industry (Retail Trade)	-0.0491	-0.0298	-0.0219
	(0.0858)	(0.0896)	(0.0922)
Industry (Hotels and Restaurants)	-0.0591	-0.114	-0.0959
	(0.0974)	(0.102)	(0.105)
Industry (Land Transport)	-0.0129	-0.0505	-0.174*
	(0.0828)	(0.0864)	(0.0890)
Industry (Air Transport)	-0.00245	-0.0268	-0.0996
	(0.200)	(0.209)	(0.215)
Industry (Supporting and Auxiliary Transport Activities)	0.131	0.154	0.0827
	(0.122)	(0.127)	(0.131)
Industry (Post and Telecommunications)	-0.0191	-0.0216	-0.0151
	(0.0888)	(0.0928)	(0.0955)
Industry (Financial Institutions)	-0.0111	-0.0575	-0.160*
	(0.0871)	(0.0910)	(0.0936)
Industry (Activities Auxiliary to Financial Intermediation)	-0.102	-0.152	-0.102
	(0.158)	(0.165)	(0.170)
Industry (Real Estate Activities)	-0.0133	-0.120	-0.192
	(0.142)	(0.149)	(0.153)
Industry (Computer and Related Activities)	0.0461	0.0586	0.0600
	(0.121)	(0.126)	(0.130)
Industry (Professional, Scientific and Technical Services)	0.0141	0.0665	-0.00358
	(0.0803)	(0.0839)	(0.0864)
Industry (Business Support Services)	0.0693	-0.145	-0.264*
	(0.144)	(0.151)	(0.155)
Industry (Public Administration and Defense)	-0.0206	-0.0281	-0.0685
	(0.0627)	(0.0654)	(0.0673)

	$JD_t - JD_{(t-1)}$	$JD_t - JD_{(t-2)}$	$JD_t - JD_{(t-3)}$
Independent Variables	(1)	(2)	(3)
Industry (Education)	-0.00509	-0.0169	-0.0940
	(0.0629)	(0.0657)	(0.0677)
Industry (Human Health Activities)	-0.0282	-0.0227	-0.117
	(0.0904)	(0.0943)	(0.0971)
Industry (Motion Picture Industries)	-0.178	-0.257	-0.357
	(0.208)	(0.217)	(0.223)
Industry (Other Recreational, Cultural and Sporting Activities	0.267	0.229	0.254
	(0.218)	(0.227)	(0.234)
Industry (Sewage and Refuse Disposal)	0.161	-0.00420	-0.0138
	(0.186)	(0.194)	(0.200)
Industry (Membership Organizations N.E.C.)	-0.0164	0.0641	0.00692
	(0.169)	(0.177)	(0.182)
Industry (Maintenance and Repair Services)	-0.0296	-0.0367	-0.0689
	(0.121)	(0.127)	(0.130)
Industry (Private Households with Employed Persons)	-0.0359	-0.181	-0.431**
	(0.190)	(0.198)	(0.204)
Industry (Extra-Territorial Organizations and Bodies)	-0.0638	-0.199	-0.300
	(0.180)	(0.188)	(0.194)
Constant	-0.127	-0.203	0.0553
	(0.143)	(0.150)	(0.154)
Observations	2,975	2,975	2,975
R-squared	0.024	0.034	0.050

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

TABLE 7: RELATIVE RISK RATIOS FROM MUTINOMIAL LOGIT ESTIMATIONS (COMPARED TO "NO SEPARATION")

	Relative Risk Ratio			
	Separation with Wage Gain		**Separation with Wage Loss**	
Independent Variables	**(1)**	**(2)**	**(1)**	**(2)**
Log of Real Monthly Wages	0.409***	0.413***	1.395	1.319
	(0.113)	(0.115)	(0.511)	(0.481)
Tenure	0.964*	0.963*	0.923***	0.923***
	(0.0209)	(0.0210)	(0.0271)	(0.0275)
Dissatisfied with Job (Overall)	1.799**		1.673	
	(0.504)		(0.604)	
(Dissatisfied with Job) X (Existence of a Union)	1.019		3.39e-08	
	(0.855)		(0.000160)	
Dissatisfied with Promotion		2.226***		1.397
		(0.555)		(0.478)
(Dissatisfied with Promotion) X (Existence of a Union)		2.093		6.70e-08
		(1.275)		(0.000145)
Dissatisfied with Life (Overall)	0.897	0.941	1.423	1.640
	(0.372)	(0.384)	(0.663)	(0.742)
Existence of a Union	0.354***	0.269***	0.502*	0.568
	(0.122)	(0.108)	(0.200)	(0.227)
Part Time	0.635	0.577	1.139	1.138
	(0.340)	(0.306)	(0.762)	(0.771)
Married	1.004	1.024	0.720	0.738
	(0.279)	(0.284)	(0.263)	(0.269)
High School Degree	1.264	1.219	1.526	1.534
	(0.797)	(0.771)	(1.171)	(1.179)
Associate Degree	1.339	1.328	2.001	2.065
	(0.916)	(0.910)	(1.667)	(1.724)
University Degree	1.982	2.056	1.300	1.326
	(1.297)	(1.346)	(1.055)	(1.077)
Female	0.635	0.623	1.862	1.778
	(0.202)	(0.199)	(0.736)	(0.701)
Age Group (27-30)	1.243	1.297	0.922	0.921
	(0.474)	(0.504)	(0.467)	(0.466)
Age Group (30-34)	2.199*	2.229*	1.557	1.578
	(1.001)	(1.029)	(0.893)	(0.900)
Age Group (35-39)	1.675	1.699	1.403	1.408
	(0.890)	(0.915)	(0.920)	(0.918)

	Relative Risk Ratio			
	Separation with Wage Gain		Separation with Wage Loss	
Independent Variables	**(1)**	**(2)**	**(1)**	**(2)**
Age Group (40-44)	1.505	1.504	1.367	1.379
	(0.841)	(0.847)	(0.929)	(0.933)
Age Group (45-52)	1.604	1.686	0.903	0.921
	(0.961)	(1.020)	(0.670)	(0.680)
Age Group (53-56)	2.021	2.217	3.876	4.066*
	(1.551)	(1.714)	(3.275)	(3.434)
Age Group (57-60)	2.714	3.230	3.89e-07	5.20e-07
	(3.372)	(4.045)	(0.00176)	(0.00210)
Year 2000	3.180e+07	2.530e+07	2.253e+07	1.637e+07
	(5.290e+10)	(3.656e+10)	(4.052e+10)	(2.520e+10)
Year 2001	3.611e+07	3.027e+07	3.585e+07	2.666e+07
	(6.006e+10)	(4.373e+10)	(6.448e+10)	(4.104e+10)
Year 2002	4.498e+07	3.736e+07	2.685e+07	1.940e+07
	(7.482e+10)	(5.398e+10)	(4.828e+10)	(2.986e+10)
Year 2003	4.090e+07	3.315e+07	4.569e+07	3.399e+07
	(6.803e+10)	(4.790e+10)	(8.218e+10)	(5.232e+10)
Year 2004	5.664e+07	4.736e+07	3.749e+07	2.880e+07
	(9.422e+10)	(6.843e+10)	(6.742e+10)	(4.433e+10)
Year 2005	4.072e+07	3.201e+07	2.527e+07	1.879e+07
	(6.774e+10)	(4.625e+10)	(4.545e+10)	(2.892e+10)
Year 2006	2.414e+07	1.934e+07	2.297e+07	1.715e+07
	(4.015e+10)	(2.794e+10)	(4.132e+10)	(2.639e+10)
Industry (Manufacture of Textiles)	4.219	4.423*	0.490	0.476
	(3.749)	(3.930)	(0.552)	(0.537)
Industry (Manufacture of Sewn Wearing Apparel)	3.172	3.325	1.128	1.102
	(3.289)	(3.449)	(0.990)	(0.969)
Industry (Tanning and Dressing of Leather)	3.00e-10	2.96e-10	8.570**	7.892**
	(4.22e-05)	(4.13e-05)	(8.685)	(7.972)
Industry (Manufacture of Pulp, Paper and Paper Products)	6.94e-08	9.32e-08	4.754	4.298
	(0.000863)	(0.00102)	(5.683)	(5.136)
Industry (Publishing and Printing)	3.796	3.705	2.877	2.983
	(4.785)	(4.688)	(2.585)	(2.685)
Industry (Manufacture of Chemicals and Chemical Products)	3.066	3.036	1.335	1.249
	(3.841)	(3.814)	(1.515)	(1.419)
Industry (Manufacture of Rubber and Plastic Products)	1.471	1.334	1.379	1.297
	(1.830)	(1.664)	(1.202)	(1.132)

	Relative Risk Ratio			
	Separation with Wage Gain		Separation with Wage Loss	
Independent Variables	**(1)**	**(2)**	**(1)**	**(2)**
Industry (Manufacture of Other Non-metallic Mineral Products)	9.15e-08	1.21e-07	2.863	2.938
	(0.000718)	(0.000851)	(3.439)	(3.523)
Industry (Manufacture of Basic Metals)	3.344	3.468	2.103	2.046
	(3.420)	(3.552)	(1.622)	(1.579)
Industry (Manufacture of Fabricated Metal Products)	3.347	3.243	1.259	1.179
	(4.220)	(4.093)	(1.462)	(1.367)
Industry (Manufacture of Other Machinery)	4.503	4.632	1.799	1.695
	(4.266)	(4.394)	(1.404)	(1.323)
Industry (Manufacturing of Electrical Machinery)	5.270	5.811	2.89e-08	3.53e-08
	(6.619)	(7.302)	(0.000259)	(0.000279)
Industry (Manufacturing of Electronic Components)	7.829**	8.443***	0.735	0.700
	(6.387)	(6.909)	(0.637)	(0.606)
Industry (Manufacturing of Medical, Precision and Optical Instruments)	8.011**	7.942**	1.45e-08	1.77e-08
	(8.381)	(8.331)	(0.000149)	(0.000161)
Industry (Manufacture of Motor Vehicles)	2.016	1.966	1.443	1.353
	(2.055)	(2.004)	(1.101)	(1.031)
Industry (Manufacture of Other Transport Equipment)	7.187**	7.638**	1.330	1.271
	(6.443)	(6.862)	(1.165)	(1.113)
Industry (Manufacturing of Furniture)	4.99e-08	7.23e-08	2.392	2.549
	(0.000475)	(0.000605)	(2.792)	(2.972)
Industry (Electricity, Gas, Steam and Hot Water Supply)	1.49e-07	1.72e-07	2.650	2.779
	(0.000981)	(0.000973)	(3.027)	(3.176)
Industry (General Construction)	1.305	1.264	1.271	1.255
	(1.154)	(1.118)	(0.774)	(0.766)
Industry (Special Trade Construction)	6.069**	6.073**	0.300	0.297
	(4.901)	(4.912)	(0.338)	(0.335)
Industry (Sale of Motor Vehicles)	6.092**	6.532**	0.568	0.567
	(5.490)	(5.894)	(0.642)	(0.641)
Industry (Wholesale Trade and Commission Trade)	5.584**	5.483**	0.686	0.660
	(4.619)	(4.540)	(0.597)	(0.574)
Industry (Retail Trade)	5.577**	5.733**	1.273	1.243
	(4.489)	(4.620)	(0.846)	(0.826)
Industry (Hotels and Restaurants)	6.434**	6.669**	1.896	1.883
	(5.459)	(5.681)	(1.224)	(1.219)
Industry (Land Transport)	5.139*	4.718*	3.44e-08	4.27e-08
	(4.600)	(4.231)	(0.000149)	(0.000162)

	Relative Risk Ratio			
	Separation with Wage Gain		Separation with Wage Loss	
Independent Variables	**(1)**	**(2)**	**(1)**	**(2)**
Industry (Air Transport)	14.64**	12.94*	4.99e-08	5.97e-08
	(19.18)	(17.05)	(0.000602)	(0.000637)
Industry (Supporting and Auxiliary Transport Activities)	4.311	3.355	2.80e-08	4.10e-08
	(5.396)	(4.209)	(0.000206)	(0.000254)
Industry (Post and Telecommunications)	3.769	3.753	0.550	0.522
	(3.872)	(3.857)	(0.621)	(0.589)
Industry (Financial Institutions)	1.11e-07	1.36e-07	0.637	0.636
	(0.000405)	(0.000425)	(0.713)	(0.713)
Industry (Activities Auxiliary to Financial Intermediation)	4.955	5.936	2.02e-08	2.46e-08
	(6.319)	(7.589)	(0.000201)	(0.000217)
Industry (Real Estate Activities)	6.537	7.017	4.46e-08	5.30e-08
	(8.330)	(8.984)	(0.000328)	(0.000348)
Industry (Computer and Related Activities)	18.02***	17.84***	1.20e-08	1.50e-08
	(14.92)	(14.79)	(9.23e-05)	(0.000102)
Industry (Professional, Scientific and Technical Services)	3.201	3.119	0.874	0.837
	(2.730)	(2.660)	(0.609)	(0.583)
Industry (Business Support Services)	5.163	4.449	1.24e-08	1.65e-08
	(5.708)	(4.919)	(0.000123)	(0.000143)
Industry (Public Administration and Defense)	0.703	0.702	0.321	0.315
	(0.715)	(0.714)	(0.276)	(0.271)
Industry (Education)	2.160	2.153	2.71e-08	3.43e-08
	(1.858)	(1.854)	(6.54e-05)	(7.29e-05)
Industry (Human Health Activities)	3.063	2.933	0.350	0.318
	(3.180)	(3.043)	(0.402)	(0.365)
Industry (Motion Picture Industries)	5.734	4.766	2.612	2.483
	(7.355)	(6.134)	(3.075)	(2.920)
Industry (Other Recreational, Cultural and Sporting Activities	5.97e-08	6.04e-08	8.016**	8.895**
	(0.000770)	(0.000691)	(7.590)	(8.600)
Industry (Sewage and Refuse Disposal)	11.95**	9.007**	2.05e-08	2.46e-08
	(12.75)	(9.716)	(0.000256)	(0.000263)
Industry (Membership Organizations N.E.C.)	8.07e-08	1.06e-07	3.496	3.519
	(0.000673)	(0.000786)	(4.044)	(4.060)
Industry (Maintenance and Repair Services)	4.335	4.529	2.118	2.045
	(4.500)	(4.717)	(1.899)	(1.832)
Industry (Private Households with Employed Persons)	9.080**	8.583**	6.92e-09	8.59e-09
	(9.092)	(8.624)	(8.42e-05)	(9.29e-05)

	Relative Risk Ratio			
	Separation with Wage Gain		Separation with Wage Loss	
Independent Variables	**(1)**	**(2)**	**(1)**	**(2)**
Industry (Extra-Territorial Organizations and Bodies)	5.567	5.906	2.658	3.048
	(7.101)	(7.566)	(3.101)	(3.561)
Constant	1.60e-08	1.71e-08	1.21e-10	2.18e-10
	(2.67e-05)	(2.46e-05)	(2.17e-07)	(3.36e-07)
Observations	4,760	4,760	4,760	4,760

Standard errors in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1

TABLE 8: EXPONENTIATED COEFFICIENTS FROM COMPLEMENTARY LOG-LOG ESTIMATIONS

	Hazard of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Log of Real Monthly Wages	0.295***	0.295***	0.286***	0.287***	0.287***
	(0.0294)	(0.0302)	(0.0282)	(0.0284)	(0.0281)
Dissatisfied with Job (Overall)	1.496***				
	(0.191)				
(Dissatisfied with Job) X (Existence of a Union)	1.075				
	(0.382)				
Dissatisfied with Wages		1.220**			
		(0.123)			
(Dissatisfied with Wages) X (Existence of a Union)		0.963			
		(0.251)			
Dissatisfied with Promotion			1.415***		
			(0.162)		
(Dissatisfied with Promotion) X (Existence of a Union)			0.816		
			(0.268)		
Dissatisfied with Personal Development at Work				1.368***	
				(0.152)	
(Dissatisfied with Personal Development) X (Existence of a Union)				0.918	
				(0.290)	
Dissatisfied with Work Hours					1.383***
					(0.148)
(Dissatisfied with Work Hours) X (Existence of a Union)					1.033
					(0.310)
Dissatisfied with Life (Overall)	1.370*	1.548***	1.608***	1.504***	1.535***
	(0.225)	(0.242)	(0.249)	(0.237)	(0.240)
Existence of a Union	0.467***	0.478***	0.484***	0.479***	0.472***
	(0.0664)	(0.0769)	(0.0699)	(0.0702)	(0.0697)
Married	1.156	1.192	1.170	1.162	1.181
	(0.125)	(0.128)	(0.126)	(0.126)	(0.127)
Part Time	0.935	0.927	0.857	0.935	0.928
	(0.197)	(0.195)	(0.181)	(0.196)	(0.196)
Female	0.584***	0.581***	0.565***	0.568***	0.586***
	(0.0638)	(0.0642)	(0.0612)	(0.0618)	(0.0642)
High School Degree	0.830	0.851	0.857	0.841	0.827
	(0.220)	(0.226)	(0.227)	(0.222)	(0.219)
Associate Degree	0.699	0.725	0.717	0.715	0.698
	(0.197)	(0.205)	(0.202)	(0.202)	(0.197)

	Hazard of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
University Degree	1.269	1.312	1.318	1.312	1.279
	(0.354)	(0.368)	(0.368)	(0.366)	(0.357)
Graduate School Degree	1.510	1.543	1.548	1.552	1.530
	(0.539)	(0.552)	(0.552)	(0.554)	(0.546)
Tenure = 2	9.386***	9.404***	9.403***	9.436***	9.423***
	(3.022)	(3.029)	(3.028)	(3.039)	(3.034)
Tenure = 3	16.41***	16.43***	16.42***	16.59***	16.56***
	(5.237)	(5.244)	(5.242)	(5.296)	(5.287)
Tenure = 4	22.27***	22.29***	22.33***	22.53***	22.37***
	(7.151)	(7.161)	(7.172)	(7.237)	(7.185)
Tenure = 5	23.31***	23.31***	23.37***	23.57***	23.31***
	(7.623)	(7.623)	(7.642)	(7.710)	(7.622)
Tenure = 6	30.61***	30.76***	30.78***	31.26***	30.48***
	(10.13)	(10.18)	(10.18)	(10.35)	(10.08)
Tenure = 7	32.74***	32.56***	32.99***	33.20***	32.47***
	(11.11)	(11.06)	(11.20)	(11.28)	(11.02)
Tenure = 8	36.86***	36.83***	37.29***	37.54***	36.83***
	(12.84)	(12.83)	(12.99)	(13.08)	(12.83)
Tenure = 9	22.36***	22.56***	22.78***	22.86***	22.48***
	(8.772)	(8.855)	(8.939)	(8.973)	(8.818)
Tenure = 10	26.69***	26.80***	27.14***	27.18***	26.82***
	(10.61)	(10.66)	(10.79)	(10.81)	(10.66)
Tenure = 11	17.10***	17.15***	17.30***	17.35***	17.25***
	(8.041)	(8.070)	(8.138)	(8.163)	(8.112)
Tenure = 12	21.88***	22.13***	22.43***	22.20***	22.23***
	(10.30)	(10.42)	(10.56)	(10.46)	(10.47)
Tenure = 13	20.58***	20.85***	21.12***	20.97***	20.89***
	(10.57)	(10.72)	(10.85)	(10.77)	(10.74)
Tenure = 14	21.76***	22.03***	22.36***	22.16***	21.96***
	(11.89)	(12.04)	(12.22)	(12.11)	(12.00)
Tenure = 15	53.55***	54.11***	55.08***	54.91***	54.16***
	(24.61)	(24.88)	(25.33)	(25.25)	(24.90)
Tenure = 17	8.700**	8.806**	8.936**	8.994**	8.724**
	(9.131)	(9.243)	(9.380)	(9.441)	(9.156)
Tenure = 19	25.10***	25.36***	25.98***	25.67***	24.89***
	(19.49)	(19.70)	(20.19)	(19.94)	(19.33)
Tenure = 20	76.88***	78.24***	81.07***	78.53***	76.85***
	(42.49)	(43.27)	(44.86)	(43.41)	(42.47)

	Hazard of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Tenure = 22	88.73***	88.59***	91.64***	89.87***	89.09***
	(53.24)	(53.17)	(55.02)	(53.94)	(53.46)
Tenure = 23	29.44***	29.59***	31.01***	29.84***	29.20***
	(31.06)	(31.22)	(32.72)	(31.48)	(30.79)
Tenure = 24	71.16***	71.18***	74.75***	71.09***	71.16***
	(55.77)	(55.79)	(58.63)	(55.72)	(55.77)
Tenure = 25	6.48e-05	9.47e-05	6.71e-05	6.59e-05	6.62e-05
	(0.0414)	(0.0545)	(0.0432)	(0.0419)	(0.0422)
Tenure = 26	49.81***	49.98***	52.22***	49.75***	49.63***
	(52.68)	(52.85)	(55.25)	(52.60)	(52.48)
Tenure = 28	147.6***	147.3***	156.0***	145.0***	146.6***
	(116.4)	(116.2)	(123.1)	(114.3)	(115.6)
Tenure = 29	90.93***	91.38***	95.77***	89.19***	89.20***
	(96.43)	(96.92)	(101.6)	(94.57)	(94.58)
Age Group (27-30)	0.682***	0.690***	0.682***	0.682***	0.678***
	(0.0966)	(0.0977)	(0.0966)	(0.0967)	(0.0957)
Age Group (30-34)	0.305***	0.308***	0.304***	0.300***	0.303***
	(0.0474)	(0.0478)	(0.0472)	(0.0467)	(0.0470)
Age Group (35-39)	0.247***	0.253***	0.247***	0.249***	0.249***
	(0.0434)	(0.0443)	(0.0433)	(0.0436)	(0.0437)
Age Group (40-44)	0.172***	0.171***	0.169***	0.167***	0.169***
	(0.0330)	(0.0328)	(0.0323)	(0.0321)	(0.0324)
Age Group (45-52)	0.0680***	0.0690***	0.0682***	0.0665***	0.0683***
	(0.0148)	(0.0150)	(0.0148)	(0.0146)	(0.0149)
Age Group (53-56)	0.0661***	0.0682***	0.0653***	0.0670***	0.0685***
	(0.0204)	(0.0210)	(0.0202)	(0.0207)	(0.0211)
Age Group (57-60)	0.0303***	0.0307***	0.0300***	0.0301***	0.0300***
	(0.0126)	(0.0128)	(0.0125)	(0.0125)	(0.0125)
Occupation (Technicians and Associate Professionals)	1.613*	1.609	1.590	1.599	1.617*
	(0.468)	(0.467)	(0.462)	(0.463)	(0.469)
Occupation (Clerks)	0.673	0.649	0.662	0.666	0.664
	(0.485)	(0.468)	(0.477)	(0.480)	(0.478)
Occupation (Skilled Agricultural, Forestry and Fishery Workers)	2.884	2.598	2.762	2.838	2.346
	(2.985)	(2.692)	(2.858)	(2.937)	(2.446)
Occupation (Plant, Machine Operators and Assemblers)	10.69***	9.839***	10.42***	10.68***	10.79***
	(5.245)	(4.874)	(5.103)	(5.257)	(5.304)
Occupation (Armed Forces)	1.49e-06	2.19e-06	1.60e-06	1.49e-06	1.45e-06
	(0.00108)	(0.00142)	(0.00115)	(0.00107)	(0.00106)

	Hazard of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Industry (Manufacture of Food Products and Beverages)	1.157	1.158	1.162	1.162	1.138
	(0.445)	(0.446)	(0.447)	(0.447)	(0.438)
Industry (Manufacture of Textiles)	1.849*	1.820*	1.819*	1.786*	1.787*
	(0.612)	(0.602)	(0.602)	(0.591)	(0.591)
Industry (Manufacture of Sewn Wearing Apparel)	2.951***	2.989***	3.070***	2.912***	2.874***
	(0.960)	(0.972)	(0.998)	(0.948)	(0.936)
Industry (Tanning and Dressing of Leather)	1.313	1.313	1.273	1.258	1.208
	(0.978)	(0.977)	(0.948)	(0.937)	(0.901)
Industry (Manufacture of Pulp, Paper and Paper Products)	1.175	1.367	1.315	1.236	1.364
	(0.875)	(1.014)	(0.977)	(0.919)	(1.012)
Industry (Publishing and Printing)	1.973*	1.947*	1.995*	1.951*	1.953*
	(0.788)	(0.776)	(0.796)	(0.777)	(0.778)
Industry (Manufacture of Chemicals and Chemical Products)	1.376	1.387	1.379	1.323	1.417
	(0.601)	(0.606)	(0.602)	(0.578)	(0.619)
Industry (Manufacture of Rubber and Plastic Products)	1.791	1.759	1.716	1.766	1.814
	(0.832)	(0.818)	(0.798)	(0.821)	(0.843)
Industry (Manufacture of Other Non-metallic Mineral Products)	2.656**	2.402**	2.508**	2.456**	2.546**
	(1.065)	(0.964)	(1.004)	(0.983)	(1.020)
Industry (Manufacture of Basic Metals)	1.798	1.684	1.787	1.727	1.828
	(0.675)	(0.633)	(0.671)	(0.648)	(0.687)
Industry (Manufacture of Fabricated Metal Products)	1.352	1.364	1.402	1.361	1.363
	(0.628)	(0.634)	(0.651)	(0.632)	(0.633)
Industry (Manufacture of Other Machinery)	1.399	1.367	1.392	1.400	1.401
	(0.483)	(0.472)	(0.481)	(0.483)	(0.484)
Industry (Manufacturing of Electrical Machinery)	0.651	0.640	0.637	0.622	0.664
	(0.402)	(0.396)	(0.393)	(0.384)	(0.410)
Industry (Manufacturing of Electronic Components)	1.998**	1.978**	2.003**	1.922**	1.914**
	(0.559)	(0.553)	(0.561)	(0.537)	(0.535)
Industry (Manufacturing of Medical, Precision and Optical Instruments)	1.053	1.027	1.066	1.054	1.019
	(0.787)	(0.770)	(0.798)	(0.788)	(0.762)
Industry (Manufacture of Motor Vehicles)	1.558	1.596	1.561	1.543	1.526
	(0.544)	(0.557)	(0.544)	(0.538)	(0.533)
Industry (Manufacture of Other Transport Equipment)	2.187*	2.271*	2.153*	2.205*	2.440**
	(0.924)	(0.957)	(0.910)	(0.931)	(1.028)
Industry (Manufacturing of Furniture)	2.089*	1.982*	1.996*	2.015*	2.069*
	(0.806)	(0.766)	(0.771)	(0.777)	(0.799)
Industry (Electricity, Gas, Steam and Hot Water Supply)	0.858	0.975	0.858	0.942	0.891
	(0.644)	(0.728)	(0.644)	(0.703)	(0.668)

	Hazard of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Industry (General Construction)	1.340	1.430	1.403	1.385	1.358
	(0.391)	(0.416)	(0.408)	(0.403)	(0.396)
Industry (Special Trade Construction)	1.419	1.414	1.391	1.412	1.442
	(0.426)	(0.424)	(0.418)	(0.424)	(0.432)
Industry (Sale of Motor Vehicles)	1.287	1.328	1.283	1.266	1.319
	(0.596)	(0.617)	(0.594)	(0.586)	(0.611)
Industry (Wholesale Trade and Commission Trade)	1.398	1.394	1.440	1.379	1.350
	(0.405)	(0.404)	(0.418)	(0.400)	(0.392)
Industry (Retail Trade)	1.471	1.491	1.516	1.445	1.444
	(0.385)	(0.390)	(0.396)	(0.378)	(0.378)
Industry (Hotels and Restaurants)	2.802***	2.865***	2.874***	2.757***	2.696***
	(0.790)	(0.808)	(0.810)	(0.777)	(0.760)
Industry (Land Transport)	1.137	1.164	1.179	1.128	1.107
	(0.465)	(0.476)	(0.480)	(0.465)	(0.453)
Industry (Water Transport)	3.494**	3.245*	3.194*	2.771	3.261*
	(2.173)	(2.020)	(1.987)	(1.733)	(2.028)
Industry (Air Transport)	1.472	1.462	1.454	1.447	1.339
	(1.513)	(1.503)	(1.495)	(1.488)	(1.377)
Industry (Supporting and Auxiliary Transport Activities)	2.038**	2.084**	2.042**	2.003*	2.039**
	(0.740)	(0.755)	(0.740)	(0.725)	(0.738)
Industry (Post and Telecommunications)	1.758*	1.765*	1.766*	1.726	1.772*
	(0.599)	(0.600)	(0.600)	(0.587)	(0.602)
Industry (Financial Institutions)	1.112	1.100	1.095	1.100	1.119
	(0.415)	(0.411)	(0.409)	(0.411)	(0.418)
Industry (Insurance and Pension Funding)	0.981	0.965	0.981	0.937	0.947
	(0.456)	(0.448)	(0.456)	(0.435)	(0.440)
Industry (Activities Auxiliary to Financial Intermediation)	1.794	1.755	1.809	1.790	1.839
	(1.334)	(1.306)	(1.346)	(1.331)	(1.368)
Industry (Real Estate Activities)	1.080	1.084	1.067	1.074	1.139
	(0.799)	(0.803)	(0.790)	(0.795)	(0.843)
Industry (Renting of Machinery and Equipment)	3.500*	3.484*	3.379	3.422*	2.941
	(2.599)	(2.590)	(2.510)	(2.544)	(2.191)
Industry (Computer and Related Activities)	2.960***	2.889***	3.000***	2.926***	2.864***
	(0.954)	(0.931)	(0.967)	(0.943)	(0.924)
Industry (Research and Development)	1.412	1.432	1.424	1.396	1.439
	(0.782)	(0.794)	(0.789)	(0.773)	(0.797)
Industry (Professional, Scientific and Technical Services)	1.322	1.315	1.335	1.323	1.325
	(0.394)	(0.393)	(0.399)	(0.395)	(0.395)

	Hazard of Job Separation				
Independent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Industry (Business Support Services)	2.378**	2.423**	2.456**	2.443**	2.509**
	(0.912)	(0.930)	(0.942)	(0.937)	(0.963)
Industry (Public Administration and Defense)	0.340**	0.341**	0.333**	0.334**	0.342**
	(0.149)	(0.149)	(0.146)	(0.146)	(0.150)
Industry (Education)	1.033	1.017	1.025	1.030	1.020
	(0.284)	(0.279)	(0.282)	(0.283)	(0.280)
Industry (Human Health Activities)	1.388	1.348	1.357	1.386	1.378
	(0.436)	(0.424)	(0.426)	(0.436)	(0.433)
Industry (Motion Picture Industries)	0.737	0.650	0.626	0.716	0.660
	(0.551)	(0.487)	(0.470)	(0.535)	(0.496)
Industry (Other Recreational, Cultural and Sporting Activities	1.239	1.254	1.206	1.235	1.218
	(0.772)	(0.781)	(0.751)	(0.769)	(0.762)
Industry (Sewage and Refuse Disposal)	2.190	2.215	2.111	2.131	2.083
	(1.359)	(1.375)	(1.310)	(1.322)	(1.291)
Industry (Membership Organizations N.E.C.)	0.682	0.710	0.705	0.666	0.692
	(0.350)	(0.365)	(0.362)	(0.341)	(0.355)
Industry (Maintenance and Repair Services)	1.028	0.997	0.996	1.047	1.002
	(0.477)	(0.463)	(0.462)	(0.486)	(0.465)
Constant	2.835	2.609	3.165*	3.185*	3.192*
	(1.880)	(1.794)	(2.081)	(2.101)	(2.095)
Observations	30,737	30,737	30,737	30,737	30,737

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1