

Job insecurity and social support. Evidence from the UE

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Abstract

This paper studies the determinants of perceived job insecurity across European Union countries focusing on work-based and nonwork-based social support. Perceived job insecurity looks upon the subjective perception of losing a current job (*job tenure insecurity*) and the perceived difficulty of finding another job with similar salary (*job market insecurity*). Work-based social support refers to support from boss, managers and colleagues on workplace while nonwork-based social support regards to support from social networks outside of workplace. This paper uses the Sixth European Working Conditions Survey grounded in 2015. For each measure of perceived job instability, the study considers three dataset: all European Union countries (EU24), older European Union countries (WEU15) and novel European Union countries (EEU13). A Heckman selection model is used in the empirical analysis. In the first stage, the study accounts for the association between social support variables and job tenure insecurity. Next, it narrows the attention to those employees who fear of losing the current job and it examines the correlation between social support variables and job market insecurity. Here, to correct for self-selection bias it is added a transformation of the predicted individual probabilities (inverse Mills ratio) from the first stage. For the EU24, results show that work-based social support plays a more important role than nonwork-based social support in alleviating job tenure insecurity while work-based social support have a more relevant function than work-based social support in lessening job market insecurity. Differences emerge between older and novel European Union countries. Both work-based and nonwork-based social support reduce perceived job insecurity in together older and novel EU members. Work-based and nonwork-based social support have a relevant role in decreasing perceived market insecurity only for older EU states.

Keywords: Job tenure insecurity, job market insecurity, social support, Heckman selection model, European Union countries

1. Introduction

In the recent decades, processes of globalization, skill-based technological changes, increased flexibility changes, dualisation of labour market and welfare state retrenchment have increased socio-economic insecurities (Mau et al. 2012). Due to changes in the labour market, which has led to a spread of precarious labour forms such as part-time work, fixed-term contracts and temporary agency employment and a decline in the long-term employer-employee relationships (Cappelli 1999; Kalleberg 2000; Kalleberg 2009), an increased number of studies have examined the determinants and consequences of self-perceived job insecurity (Shoss 2017)¹. Research on individual outcomes have shown that perceived job insecurity may be harmful to physical and mental health (Kuhnert et al. 1989; Ferrie 2001; Ferrie et al. 2005; Green 2011); may have repercussion on job motivations and job satisfaction (Rosenblatt et al. 1999; Origo and Pagani 2009; Geishecker 2012), may lead employees to leave the job (Ashford et al. 1989; Hellgren et al. 1999) and may have negative effect on family life (Larson et al. 1994; Scherer 2009). Studies on antecedents of subjective job insecurity have looked to individual socio-economic characteristics (gender, age, education, income), family structure (children and partner's employment status), job related features (fixed-term contract, hours worked, job tenure, occupational class, firm economic sector), organizational features and changes (company site, firm size, downsizing) work organization (production system, human resource policy), workplace features (trade union, cooperation) and country specific context (welfare institutions and labour market regulation), showing that exists much heterogeneity across European countries (Böckerman 2004; Erlinghagen 2008; Bernhardt and Krause 2014). While this research suggests that there is room for improving our empirical knowledge about the determinants of job insecurity (Muñoz de Bustillo and de Pedraza 2010), we identify this space in the multidimensionality of the concept of job insecurity and in its relationship with social support.

Indeed, literature has focused mainly upon one dimension of perceived job insecurity - fear of loss of employment - while a smaller amount of research has paid attention to insecurity in the labour market, meaning the individual's perception of how easy it will be to find another job with the same features as one held at the moment (Anderson and Pontusson 2007). Furthermore, while a related research has considerate the individual and contextual characteristics that influence the relationship between job insecurity and well-being (Carr and

¹However, Fevre (2007) finds no empirical support for the identification of a new era of job insecurity, leading him to advice of a growing alarmism in the social science literature.

Chung 2014), the direct link between social support and job insecurity has been overlooked in recent years.

In this paper, we are interested to study the relationship between social support and perceived job insecurity within European Union countries. We examine two dimension of job insecurity: job insecurity in the sense of fear of losing job (*job tenure insecurity* according to Gallie et al. 2017); and perceived difficulty to find a job of similar salary, in the case of losing current job (that we label *job market insecurity*). The former refers to the anxiety about the loss of employment (Gallie et al. 2017), the latter to the anxiety to find another job with similar pay, in the case that existing job is lost (Chang and Mau 2014). Additionally, we consider two type of social support: work-based and nonwork-based social support (Lim 1996). The first refers to social support from boss, managers and colleagues on workplace while the second regards to social support from social networks outside workplace. Our aim is to show that work-based and nonwork-based social support exhibit different links with the two dimensions of job insecurity. To our knowledge, there has been no previous research between job tenure insecurity and social support and between job market insecurity and social support within European Union countries as a whole. We contribute to the literature in several ways. First, following the literature, we develop and test hypotheses regarding the main determinants of job tenure and job market insecurities. Second, we develop and test hypotheses about the main effects of work-based and nonwork-based social support on job insecurities in two stage. In the first step, we study job tenure insecurity, in the second step we analyse job market insecurity. Third, we use a recent dataset, the Sixth European Working Conditions Survey grounded in 2015, which measures and monitors trends and changes in working conditions in a growing number of European countries. Finally, we consider all European Union countries and we also split the dataset in older and new members of EU28.

Our paper is structured as follows. In the next section, conceptualization of job insecurity is examined, individual determinants of job insecurity are offered and hypotheses regarding work-based and nonwork-based social support and job insecurity are provided. Then, data, variables and methodology are discussed. Finally, empirical findings are shown and commented.

2. Definitions, determinants, social support and hypotheses

2.1 Conceptualization of job insecurity

Job insecurity is the perception of a potential threat to continuity in current job (Heaney et al 1994). Job insecurity is a subjective insecurity that reflects the degree to which employees consider their jobs to be threatened. It is distinct from actual job loss because individuals who suffer from it are still employed, but the future existence of their job is uncertain (Lee et al. 2018). This implies both that the feeling of job insecurity may differ between individuals even if they are exposed to the same objective situation, and that individuals may differ in their reactions to perceptions of jobs at risk (Sverke and Hellgren 2002). Objective insecurity, instead, refers to positions that are of limited duration, such as fixed-term contract, temporary work contract and temporary agency contract (De Witte and Näswall 2003). Job insecurity has been conceptualized as both a one-dimensional and multidimensional construct (Sverke et al. 2002). The first construct focus on the perception about job loss (De Witte 1999). The second construct address job loss, the loss of desired job features and the consequences that these changes may have (Greenhalgh and Rosenblatt 1984; Carr and Chung 2014). A further distinction is between “cognitive” and “affective” job insecurity (Borg and Elizur 1992). Cognitive job insecurity refers to the perception of the likelihood to lose a current job in the near future, whereas affective job insecurity refers to worry, fear or anxiety about losing job (Anderson and Pontusson 2007). A third concept accepted in literature is “labour market insecurity” (Chang and Mau 2014) which refers to the perception of how easy another job with equivalent characteristics will be found after job loss (Lübke and Erlinghagen 2014). Of these three dimensions, few previous studies have used both cognitive job insecurity and labour market insecurity concepts (Green et al. 2000; Anderson and Pontusson 2007; Green 2009; Dixon et al. 2013; Lübke and Erlinghagen 2014; Hipp 2016). In this paper, we take advantage of subjective measures of job insecurity, first of all, disentangling the fear of job loss (*job tenure insecurity*) from the perceived difficulty to find another job easily (*job market insecurity*), and next combining them. Thus, we first study, as the most research does, the determinants of job tenure insecurity. Then, unlike previous studies that consider two dimensions of job insecurity, we investigate the determinants of job market insecurity only for employees who fear losing their job.

2.2 Determinants of job insecurity

Although job insecurity is a perceptual phenomenon, these perceptions generally have their basis in objective threats (Shoss 2017). These objective threats are linked to individual and job-related characteristics, family structure, organizational features and changes, work organization and workplace (Kein et al. 2014; Lee et al. 2018). We thus focus on these variables. Table 1 provides a summary of our hypotheses regarding these variables and job insecurities.

Determinants	Job tenure insecurity	Job market insecurity
	Sign	Sign
Male	+	-
Age	+	+
Education	-	-
Income	-	+
Precarious household financial situation	+	+
Family responsibility	+	+
Temporary work	+	-
Job tenure	-	+
White-collar	-	-
Public sector	-	+
Size of firm	+	
Workforce reduction	+	
Work organizational practices decreasing employees' job control	+	+
Trade union in firm	-	+
Fair treatments	-	+
Cooperative work relationships	-	+

Table 1. Hypotheses regarding the link among individual and job-related characteristics, family structure, organizational features and changes, work organization and workplace and job insecurities. Authors' elaboration

Demographic and socio economic variables are relevant. Men exhibit a stronger relation between the stress of insecure employment and its negative outcomes than women. This is attributable to the traditional role of men as family supporters, financially, and because of this, men are more strain when facing the threat of losing their job (Naswall and De Witte 2003). Moreover, to the extent that informal sex discrimination in employment practices persists, it must primary affect women's estimates of their replacement job prospects rather than their estimates of the security of their current job (Anderson and Pontusson 2007). Hence, our hypothesis is that men will experience higher job tenure insecurity than women and lower job market insecurity than women.

A strong positive correlation is found between the level of insecurity reported and age, implying that older employees experience higher levels of job insecurity (Naswall and De Witte 2003). Older employees may be more reliant on their jobs than younger employees for financial stability and family obligations and, therefore, may experience greater financial instability. Older employees have also lower levels of perceived job mobility which leads to greater job dependence and greater susceptibility to perceiving their job as insecure (Cheng and Chan 2008). Thus, we hypothesize that older employees will exhibit higher both job insecurities than younger.

Education is a good predictor for subjective insecurity as it is a proxy for individual levels of human capital and chances of employment and re-employment (Chang and Mau 2014). It seems reasonable to expect that those with less education will lack skills and knowledge required for many choices to be available, and therefore be more vulnerable to the experience of job insecurity. Studies have shown that employees with more educational feel more secure in their jobs than those with less education (Kiem et al. 2014). Hence, we hypothesize that employees that are more educated will feel more secure than those who are less educated.

The relationship between wage and job tenure insecurity may be both direct and indirect. On one hand, the higher the wage, the higher the cost of losing the job and the higher is job tenure insecurity. On the other hand, employees with higher wages would have more savings, thus, reducing the short-term impact of unemployment and likewise reducing tenure job insecurity. Furthermore, the higher the wage the lower the probabilities of finding a similar job with the same salary and therefore the higher is job market insecurity (Muñoz de Bustillo and de Pedraza 2010). Thus, we hypothesize that employees with higher wages will have lower job tenure insecurity and higher job market insecurity than employees with lower wages.

Family structure is significant, too. First, a precarious household financial situation heightens perceived job insecurity, since the potential loss of job becomes a threat to the family's livelihood (Erlinghagen 2008). Furthermore, family structure and partner's employment status have also been shown to affect individual's perception of insecurity due to the significance of job loss for the family's livelihood (Chang and Mau 2014). Nevertheless, employees with a partner may be expected to be less dependent on their income, since their partner may be able to provide for them in event of job loss (Naswall and De Witte 2003). We hypothesize that employees with a precarious household financial situation and family responsibility will experience higher levels of both job insecurity.

Individual job related-characteristics also contribute to employees' sense of (in)security. The expectation that temporary workers would feel greater insecurity about job loss than regular employees has been strongly confirmed in literature (Gallie et al. 2017). This may be because temporary and part-time employees are not as attached to an organization or as protected by the organization (Keim et al. 2018). Anyway, temporary jobs could be considered less difficult to regain. A possible explanation could be that temporary workers may have a higher probability (propensity) to regain employment than permanent workers, through a shorter period of unemployment. Hence, we hypothesize that employees with temporary workers will exhibit higher job tenure insecurity and lower job market insecurity than permanent workers.

Self-perceived job (tenure) insecurity has been found negatively correlated with length of job tenure (Green et al. 2000). This may happen because the longer individuals remain with the same employer, the safer they should be from dismissal, whether because investments in company specific human capital are protecting them, because implicit contracts and trust developed over time exist or because there might be special legal regulations protecting employees with many years' tenure (Erlinghagen 2008). Moreover, self-perceived job market insecurity might be positively associated with the length of job tenure. Anxiety about job loss may increase with length of job tenure, since departure from the company could give rise to high costs. These costs might include the loss of company-specific human capital and long-term private investments (importance of social networks based on neighbours or friends). Thus, we hypothesize that job tenure is negatively associated with job tenure insecurity and positively correlated with job market insecurity.

Previous research has shown that white-collar employees have less job insecurity than blue-collar employees (Lee et al. 2018). Thus, our hypotheses are that white-collar employees will exhibit less job tenure and market insecurities than blue collar employees.

Employees in public sector are more secure about their employment, because this employer is less likely to be impacted by cyclical changes in the market (Chang and Mau 2014). Therefore, our hypotheses are that working in the public sector will reduce job tenure insecurity and will rise job market insecurity.

Organizational features and changes also have a role in shaping job insecurity perceptions. Employees in large firms may experience less job insecurity simply because of greater importance of internal labour markets. Small firms, indeed, do not have such great powers of resistance in periods of economic difficulty as larger firms (Erlinghagen 2008). Alternatively, it can be argued that labour relations in small firms are more personal. If this is the case,

employees of small firms could show higher confidence that their employers will do as much as they can keep them in work (Muñoz de Bustillo and de Pedraza 2010). Moreover, experiencing downsizing and other organizational changes may be associated with a greater job insecurity perception (Keim et al. 2018). Thus, our hypothesis is that the perception of job tenure instability increases according to the size of the firm and workforce reduction.

Work organizational practises and conditions can influence employees' sense of insecurity (Lee et al. 2018). Employment conditions that do not allow employees to control their work, as such to work at high speed, make repetitive movements, have no control over the pace of work and have less job training, contribute to rise perceived job insecurity (Landsbergis et al. 2014). On the other hand, employment practices which increases employees' perceptions of job control, such as sharing information about organizational aims and including employees in decision-making and problem-solving endeavours, can reduce perceived job insecurity (Huang et al. 2012). Hence, work organizational practises and conditions that decrease employees' perceptions of job control will increase job insecurity.

Finally, workplace also have a role in mitigating job insecurity perceptions. Being a union member has been shown to reduce feeling of insecurity for workers (Chang and Mau 2014). The impact of unions on insecurity is nevertheless twofold. On one hand, unionism may add protection against unfair dismissal and raise the cost of firms of making workers redundant. On the other hand, to the extent that unions raise wages and are concentrated among older industries, unionised workers might expect a greater risk of unemployment (Green et al. 2000). Hence, we hypothesize that the presence of a trade union in the company will reduce job tenure insecurity and will increase job market insecurity.

Employees' perceptions of fair treatment in workplace may enhance feeling of job security (Sverke and Hellgren 2002). In addition, employees who develop and maintain high-quality relationships with organizations and their managers may have higher perception of job security (Lee et al. 2018). Hence, our hypotheses are that fair treatment of employees in the workplace as well as cooperative relationships between employees-managers and employees-employees will reduce job tenure insecurity and will increase job market insecurity.

2.3. Social support

Social support is considered as the resources provided by others from which individuals may draw when handling stressors (Thoits 1995). Social support refers to formal and informal relationships and groups through which individuals receive emotional, informational and instrumental supports (House and Kahn 1985). *Emotional support* refers to behavior that

fosters feelings of comfort and leads individuals to believe that they are admired, respected and loved, and that others are available to provide caring and security. *Informational support* refers to information, knowledge and/or advice that helps individuals in defining, understanding and coping with problematic events. *Instrumental supports* refers to good and services that help to solve practical problems (Jacobson 1986).

Social support has been considered in terms of dimensions and source of support. In the first case, two different perspectives arise: structure of an interpersonal relationship or social network and the functions that the relationship or network serve (Cohen and Syme 1985). *Structural support* means that a relationship with one or more others exists (Cohen and Wills 1985). Individuals have structural social support if there is someone to whom they relate in a social structure, that is, simply by being in a social structure. Families are social structures, as well as are volunteer groups, businesses and communities. *Functional support* implies that the supportive people are performing functions for the focal person. This functions - as said above - might be self-esteem, appraisal and instrumental support. Regarding people who provides social support, i.e. its sources, the most frequent classification consists of the supervisor, work colleagues and outsiders (family and friends who do not work in the same organization) (Beehr and Glazer 2001).

Much has been written about the ability of social support to “moderate” or “buffer” the impact of job stress (see LaRocco et al. 1980; Cohen and Wills 1985; Thoits 1995), including job insecurity (Lim 1996; Sverke and Hellgren 2002; Schreurs et al. 2012). The underlying idea is that social support can mitigate the negative stress effects by helping individuals to cope with job insecurity (stressor) more adequately. For instance, Lim (1996) found that nonwork-based support (i.e. support provided by family and friends) moderated the negative effects of job insecurity on life dissatisfaction, while work-based social support (supervisor and work colleagues) buffered individuals against the negative effects of job dissatisfaction, proactive job search, and noncompliant job behaviours.

In terms of conceptual framework, in Figure 1, arrow 3 shows the buffering (interaction) effects according to social support buffers the effects of job insecurity on job strain. Figure 1, in addition, shows that social support may also have additive or main effects on job insecurity and job strain indicated by the arrows numbered 1 and 2.

Because the direct link between social support and job insecurity has been overlooked in literature in recent years, in this article we are interested to investigate the main effects of social support on job tenure and job market insecurities (arrow 1 Figure 1).

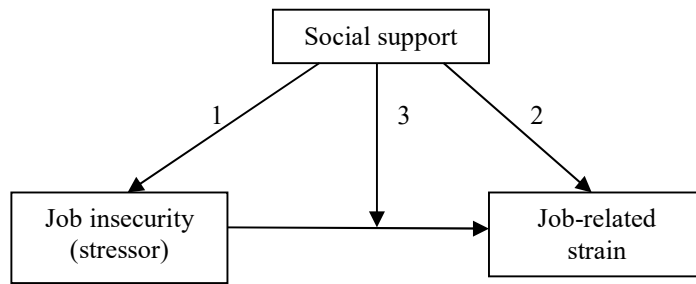


Figure 1. A model of relationships between social support, job insecurity and job strain
 Authors' elaboration from LaRocco et al. (1980)

We focus our attention on both sources and dimension of social support. Regarding individuals who provide social support, we distinguish between insiders, as boss, managers and work colleagues, and outsiders, as organized groups such as volunteer groups, trade union and political party and recreational groups, to whom employees relate outside work. Insiders and outsiders describe structural social support which may serve to provide emotional and instrumental support (functional support) to employees. We define functional support provided by insiders as *work-based social support* and functional support offered by outsiders as *nonwork-based social support*. Hypotheses regarding the association among work-based social support, nonwork-based social support, job tenure insecurity and job market insecurity are shown in Table 2.

2.3.1 Work-based social support

Boss, managers and work colleagues may provide help and/or assistance to individuals to solve problems or get tasks done, making the work situation more manageable and less threatening. Moreover, boss may perform emotional support to the focal person, creating a supportive work atmosphere in the organization and mitigating individual's feeling of job tenure insecurity.

Boss, managers and work colleagues can also provide resources that make easier for the focal person to solve his/her own problems. Such resources can be, for example, informational. Thus, boss, managers and work colleagues may provide informational helps in finding new jobs opportunity in case of job loss.

Hence, we hypothesises that boss emotional and instrumental support as well as managers and work colleagues support will have a negative link with job tenure insecurity.

In addition, we hypothesises that boss emotional support will exhibit a positive correlation with job market insecurity while boss, managers and work colleagues instrumental support will be negatively associated with job market insecurity.

Work-based social support		Job tenure insecurity	Job market insecurity	Nonwork-based social support		Job tenureinsecurity	Job market insecurity
Structural	Functional	Sign	Sign	Structural	Functional	Sign	Sign
Boss	Emotional	-	+	Volunteer groups	Emotional	-	
	Instrumental	-	-		Instrumental		-
Managers	Instrumental	-	-	Political party/ trade union	Instrumental	-	-
Colleagues	Instrumental	-	-	Leisure groups	Emotional	-	
					Instrumental		-

Table2. Hypotheses regarding the association among work-based social support, nonwork-based social support, job tenure insecurity and job market insecurity.
Authors' elaboration

2.3.2 Nonwork-based social support

Support from a social network outside the workplace may also have negative influence on individual's feeling of job insecurity. Spending time with others in voluntary and leisure activities is social companionship. Social companionship fulfills need for affiliation and contact with others facilitating positive effective moods which cope with the threat of perceived job tenure insecurity. Spending time with others in political party and trade union is another important source of social support. Trade union and political party may support the focal person and offer him/her protection.

Finally, the social network in which the focal person is "embedded" may provide him/her with informational helps in finding new jobs opportunity in case of job loss.

Hence, we hypothesises that volunteer and leisure groups emotional support and political party/trade union instrumental support will have a negative association with job tenure insecurity.

Additionally, we hypothesises instrumental support provided by volunteer and leisure groups as well as political party/trade union will have a negative correlation with job market insecurity.

3. Data, variables and methods

This study uses the Sixth European Working Conditions Survey (EWCS) grounded in 2015, whose detailed description can be found in Eurofound (Eurofound 2016). The EWCS measures trends and changes in working conditions in a growing number of European countries since its launch in 1990.

A random sample of workers (salaried employees and self-employed), approximately 43,000 aged 15 years and above, have been interviewed face to face. The questionnaire includes topics related to demographic and socio-economic characteristics, employment status, working time duration and organisation, work organisation, learning and training, physical and psychosocial risk factors, health, work-life balance, job in general, activities outside work, earnings and financial security. Table A1, in Appendix A, provides variables description used in the analysis.

3.1 *Dependent variables*

Two dependent variables are used as indicators of subjective job insecurity. Respondents were asked: “To what extent do you agree or disagree with the following statements about your job?” (i) “I might lose my job in the next 6 months”; (ii) “if I were to lose or quit my current job, it would be easy for me to find a job of similar salary”. Five possible answers were offered: (1) “strongly agree”, (2) “tend to agree”, (3) “neither agree nor disagree”, (4) “tend to disagree”, (5), “strongly disagree”. The first dependent variable, *job tenure insecurity* is equal to 1 if the respondent answered to (i): “strongly agree”. Only for the individual who answered “strongly agree” to (i), the second dependent variable, *job market insecurity* is equal to 1 if he/she answered to (ii): “strongly disagree”.

3.1.1 *Work-based social support*

The key independent variables used to measure work based social support look to the questions about “your boss” and “work situation”.

The first two key independent variables are related to “your boss”. Employees were asked: “To what extent do you agree or disagree with the following statements? Your immediate boss... (a) respects you as a person, (b) gives you praise and recognition when you do a good job, (c) is successful in getting people to work together, (d) is helpful in getting the job done, (e) provides useful feedback on your work, (f) encourages and supports your development”. Five possible answers were offered: (1) “strongly agree”, (2) “tend to agree”, (3) “neither agree nor disagree”, (4) “tend to disagree”, (5) “strongly disagree”. For each question, the answer “strongly agree” is evaluated. Hence, the first key independent variable, *boss emotional support*, is built adding the answers to the questions (a) and (b). The second key independent variable, *boss instrumental support*, is made adding the answers to the questions from (c) to (f).

The second couple of key independent variables looks to the work situation. Individuals were asked: “For each of the following statements, please select the response which best

describes your work situation. (a) Your colleagues help and support you, (b) your manager helps and supports you.” Five possible answers were offered: (1) “always”, (2) “most of the time”, (3) “sometimes”, (4) “rarely”, (5), “never”. The third and fourth key independent variables, *middle management instrumental support* and *colleagues instrumental support* are equal to 1 if respondents answered to questions (b) and (a) “always”.

3.1.2 Nonwork-based social support

Issues on activities outside workplace are used to measure nonwork-based social support. Respondents were asked: “In general, how often are you involved in any of the following activities outside work? (a) “Voluntary or charitable activity”, (b) Political/trade union activity, (c) sporting, cultural or leisure activity outside your home”. Five possible answers were offered: (1) “daily”, (2) “several times a week”, (3) “several times a month”, (4) “less often”, (5), “never”. For each question, we built a dummy variable equal to 1 if the respondent answered from (1) to (4), 0 otherwise. Thus, the fifth, sixth and seventh key independent variables are: *voluntary activity*, *political/trade union activity* and *leisure activities*.

3.2 Control variables

We use several sets of control variables according to the background and hypotheses provided in Section 2. First, we look to various demographic and socioeconomic characteristics such as male, age, born in the country, secondary education, and income. Then, we consider the family structure of employees taking into account the size of household, if the respondent contributes the most to the household income and if the household is able to make ends meet with difficulty.

Third, we consider many individual job-related characteristics such as: kind of employment contract (unlimited and limited duration, agency contract), job tenure, numbers of hours usually work per week in the main job and number of days usually work in the main job; occupational group as job professional and job skilled, and public sector. Forth, we take into account organizational features and changes looking the company site (one site), the number of total employees in the company and if the number of total employees in the company has decreased during the last three years as well as if the employee agrees that during the last three years there has been a restructuring or reorganization at the workplace that has substantially affected his/her work, if the employee agrees that during the last year the number of hours usually worked per week in the main job increased along with the salary increased.

Furthermore, we take into consideration work organization viewing if working hours fit well with family, working hours are set by the company, the job involves tight deadlines and a high speed, the work depends by boss and colleagues, the job involves meeting precise quality standards and monotonous tasks, the work is done in teams if employees are able to chose the order tasks, they are consulted before work objectives are set and they are involved in improving the work organization, skills meet duties and training is provided by boss. Finally, we consider the workplace in term of if trade union exists in the company, if the work is fairly distributed and conflicts are fairly resolved, if cooperation is present among colleagues and if employees trust management.

3.3 Descriptive statistics

Data were accessed and downloaded by the UK Data Service <http://discover.ukdataservice.ac.uk>. The dataset used considers employees in the EU28. We further divided the sample in older European Union (OEU) countries (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and UK) and novel European Union (NEU) countries (Bulgaria, Croatia, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia).

After removing unselected respondents and missing variables on dependent and independent variables, final datasets on EU28, OEU15 and NEU13 are cross-section samples of employees aged between 15 and 64 years, respectively, about 22000, 14000 and 8000 observations on *job tenure insecurity*. Moreover, for *job market insecurity* datasets hold, respectively, about 3500, 2200 and 1400 observations.

Table A2, in Appendix A, shows the distribution of perceived job insecurity in the European Union. There are huge differences in perceived job insecurity from country to country. Lowest levels of perceived *job tenure insecurity* are in Germany (9.7%), Slovakia (8.2%) and Malta (7.1%). On the contrary, highest levels of perceived *job tenure instability* are in Poland (26%), Slovenia (27.8%) and Spain (29.4%). Regarding perceived *job market insecurity*, smallest levels are in Romania (30.9%), Denmark (29.9%) and Sweden (29%). Instead, biggest levels of *job market insecurity* are in Croatia (65.3%), Greece (69.6%) and Cyprus (77.9%).

Tables 3 and 4 provides descriptive statistics of dependent, key independent and control variables used in the empirical analysis. On average, *job tenure insecurity* is 0.162 in EU28, 0.160 in OEU15 and 0.167 in NEU13. Instead, *job market instability* is 0.486 in all European

Union countries, decreases to 0.454 in older European Union states and raises to 0.539 in novel European Union nations. Regarding the key independent variables, in Table 3 in the sample of all European Union countries, boss emotional and instrumental support variables present, on average, respectively, values of 0.927 and 1.317 while middle management and colleagues instrumental support variables amount to 0.322 and 0.393. Furthermore, voluntary, political/trade union and leisure activities variables are, respectively, 0.329, 0.116 and 0.766. Values of boss emotional and instrumental support, work colleagues instrumental support and leisure activities variables increases for older European Union countries and decreases for novel European Union nations. Instead, values of middle management instrumental support, voluntary, political/trade union activities variables decreases in older European Union states and raises in novel European Union nations.

Looking to the key independent variables in Table 4, in all European union countries sample, boss emotional and instrumental support variables are, respectively, 0.738 and 1.118, while middle management and work colleagues instrumental support variables present, respectively, a value of 0.262 and 0.364. Additionally, voluntary, political/trade union and leisure activities variables amount, respectively, to 0.299, 0.114 and 0.730. Comparing older and novel European Union countries, the values of all key independent variables increases for the OEU15 sample and decreases for the NEU13, except for voluntary activity variables.

3.4 Methodology

In the empirical analysis, we use the Heckman selection model. In the first stage, we try to account for the factors that affect the probability of answering “strongly agree” to the question “I might lose my job in the next 6 months” (*job tenure insecurity*). Next, we restrict our analysis to those employees who answered “strongly agree” to the question “I might lose my job in the next 6 months” and we examine the factors that affect the likelihood of answering “strongly disagree” to the question “if I were to lose or quit my current job, it would be easy for me to find a job of similar salary” (*job market insecurity*). Here, we correct for self-selection by adding a transformation of the predicted individual probabilities (inverse Mills ratio) from the first stage.

Table 3. Descriptive Statistics of job tenure insecurity samples

Variables	EU28		OEU15		NEU13	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
<i>Dependent variables</i>						
Job tenure insecurity	0,162	0,369	0,160	0,366	0,167	0,373
<i>Key independnet variables</i>						
Boss emotional support	0,927	0,847	0,988	0,833	0,824	0,860
Boss instrumental support	1,317	1,562	1,329	1,554	1,298	1,576
Middle management instrumental	0,322	0,467	0,312	0,463	0,337	0,473
Colleagues instrumental support	0,393	0,488	0,398	0,489	0,386	0,487
Voluntary activity	0,329	0,470	0,311	0,463	0,360	0,480
Political/trade union activity	0,116	0,320	0,114	0,318	0,118	0,323
Leisure activities	0,766	0,423	0,803	0,397	0,705	0,456
<i>Control variables:</i>						
Male	0,461	0,498	0,475	0,499	0,435	0,496
Age (log)	3,684	0,307	3,687	0,309	3,678	0,306
Born in the country	0,899	0,301	0,871	0,335	0,947	0,223
Secondary education	0,622	0,485	0,593	0,491	0,671	0,470
Income (log)	6,926	0,833	7,282	0,705	6,324	0,670
Househould size	2,965	1,299	2,893	1,297	3,088	1,293
Resp_most_household income	0,554	0,497	0,576	0,494	0,515	0,500
Able to make ends meet with difficulty	0,371	0,483	0,314	0,464	0,468	0,499
Unlimited duration contract	0,793	0,405	0,800	0,400	0,782	0,413
Limited duration contract	0,116	0,321	0,119	0,323	0,112	0,316
Agency contract	0,012	0,111	0,014	0,117	0,010	0,098
Tenure	9,555	9,498	9,850	9,670	9,057	9,177
Hours per week (log)	3,543	0,428	3,491	0,447	3,631	0,377
Job 7days	0,022	0,148	0,017	0,129	0,031	0,175
Job_professionals	0,376	0,484	0,393	0,489	0,347	0,476
Job_skilled	0,335	0,472	0,344	0,475	0,321	0,467
Public sector	0,275	0,446	0,265	0,441	0,292	0,455
Firm one site	0,552	0,497	0,495	0,500	0,648	0,477
Nr_employees_firm	3,118	0,797	3,192	0,821	2,990	0,736
Nr_employees_decreased	0,242	0,428	0,261	0,439	0,209	0,407
Restructuring affect work	0,259	0,438	0,296	0,456	0,197	0,398
Work_hours_increased	0,180	0,384	0,198	0,398	0,149	0,356
Salary_increased	0,308	0,461	0,314	0,464	0,297	0,457

Hrs_not_fit_with family	0,034	0,180	0,036	0,186	0,029	0,169
Working time sets by firm	0,664	0,472	0,586	0,492	0,795	0,403
Working deadlines	0,361	0,480	0,381	0,486	0,327	0,469
Working very speed	0,344	0,475	0,356	0,479	0,326	0,469
Pace of work boss	0,411	0,492	0,366	0,482	0,487	0,500
Pace of work colleagues	0,457	0,498	0,428	0,495	0,504	0,500
Job involve standards	0,722	0,448	0,730	0,444	0,709	0,454
Job involve monotonous tasks	0,826	0,379	0,856	0,351	0,776	0,416
Work in team	0,610	0,488	0,616	0,486	0,598	0,490
Able to choose tasks order	0,645	0,478	0,678	0,467	0,590	0,492
Consulted	0,208	0,407	0,202	0,402	0,218	0,413
Involved	0,216	0,412	0,232	0,422	0,190	0,392
Skills match duties	0,576	0,494	0,574	0,494	0,579	0,494
Training paid boss	0,407	0,491	0,438	0,496	0,372	0,483
Trade union in company	0,485	0,499	0,522	0,497	0,372	0,483
Work fairly ditributed	0,303	0,459	0,314	0,464	0,282	0,450
Conflicts risolved fairly	0,291	0,454	0,293	0,455	0,286	0,452
Cooperation among colleagues	0,501	0,500	0,526	0,499	0,459	0,498
Employees trust management	0,282	0,450	0,283	0,450	0,281	0,450
Observations	22000		14000		8000	

The probability of declaring *Job tenure insecurity (JTI)* is specified as follow:

$$\Pr(JTI = 1 | \mathbf{SS}, \mathbf{X}) = \Phi(\mathbf{SS}\boldsymbol{\beta} + \mathbf{X}\boldsymbol{\delta}) \quad (1)$$

Where *JTI* is a dummy variable, taking the value of 1 if the employee answered “strongly agree” to the question “I might lose my job in the next 6 months” and 0 otherwise. \mathbf{SS} is the matrix of social support variables while \mathbf{X} is the matrix of control variables. $\boldsymbol{\beta}$, $\boldsymbol{\delta}$ are the parameters to be estimated. This time the inverse Mills ratio is computed: $\lambda = \frac{\phi(\mathbf{SS}\boldsymbol{\beta} + \mathbf{X}\boldsymbol{\delta})}{\Phi(\mathbf{SS}\boldsymbol{\beta} + \mathbf{X}\boldsymbol{\delta})}$, where $\phi(\cdot)$ is the normal probability distribution and $\Phi(\cdot)$ is the cumulative distribution function of a normal standard.

Table 4. Descriptive statistics of job market insecurity samples

Variables	EU24		OEU15		NEU13	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
<i>Dependent variables</i>						
Job market insecurity	0,486	0,499	0,454	0,498	0,539	0,499
<i>Key independnet variables</i>						
Boss emotional support	0,738	0,821	0,806	0,820	0,628	0,814
Boss instrumental support	1,118	1,493	1,158	1,499	1,055	1,484
Middle management instrumental	0,262	0,440	0,263	0,440	0,259	0,438
Colleagues instrumental support	0,364	0,481	0,377	0,485	0,343	0,475
Voluntary activity	0,299	0,458	0,287	0,452	0,318	0,466
Political/trade union activity	0,114	0,317	0,119	0,323	0,105	0,307
Leisure activities	0,730	0,444	0,762	0,426	0,678	0,467
<i>Control variables:</i>						
Male	0,471	0,499	0,483	0,500	0,452	0,498
Age (log)	3,649	0,323	3,625	0,329	3,687	0,310
Born in the country	0,881	0,322	0,849	0,358	0,933	0,250
Househould size	2,903	1,305	2,838	1,310	3,009	1,291
Secondary education	0,666	0,472	0,628	0,483	0,729	0,444
Income (log)	6,717	0,842	7,022	0,809	6,228	0,639
Resp_most_household income	0,546	0,498	0,568	0,495	0,511	0,500
Able to make ends meet with difficulty	0,512	0,500	0,458	0,498	0,600	0,490
Unlimited duration contract	0,560	0,496	0,514	0,500	0,634	0,481
Limited duration contract	0,297	0,457	0,330	0,470	0,245	0,430
Agency contract	0,039	0,195	0,046	0,210	0,029	0,169
Tenure	6,710	8,421	6,196	8,130	7,536	8,809
Hours per week (log)	3,501	0,481	3,433	0,511	3,611	0,403
Job 7days	0,032	0,177	0,023	0,150	0,047	0,212
Restructuring affect work	0,277	0,448	0,293	0,455	0,253	0,434
Work_hours_increased	0,177	0,381	0,175	0,380	0,180	0,384
Salary_increased	0,200	0,400	0,208	0,406	0,190	0,392

Nr_employees_firm	3,064	0,819	3,098	0,858	3,010	0,750
Nr_employees_decreased	0,301	0,458	0,307	0,461	0,292	0,454
Hrs_not_fit_with family	0,061	0,240	0,061	0,240	0,061	0,240
Working time sets by firm	0,729	0,444	0,677	0,468	0,812	0,391
Working deadlines	0,436	0,495	0,472	0,499	0,378	0,485
Working very speed	0,438	0,496	0,471	0,499	0,384	0,486
Pace of work boss	0,506	0,500	0,475	0,499	0,555	0,497
Pace of work colleagues	0,508	0,500	0,482	0,500	0,550	0,498
Job involve standards	0,714	0,452	0,727	0,445	0,693	0,461
Job involve monotonous tasks	0,791	0,407	0,811	0,391	0,759	0,428
Work in team	0,564	0,496	0,569	0,495	0,556	0,497
Able to choose tasks order	0,569	0,495	0,588	0,492	0,537	0,499
Consulted	0,160	0,366	0,149	0,356	0,176	0,381
Involved	0,182	0,386	0,192	0,394	0,167	0,373
Skills match duties	0,528	0,499	0,521	0,500	0,542	0,498
Training paid boss	0,330	0,470	0,347	0,476	0,302	0,459
Trade union in company	0,441	0,496	0,489	0,500	0,363	0,481
Work fairly ditributed	0,256	0,437	0,289	0,453	0,204	0,403
Conflicts risolved fairly	0,243	0,429	0,251	0,433	0,230	0,421
Cooperation among colleagues	0,440	0,496	0,474	0,499	0,387	0,487
Employees trust management	0,233	0,423	0,243	0,429	0,217	0,413
Observations	3500		2200		1400	

In the second stage, the expanded probit model for *Job market insecurity (JMI)* is

$$\Pr(JMI = 1 | \mathbf{SS}, \mathbf{X}) = \Phi(\mathbf{SS}\boldsymbol{\gamma} + \mathbf{X}\boldsymbol{\rho} + \lambda) \quad (2)$$

Where *JMI* is a dummy variable, taking the value of 1 if the employee answered “strongly disagree” to the question “if I were to lose or quit my current job, it would be easy for me to find a job of similar salary” and 0 otherwise. *SS* is the matrix of social support variables while *X* is the matrix of control variables. $\boldsymbol{\gamma}$, $\boldsymbol{\rho}$ are the parameters to be estimated while λ is the inverse Mills ratio, that is a transformation of the predicted individual probabilities computed in the first stage and added in the second stage to correct for self-selection bias.

4. Results

The findings of probit models [eq(1) and eq(2)] are shown in Tables 5 and 6. Columns report marginal effects (df/dx) and standard errors corrected for heteroscedasticity (robust std.

err.). In the first section, we consider job tenure insecurity for all European countries. We start commenting earlier the results on control variables and then we focus on social support variables. In the second section, we consider job market insecurity for all European countries and we comment the findings in the same manner.

4.1 Job tenure insecurity

Results presented in Table 5 for job tenure insecurity, for the most part, confirm our hypotheses on individual and job-related characteristics, family structure, organizational features and changes, work organization and workplace and are in line with previous studies (Böckerman 2004; Anderson and Pontusson 2007; Green 2009; Muñoz de Bustillo and de Pedraza 2010; Bernhardt and Krause 2014; Hipp 2016; Gallie et al. 2017).

First, we find that job tenure insecurity is predicted by individual characteristics as male, age and income, which are statistically significant at 1 percent level and confirm our hypotheses. Male and age have a positive relation with job tenure insecurity suggesting that men and oldest employees experience higher level of insecurity compared to women and youngest. Moreover, the association between income and job tenure insecurity is negative: the higher is the income the lower is the likelihood of declaring tenure insecurity (significant at 1% level). Instead, secondary education has not a significant negative correlation with job tenure insecurity.

Second, family structure seems to be relevant. Employees who declare difficulty in making ends meet have a higher probability of declaring tenure insecurity (significant at 5% level). This result confirms our hypothesis regarding the positive association between precarious household financial situation and job tenure insecurity. Moreover, we do not find that family responsibility leads higher tenure insecurity. Employees who categorize themselves as the person who contributes to the most household income are not declaring less probability of experiencing insecure job. The variable is not statistically significant. In addition, the size of household is negatively correlated with JTI, significant at 5 percent level, although the marginal effect is close to zero. A possible explanation of this finding could be the following. Household size regards both partner and children. On one hand, the perception of job tenure instability should rise if the employees has children, because children's wellbeing is most totally dependent on the stability of their parents' income (Böckerman 2004). On the other hand, the perception of job tenure instability should decrease if the employees has a partner, because partner might be able to provide for them in event of job loss (Naswall and De Witte 2003). Thus, the negative sign of *household size* might indicate that the negative relation due

Table 3. Estimates of job tenure insecurity

Variables	All European Countries		Older European Countries		Novel European Countries	
	df/dx	Robust Std. Err	df/dx	Robust Std. Err	df/dx	Robust Std. Err
<i>Key independent variables</i>						
Boss emotional support	-0,031***	0,005	-0,032***	0,005	-0,027***	0,009
Boss instrumental support	0,005**	0,003	0,005	0,003	0,005	0,005
Middle management instrumental support	-0,016**	0,007	-0,011	0,009	-0,026**	0,012
Colleagues instrumental support	0,013*	0,007	0,011	0,008	0,014	0,011
Voluntary activity	-0,001	0,006	0,012	0,008	-0,020**	0,010
Political/trade union activity	0,012	0,009	0,015	0,011	0,005	0,014
Leisure activities	-0,016**	0,007	-0,022**	0,009	-0,009	0,010
<i>Control variables:</i>						
Male	0,017***	0,006	0,014**	0,007	0,018*	0,010
Age (log)	0,048***	0,010	0,043***	0,012	0,058***	0,018
Born in the country	-0,003	0,009	-0,002	0,010	0,005	0,018
Household size	-0,004**	0,002	-0,003	0,002	-0,005	0,003
Secondary education	0,003	0,006	0,013	0,007	-0,012	0,012
Income (log)	-0,030***	0,006	-0,027***	0,007	-0,028***	0,010
Resp_most_household income	-0,009	0,006	-0,006	0,007	-0,018*	0,010
Able to make ends meet with difficulty	0,040***	0,006	0,036***	0,008	0,045***	0,009
Unlimited duration contract	-0,083***	0,014	-0,108***	0,018	-0,042**	0,021
Limited duration contract	0,132***	0,017	0,126***	0,021	0,143***	0,029
Agency contract	0,215***	0,038	0,184***	0,043	0,244***	0,072
Tenure	-0,003***	0,000	-0,003***	0,000	-0,002***	0,001
Hours per week (log)	-0,006	0,008	0,006	0,009	-0,020	0,013
Job 7days	0,019	0,018	-0,009	0,023	0,044*	0,029
Restructuring affect work	0,042***	0,007	0,031***	0,008	0,067***	0,013
Work_hours_increased	-0,001	0,007	-0,012	0,008	0,022*	0,013
Salary_increased	-0,042***	0,006	-0,037***	0,007	-0,050***	0,010
Job_professionals	0,004	0,008	0,012	0,010	-0,013	0,013
Job_skilled	-0,006	0,007	0,003	0,009	0,016	0,011
Public sector	-0,033***	0,006	-0,038***	0,008	-0,029***	0,011
Firm one site	0,000	0,006	-0,002	0,007	0,003	0,010
Nr_employees_firm	0,008*	0,005	0,007	0,006	0,010	0,008
Nr_employees_decreased	0,047***	0,007	0,048***	0,008	0,045***	0,012
Hrs_not_fit_with family	0,061***	0,016	0,050***	0,019	0,083***	0,030
Working time sets by firm	0,020***	0,006	0,015**	0,007	0,028**	0,011
Working deadlines	0,021***	0,007	0,020**	0,008	0,021*	0,011
Working very speed	0,012**	0,007	0,020**	0,008	-0,002	0,011
Pace of work boss	0,032***	0,006	0,032***	0,007	0,030***	0,010
Pace of work colleagues	0,007	0,005	0,001	0,007	0,017*	0,009
Job involve standards	-0,009	0,006	-0,007	0,007	-0,011	0,010
Job involve monotonous tasks	-0,004	0,007	-0,014	0,009	0,007	0,010
Work in team	-0,012**	0,006	-0,008	0,007	-0,020**	0,009
Able to choose tasks order	0,001	0,006	0,004	0,007	0,000	0,009
Consulted	-0,008	0,007	-0,003	0,009	-0,015	0,012
Involved	0,014*	0,008	0,007	0,009	0,028**	0,014
Skills match duties	-0,018***	0,005	-0,020***	0,007	-0,013	0,009
Training paid boss	0,000	0,006	0,001	0,007	0,000	0,010

Trade union in company	-0,001	0,006	0,000	0,008	-0,001	0,011
Work fairly distributed	0,018**	0,008	0,028***	0,010	0,001	0,014
Conflicts resolved fairly	-0,017**	0,008	-0,018*	0,009	-0,016	0,013
Cooperation among colleagues	-0,022***	0,006	-0,020**	0,008	-0,027**	0,011
Employees trust management	-0,008	0,008	-0,014	0,009	0,006	0,014
Country dummies	Yes		Yes		Yes	
Observations	18317		11473		6984	
Pseudo R2	0,152		0,169		0,134	
Log-likelihood	-7033,10		-4247,27		-2804,38	

Notes: Country dummies omitted for reasons of space. The standard errors are corrected for heteroscedasticity. The symbols ***, **, * denote that the marginal effect is statistically significant from zero at 1, 5 and 10%, respectively.

to the presence of a partner should dominate the positive correlation on job tenure insecurity due to supporting children, thus the net effect may be a reduction of job tenure insecurity.

Third, job-related characteristics are predictors of job tenure insecurity. The expectation that JTI is positively related with the variables that capture employees that have a temporary contract, i.e. *limited duration contract* and *agency contract*, is strongly confirmed. Both variables are statistically significant at 1 percent level. Additionally, the variable *unlimited duration contract* show a negative correlation with JTI, significant at 1 percent level, too. These findings confirm that the objective condition of temporary employees is more uncertain than that of permanent workers. A long-term attachment to the same firm implies a decline in the perception of job tenure insecurity. *Tenure* exhibits a negative sign that is statistically significant at 1 percent level. Thus, our hypothesis of a negative correlation between job tenure and JTS is confirmed. This means that a long tenure should yield a decrease in job instability at the individual level of economy, because firms typically follow the policy of “last in, first out” (Böckerman 2004). Finally, we also find a sector effect, because employees in public sector are less likely to feel insecure than employees employed in other sectors (reference category). The variable *public sector* presents a negative sign that is statistically significant at 1 percent level. The perception of job tenure insecurity, instead, is not related to the fact that an employee has professionals or skilled jobs as well as it is not associated to the weekly hours of work.

Fourth, organizational features and changes also matter. The perception of job tenure insecurity is positively correlated with the size of firm (statistically significant at 10% level). Thus, JTI seems to be less common in small company. This finding is in line with our hypothesis pointing out that more personal labour relations exist in small firms. Furthermore,

three additional variables confirm our hypotheses. The variable *nr_employees_decreased*, indicating that the employee agrees that during the last three years the number of employees at workplace decreased, shows positive sign statistically significant at 1 percent level. Next, the variable *restructuring_affect_work*, meaning that the employee agrees that during the last three years there has been a restructuring or reorganization at workplace that has substantially affected his/her work, is positively correlated with JTI and statistically significant at 1 percent level, too. Finally, the variable *salary_increased* intending that employee agrees that during the last year, salary or income in the main job increased, is negatively correlated with job tenure insecurity and significant at 1 percent level.

Fifth, many of work organizational practices and conditions considered as control variables show expected correlation with job tenure insecurity. On one hand, working hours that do not fit well with family responsibility and are set by the company with no possibility for changing are positively correlated with JTI and they are statistically significant at 1 percent level. Moreover, jobs that involve tight deadlines and high speed present also a significant positive relationship with JTI. In addition, pace of work depending on the direct control of boss is also positively associated with JTI and significant at 1 percent level. On the other hand, employees who work in team and whose skills correspond well with job duties show less probability of declaring tenure insecurity. However, despite previous investigations, we find no association between training and job tenure insecurity and a positive correlation, although statistically significant at 10 percent level, between involved in improving work organization and job tenure insecurity.

Finally, variables related to workplace present mixed picture. According to our data, trade union in firm has no influence in reducing job tenure insecurity being the relative variable not statistically significant. We also find, then, that the variable *work_fairly_distributed* presents a positive association with tenure insecurity significant at conventional level. Thus, our hypotheses according to trade union in firms and fair treatments will reduce job tenure insecurity do not receive support. However, two other variables capturing workplace cohesion show the expected sign. The variables *conflicts_resolved_fairly* and *cooperation_among_colleagues* are negatively correlated and statistically significant at least at 5 percent level.

Now, we turn to the findings regarding social support variables, our key independent variables. Looking to work-based social support variables, we find opposite results. Emotional support by boss alleviate the likelihood of declaring job tenure insecurity by 3.1 percent (statistically significant at 1% level). As does the instrumental support provided by middle management variable, with the size of marginal effect being 1.6% and statistically

significant at conventional level. Hence, our hypotheses of a negative association between boss emotional support and managers instrumental support find empirical evidence in our data. Boss and middle management have a role because they are physically present at the workplace where job insecurity originates. Boss can provide emotional support to the employee making his/her work life more pleasant. Moreover, middle management may provide advice and guidance which mitigate employee's feeling of job tenure insecurity.

However, boss and colleagues have also a role in worsen job tenure insecurity. Employees who are instrumentally supported by boss declare a higher probability of job tenure insecurity by 0.5% (statistically significant at 5% level). Furthermore, employees who are also instrumentally supported by work colleagues show a higher likelihood of job tenure insecurity by 1.3%, although statistically significant at 10 percent level. Thus, our hypotheses that boss and colleagues instrumental support lessen tenure insecurity do not have empirical hold.

Looking to nonwork-based social support variable, spending free time in leisure activities reduce the likelihood of declaring job tenure insecurity by 1.6% (statistically significant at 5%). Neither voluntary activity nor political/trade union activity have a direct effect on tenure insecurity because both variables are not statistically significant. Thus, only our hypothesis on leisure group emotional support find evidence in the data. Social companionship in leisure groups outside the workplace facilitating positive effective moods may play a role in helping individuals to cope with perceived threat of job loss.

Comparing the total effect of work-based and nonwork-based social support on job tenure insecurity, it emerges that work-based social support plays a more important role than nonwork-based social support in alleviating job tenure insecurity. Within work-based social support, it results that boss and middle management support are more helpful than work colleagues support. Supervisors appear more effective in alleviating job insecurity because, thanks to their position in power, they are able to alter or transform the working situation at hand (Schreurs et al. 2012).

When we split the sample in older and new members of European Union countries, we find some differences in social support variables. In both sub-samples, boss emotional support has always a negative sign statistically significant at 1 percent level. Instead, boss and colleagues instrumental support variables are not more statistically significant, while middle management instrumental support is only statistically significant at conventional level in the novel European union countries. A feasible explanation of this result may be that in Conservative and Hierarchical societies (as the new members of EU), people are socialized to

Table 4. Estimates of job market insecurity

Variables	All European Countries		Older European Countries		Novel European Countries	
	df/dx	Robust Std. Err	df/dx	Robust Std. Err	df/dx	Robust Std. Err
Mills ratio	-0,265**	0,111	-0,284*	0,160	-0,184	0,146
<i>Key independent variables</i>						
Boss emotional support	0,058***	0,022	0,060**	0,029	0,055	0,034
Boss instrumental support	-0,027**	0,011	-0,031**	0,013	-0,022	0,018
Middle management instrumental support	-0,002	0,030	-0,030	0,038	0,051	0,048
Colleagues instrumental support	-0,004	0,026	0,035	0,034	-0,074*	0,042
Voluntary activity	-0,030	0,023	-0,061**	0,030	0,004	0,038
Political/trade union activity	-0,056*	0,032	-0,086**	0,040	0,002	0,054
Leisure activities	0,044*	0,024	0,012	0,034	0,094**	0,037
<i>Control variables:</i>						
Male	-0,051**	0,022	-0,072***	0,028	0,005	0,036
Age (log)	0,279***	0,042	0,238***	0,053	0,378***	0,071
Born in the country	-0,003	0,032	0,006	0,036	-0,045	0,068
Household size	0,000	0,008	0,003	0,010	-0,005	0,013
Secondary education	-0,023	0,024	-0,014	0,030	-0,069	0,044
Income (log)	0,068***	0,023	0,080***	0,028	0,023	0,041
Resp_most_household income	0,027	0,023	0,036	0,030	0,019	0,037
Able to make ends meet with difficulty	0,034	0,027	0,042	0,035	0,047	0,042
Unlimited duration contract	-0,019	0,050	-0,007	0,075	-0,058	0,070
Limited duration contract	-0,123**	0,055	-0,118	0,073	-0,137	0,088
Agency contract	-0,208***	0,070	-0,199**	0,085	-0,240*	0,118
Tenure	0,005***	0,002	0,007***	0,003	0,001	0,002
Hours per week (log)	-0,035	0,027	-0,070*	0,035	0,032	0,046
Job 7days	-0,099*	0,058	-0,145*	0,084	-0,062	0,083
Work_hours_increased	-0,028	0,026	-0,026	0,035	-0,025	0,042
Job_professionals	-0,055*	0,030	-0,089**	0,038	-0,011	0,050
Job_skilled	-0,034	0,025	-0,050	0,032	-0,011	0,042
Public sector	0,060**	0,028	0,025	0,039	0,121***	0,044
Firm one site	-0,032	0,021	-0,038	0,027	-0,006	0,033
Nr_employees_decreased	0,000	0,030	0,033	0,041	-0,049	0,047
Hrs_not_fit_with family	-0,048	0,047	-0,014	0,059	-0,109	0,076
Working time sets by firm	0,043	0,026	0,036	0,031	0,065	0,046
Working deadlines	0,008	0,024	0,012	0,033	-0,043	0,043
Working very speed	-0,069***	0,025	-0,086**	0,034	-0,034	0,042
Pace of work boss	0,008	0,024	-0,022	0,032	0,058	0,036
Pace of work colleagues	-0,012	0,021	-0,021	0,026	0,009	0,035
Job involve standards	0,035	0,023	0,002	0,030	0,082**	0,037
Job involve monotonous tasks	0,013	0,026	0,028	0,035	-0,022	0,039
Work in team	0,002	0,021	0,027	0,027	-0,031	0,034
Able to choose tasks order	-0,051***	0,021	-0,051*	0,028	-0,032	0,033
Consulted	-0,016	0,030	-0,005	0,039	-0,060	0,048
Involved	-0,013	0,029	-0,020	0,036	-0,018	0,049
Skills match duties	0,048**	0,021	0,041	0,028	0,047	0,032
Training paid boss	-0,023	0,022	-0,009	0,028	-0,059	0,037

Trade union in company	0,038*	0,022	0,070**	0,028	-0,022	0,038
Work fairly distributed	-0,062**	0,030	-0,083**	0,040	-0,035	0,050
Conflicts resolved fairly	0,036	0,031	0,044	0,040	0,016	0,051
Cooperation among colleagues	0,025	0,025	0,054	0,033	-0,028	0,042
Employees trust management	0,061**	0,030	0,062	0,040	0,090*	0,049
Country dummies	Yes		Yes		Yes	
Observations	3054		1835		1219	
Pseudo R2	0,097		0,098		0,122	
Log-likelihood	-1911,98		-1142,870		-738,73	

Notes: Country dummies omitted for reasons of space. The standard errors are corrected for heteroscedasticity. The symbols ***, **, * denote that the marginal effect is statistically significant from zero at 1, 5 and 10%, respectively.

provide and to accept instrumental support being giving and receiving implicit in this type of society (Beehr et al. 2001).

Regarding nonwork-based social support, while in older European Union countries leisure active activities is negatively associated with job tenure insecurity (statistically significant at 5% level), in novel EU countries voluntary activity exhibits a negative correlation with JTI (statistically significant at 5% level too). Thus, while in older EU states social companionship in leisure groups helps workers to cope with perceived threat of job loss, in novel EU countries, is spending time in social groups to help others that has a role in lessening workers' perceived job insecurity.

4.2 Job market insecurity

In the case of job market insecurity, findings reported in Table 6 confirm our hypotheses on individual, job-related characteristics and workplace and are mainly in line with previous studies (Green et al. 2000; Anderson and Pontusson 2007; Dixon et al. 2013; Lübke and Erlinghagen 2014; Hipp 2016).

First of all, the inverse Mills ratio marginal effects is negative and statistically significant at 5 percent level, providing that there is an overestimation of job market insecurity if we do not correct for self-selection bias.

We find that job market insecurity is predicted by male, age and income, which are statistically significant at 1 percent level. Male have a negative relation with job market insecurity suggesting that men experience lower level of market insecurity compared to women. This may be due to the high power that men have in the labor market (Keim et al. 2014). Moreover, the perception of job insecurity is higher among older workers than among

young workers. This result is consistent with the idea that job market instability is more a problem of aged employees because of their occupation-specific skills and lower levels of perceived job mobility (Cheng and Chan 2008). Furthermore, the association between income and job market insecurity is positive: the higher is the income the higher is the probability of declaring difficulty in replacing the job with equivalent high-income job (significant at 1% level).

Our expectation that, *ceteris paribus*, temporary jobs are judged less difficult to regain, find confirmation from results which show that *limited duration contract* and *agency contract* variables are negatively correlated with job tenure insecurity, statistically significant at least at conventional level. Our explanation for this result is that temporary workers may have a higher probability (propensity) to regain employment than permanent workers, through a shorter period of unemployment.

Despite our hypothesis, an employee's transferable human capital does not make him/her easier to find a new job with equivalent income. The variable measuring secondary education has not an association statistically significant with job market insecurity. In addition, the variable *skills math duties* is positively correlated with job market insecurity (significant at 5% level). We also find a positive correlation, significant at 1 percent level, between job tenure, measuring firm-specific human capital, and JMI. In line with our hypothesis, employees with a larger job tenure assess greater difficulty in regaining jobs with equivalent income.

Again consistent with our hypotheses, public-sector employees and trade union in company are positively and significantly associated with job market insecurity. Generally, employees in public sector and members of trade union in firms have more negative assessments of their prospects in the labor market (Anderson and Pontusson 2007).

Other results statistically significant relating to job characteristics are that employees work seven days for week and they are professionals' workers. Both variables are negatively correlated with the likelihood of declaring job market insecurity (although at 10% level). The last result support our hypothesis that white-collar employees have less job market insecurity than blue-collar employees.

Moreover, looking to the work organizational practices, we find that only *working very speed* and *able to choose tasks order* variables reduce the probability of declaring difficulty in finding an equivalent job.

Finally, variables related to workplace which are statistically significant (at conventional level) other than trade union in company are *work fairly distributed* and *employees trust*

management. Contrary to our expectation, employees who consider that work in firm is fairly distributed declare that is more likely to gain re-employment. Indeed, in line with our hypothesis, employees who trust management are more likely of declaring difficulty in regaining employment.

We now focus on results concerning social support variables. Looking to work-based social support variables, some findings are in line with our expectations. Emotional support by boss aggravate the likelihood of declaring job market insecurity by 5.8 percent (statistically significant at 1% level). In addition, the instrumental support also provided by boss reduce the probability of perceiving difficulty in finding an equivalent job by 2.7 percent (statistically significant at conventional level). Hence, our hypotheses, of a positive association between boss emotional support and JMI and a negative relationship between boss instrumental support and JMI, find empirical evidence in our data. A possible explanation could be that, on one hand, boss may provide emotional support to the employee making his/her work life more pleasant, so reducing perceived job tenure insecurity. On the other hand, the loss of employment also results in the loss of boss emotional support with the employee's judgement that will be difficult to find an equivalent job. Moreover, boss may provide to the employee informational helps in findings new job opportunity in the case of job loss. Finally, human capital accumulated by the employee through the instrumental help provided by boss makes the employee more aware of easily finding an equivalent job.

Regarding the other variables, middle management and work colleagues instrumental support do not have a direct effect on the perception of job market insecurity. Both variables are not statistically significant. Thus, our hypotheses that middle management and work colleagues instrumental support lessen perceived job market insecurity do not have empirical hold.

Looking to nonwork-based social support variable, we find conflicting findings. Spending free time in political/trade union activity alleviate the likelihood of declaring perceived job market insecurity by 5.6% (statistically significant at 10% level). Nevertheless, spending free time in leisure activities increase the likelihood of declaring job market insecurity by 4.4% (statistically significant at 10% level). Spending free time in voluntary activity has not effect on the perception of job market insecurity. Thus, only our hypothesis on political/trade union instrumental support find evidence in our data.

Comparing the total effect of work-based and nonwork-based social support on job tenure insecurity, it emerges that nonwork-based social support plays a more important role than work-based social support in lessening job market insecurity.

When we look to sub-samples of older and new European Union countries, we again observe differences. Regarding work-based social support, boss emotional and instrumental support variables hold sign and significance only for older EU members. Instead, for new EU members, colleagues instrumental support variable is negatively related to job market insecurity, although at 10 percent level. It may be said that Conservative and Hierarchical societies provide instrumental support from co-workers, because in this type of societies it is easier to reciprocate (Beehr et al. 2001). With regard to nonwork-based social support, we find that the network matter for older EU members. In these countries, workers who are integrated in larger groups, such as volunteering groups as well as political party and trade union, have a higher probability of declaring less job market insecurity.

5. Conclusions

We investigated the determinants of job tenure insecurity and job market insecurity in European Union countries focusing on work-based and nonwork-based social support. We first studied, as the most research did, the determinants of subjective perception of losing a current job. Then, unlike previous studies that considered two dimensions of job insecurity, we examined the determinants of perceived difficulty of finding another job with similar salary only for employees who fear losing their job. We use the Sixth European Working Conditions Survey grounded in 2015 and an Heckman selection model.

Most of our research hypotheses were supported.

Regarding job tenure insecurity, for the most part, results confirmed our hypotheses on individual and job-related characteristics, family structure, organizational features and changes, work organization and workplace and was in line with previous empirical investigations.

Emotional support from boss and instrumental support from middle management was found to alleviate the likelihood of declaring job tenure insecurity. However, boss and colleagues instrumental support was also found to worsen job tenure insecurity. Looking to nonwork-based social support variable, spending free time in leisure activities emerged as a significant variable in reducing job tenure insecurity. Overall, our results showed that work-based social support plays a more important role than nonwork-based social support in alleviating job tenure insecurity.

In the case of job market insecurity, findings confirmed our hypotheses on individual, job-related characteristics and workplace and was mainly in line with previous studies.

Emotional support from boss was found to aggravate the likelihood of declaring job market insecurity while the instrumental support also provided from boss emerged as a significant variable in reducing the probability of declaring difficulty in finding an equivalent job.

Looking to nonwork-based social support variable, we found that spending free time in political/trade union activity alleviated the likelihood of declaring perceived job market insecurity. Overall, our findings indicated that nonwork-based social support plays a more important role than work-based social support in lessening job market insecurity.

References

- Anderson C., Pontusson J. (2007). Workers, worriers and Welfare State: Social protection and job insecurity in 15 OECD countries, *European Journal of Political Research*, 46(2), 211-235.
- Ashford S. J., Lee C., Bobko P. (1989). Content, causes, and consequences of job insecurity: a theory-based measure and substantive test, *Academy of Management Journal*, 32, 803-829.
- Beehr T.A., Glazer S. (2001). A cultural perspective of social support in relation to occupational stress, in Perrewe P. L., Ganster D. C.(eds), *Exploring Theoretical Mechanisms and Perspectives*, Emerald Group Publishing Limited,97-142.
- Bernhardt J., Krause A. (2014). Flexibility, performance and perceptions of job security: a comparison of East and West German employees in standard employment relations, *Work, Employment and Society* 28(2), 285-304.
- Böckerman P. (2004). Perception of job instability in Europe, *Social Indicator Research* 67, 283-314.
- Borg I., Elizur D. (1992), job insecurity: correlates, moderators and measurement, *International Journal of Manpower*, 13(2), 13-26.
- Cappelli P. (1999). Career job are dead, *California Management Review*, 42(1), 146-167.
- Carr E., Chung H. (2014). Employment insecurity and life satisfaction: The moderating influence of labour market policies across Europe, *Journal of European Social Policy*, 24(4), 383-399.
- Cheng G. H.-L., Chan D. K.-S. (2008). Who suffers more from job insecurity? A meta-analytic review, *Applied Psychology: An International Review*, 57(2), 272-303.
- Chung H., Mau S. (2014). Subjective insecurity and the role of institutions, *Journal of European Social Policy*, 24(4), 303-318.
- Cohen S., Syme S.L. (1985). *Social Support and Health*, Orlando, FL: Academic Press
- Cohen S., Wills T. A. (1985). Stress, social support, and the buffering hypothesis, *Psychological Bulletin*, 98(2), 310-357.

- De Witte H. (1999). Job insecurity and psychological well-being: Review of the literature and exploration of some unresolved issues, *European Journal of Work and Organizational Psychology*, 8, 155-177.
- De Witte H., Näswall K. (2003). “Objective” vs “subjective” job insecurity: consequences of temporary work for job satisfaction and organizational commitment in four European countries, *Economic and Industrial Democracy*, 24(2), 149-188.
- Dixon J. C., Fullerton A. S., Robertson D. L. (2013). Cross-national differences in workers’ perceived Job, labour market, and employment insecurity in Europe: Empirical tests and theoretical extensions, *European Sociological Review*, 29 (5), 1053–1067.
- Erlinghagen M. (2008). Self-perceived job insecurity and social context: A multi-level analysis of 17 European countries, *European Sociological Review*, 24(2), 183-197.
- Eurofound (2016). *Sixth European Working Conditions Survey – Overview report*, Publications Office of the European Union, Luxembourg.
- Ferrie J.E. (2001). Is job insecurity harmful to health? *Journal of the Royal Society of Medicine*, 94(2), 71-76.
- Ferrie J. E., Shipley M. J., Newman K., Stansfeld S. A., Marmot M. (2005). Self-reported job insecurity and health in the Whitehall II study: Potential explanations of the relationship, *Social Science & Medicine*, 60, 1593–1602.
- Fevre R. (2007). Employment insecurity and social theory: The power of nightmares’, *Work, Employment and Society*, 21, 517–535.
- Gallie D., Felstead A., Green F., Inanc H. (2017). The hidden face of job insecurity, *Work, Employment and Society*, 31(1), 36-53.
- Geishecker, I. (2012). Simultaneity bias in the analysis of perceived job insecurity and subjective well-being, *Economics Letters*, 116, 319–321.
- Green F. (2011). Unpacking the misery multiplier: how employability modifies the impacts of unemployment and job insecurity on life satisfaction and mental health, *Journal of Health Economics*, 30(2), 265-276.
- Green F. (2009). Subjective employment insecurity around the world, *Cambridge Journal of Regions, Economy and Society*, 2, 343-363.

- Green F., Felstead A., Burchell B. (2000). Job insecurity and the difficulty of regaining employment: An empirical study of unemployment expectations, *Oxford Bulletin of Economics and Statistics*, 62, 855-883.
- Greenhalgh L., Rosenblatt Z. (1984). Job insecurity: Toward conceptual clarity, *The Academy of Management Review*, 9(3), 438-448.
- Heaney C.A., Israel B.A., House J. S. (1994). Chronic job insecurity among automobile workers: effects on job satisfaction and health, *Social Science & Medicine*, 38(10), 1431-1437.
- Hellgren J., Sverke M., Isaksson K. (1999). A two-dimensional approach to job security: consequences for employee attitudes and well-being, *European Journal of Work and Organizational Psychology*, 8, 179-195.
- House J. S., Robert L. K. (1985). Measures and concepts of social support. In Cohen S., Syme S.L. (eds), *Social Support and Health*, Orlando, FL: Academic Press, 83-108.
- Huang G.-H., Niu X., Lee C., Ashford S.J. (2012). Differentiating cognitive and affective job insecurity: antecedents and outcomes, *Journal of Organizational Behavior*, 33(6), 752-769.
- Hipp L. (2016). Insecure time? Workers' perceived job and labor market security in 23 OECD countries, *Social Science Research*, 60, 1-14.
- Jacobson D.E. (1986). Types and timing of social support, *Journal of Health and Social Behavior*, 27(3), 250-264.
- Kalleberg A.L. (2009). Precarious work, insecure workers: employment relations in transition, *American Sociological Review*, 74, 1-22.
- Kalleberg A.L. (2000). Nonstandard employment relations: Part-time, temporary and contract work, *Annual Review of Sociology*, 26(1), 341-365.
- Keim A.C., Landis R. S., Pierce C. A., Earnest D.R. (2014). Why do employees worry about their jobs? A meta-analytic review of predictors of job insecurity, *Journal of Occupational Health Psychology*, 19(3), 269-290.
- Kuhnert K., Sims R., Lahey M. (1989). The relationship between job security and employees' health, *Group and Organization Studies*, 14, 399-410.
- LaRocco J.M., House J.H., French J.R.P. (1980). Social support, occupational stress, and health, *Journal of Health and Social Behavior*, 21(3), 202-218.

- Landsbergis P.A., Grzywacz J.G., LaMontagne A.D. (2014). Work organization, job insecurity, and occupational health disparities, *American Journal of Industrial Medicine*, 57, 495-515.
- Larson J.H., Wilson S. M., Beley R. (1994). The impact of job insecurity on marital and family relationship, *Family Relations*, 43(2), 138-143.
- Lee C., Huang G.-H., Ashford S.J. (2018), Job insecurity and the changing workplace: Recent developments and the future trends in job insecurity research, *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 335-359.
- Lim V. K. G. (1996). Job insecurity and its outcomes: Moderating effects of work-based and nonwork-based social support, *Human Relations*, 49(2), 171-194.
- Lübke C., Erlinghagen M. (2014). Self-perceived job insecurity across Europe over time: Does changing context matter? *Journal of European Social Policy*, 24(4), 319-336.
- Mau S., Mewes J., Schöneck N.M. (2012). What determines subjective socio-economic insecurity? Context and class in comparative perspective, *Socio-Economic Review*, 10, 655-682.
- Muñoz de Bustillo R., de Pedraza P. (2010). Determinants of job security in five European countries, *European Journal of Industrial Relations*, 16(1), 5-20.
- Näswall K., De Witte H.(2003). Who feels insecure in Europe? Predicting job insecurity from background variables, *Economic and Industrial Democracy*, 24(2), 189-215.
- Origo F., Pagani L. (2009). Flexicurity and job satisfaction in Europe: The importance of perceived and actual job stability for wellbeing at work, *Labour Economics*, 16, 547–555
- Rosenblatt Z., Talmud I., Ruvio A. (1999). A gender-based framework of the experience of job insecurity and its effects on work attitudes, *European Journal of Work and Organizational Psychology*, 8(2), 197-217.
- Scherer S. (2009). The social consequences of insecure jobs, *Social Indicators Research*, 93(3), 523-547.
- Schreurs B.H.J., Van Emmerik IJ. Günners H., Germeys F. (2012). A weekly diary study on the buffering role of social support in the relationship between job insecurity and employee performance, *Human Resource Management*, 51(2), 259-280.

Shoss M. (2017). Job insecurity: An integrative review and agenda for future research, *Journal of Management*, 43(6), 1911-1939.

Sverke M., Hellgren J. (2002). The nature of job insecurity: Understanding employment uncertainty on the brink of new millennium, *Applied Psychology*, 51(1), 23-42.

Sverke M., Hellgren J. Näswall K. (2002). No security: A meta-analysis and review of job insecurity and its consequences, *Journal of Occupational Health Psychology*, 7(3), 242-264.

Thoits P.A. (1995). Stress, coping, and social support processes: Where are we? What next?, *Journal of Health and Social Behavior*, 35, 53-79.

Appendix A

Table A1. Definition of variables

<i>Variable</i>	<i>Description</i>
<i>Dependent variables</i>	
Job tenure insecurity	= 1 if the respondent strongly agrees that "I might lose my job in the next 6 months"
Job market insecurity	= 1 if the respondent strongly disagrees that "if I were to lose or quit my current job, it would be easy for me to find a job of similar salary"
<i>Key independent variables</i>	
<i>Work-based social support</i>	
Boss emotional support	0 - 2. The respondent strongly agrees that the boss "respects you as a person" and " gives you praise and recognition when you do a good job"
Boss instrumental support	0 - 4. The respondent strongly agrees that the boss "is successful in getting people to work together" and " is helpful in getting the job done" and " provides useful feedback on your work" and "encourages and supports your development"
Middle management instrumental support	= 1 if the respondent always answers that "your manager helps and supports you"
Colleagues instrumental support	= 1 if the respondent always answers that "your colleagues helps and supports you"
<i>Nonwork-based social support</i>	
Voluntary activity	= 1 if the respondent does voluntary or charitable activity
Political/trade union activity	= 1 if the respondent does political or trade union activity
Leisure activities	= 1 if the respondent does sporting, cultural or leisure activity outside your home
<i>Control variables:</i>	
<i>Individual characteristics</i>	
Male	= 1 if male
Age	Age of the respondent (in log)
Born in the country	= 1 if the respondent was born in the country
Secondary education	= 1 if the highest level of education completed is lower and upper secondary education and post-secondary non tertiary education
Income	Net monthly earnings from the main job in euro (in log)
<i>Family structure</i>	
Household size	Number of people living in the household
Resp_most_household income	= 1 if the respondent is the person who contributes the most to the household income
Able to make ends meet with difficulty	= 1 if the household is able to make ends meet with difficulty

Job-related characteristics

Unlimited duration contract	= 1 if contract of unlimited duration
Limited duration contract	= 1 if contract of limited duration
Agency contract	= 1 if a temporary employment agency contract
Tenure	Number of years in which the respondent has been in company or organization
Hours per week	Hours usually worked per week in the main job (in log)
Job 7days	= 1 if the respondent usually works 7 days for week = 1 if the respondent is employed as managers, professional, technicians and associate
Job_professionals	professionals = 1 if the respondent is employed as clerical support workers, service and sales workers,
Job_skilled	forestry and fishery workers
Public sector	= 1 if the respondent works in public sector

Organizational features and changes

Firm one site	= 1 if the respondent works in a company which operates from on site
Nr_employees_firm	1 = 1; 2 = (2 - 9); 3 = (10 - 249); 4 = 250+
Nr_employees_decreased	= 1 if the respondent agrees that during the last three years the number of employees at workplace decreased = 1 if the respondent agrees that during the last three years there has been a restructuring or
Restructuring affect work	reorganization at workplace that has substantially affected his/her work = 1 if the respondent agrees that during the last year, number of hours usually worked per
Work_hours_increased	week in the main job increased = 1 if the respondent agrees that during the last year, salary or income in the main job
Salary_increased	increased

Work organization

Hrs_not_fit_with family	= 1 if the respondent agrees that working hours do not fit well with family
Working time sets by firm	= 1 if the respondent agrees that the working hours are set by the company with no possibility for changes
Working deadlines	= 1 if the respondent agrees that his/her job involves tight deadlines
Working very speed	= 1 if the respondent agrees that his/her job involves a high speed = 1 if the respondent agrees that his/her pace of work depends on the direct control of the
Pace of work boss	boss = 1 if the respondent agrees that his/her pace of work depends on the work done by
Pace of work colleagues	colleagues
Job involve standards	= 1 if the respondent agrees that his/her main job involves meeting precise quality standards
Job involve monotonous task	= 1 if the respondent agrees that his/her main job involves monotonous tasks
Work in team	= 1 if the respondent agrees that his/her works in a team with common tasks
Able to choose tasks order	= 1 if the respondent agrees that he/she is able to choose or change his/her order of tasks = 1 if the respondent agrees that he/she always consulted before objectives are set for his/her
Consulted	work
Involved	= 1 if the respondent agrees that he/she always involved in improving the work organization
Skills match duties	= 1 if the respondent agrees that his/her skills correspond well with his/her duties
Training paid boss	= 1 if the respondent agrees that his/her training was paid by boss

Workplace

Trade union in company	= 1 if the respondent agrees that a trade union, works council or a similar committee representing employees exists in his/her company
Work fairly distributed	= 1 if the respondent agrees that the work is distributed fairly
Conflicts resolved fairly	= 1 if the respondent agrees that conflicts are resolved in a fair way = 1 if the respondent agrees that there is a good cooperation between you and your
Cooperation among colleague colleagues	
Employees trust management	= 1 if the respondent agrees that in general, employees trust management

Table A2. Job insecurity across European Union countries					
Older European Union countries			Novel European Union countries		
Countries	Job tenure insecurity	Job market insecurity	Countries	Job tenure insecurity	Job market insecurity
Austria	0,105	0,366	Bulgaria	0,106	0,546
Belgium	0,137	0,433	Croatia	0,209	0,653
Denmark	0,099	0,299	Cyprus	0,133	0,779
Finland	0,163	0,524	Czech Republic	0,202	0,619
France	0,138	0,447	Estonia	0,174	0,527
Germany	0,096	0,479	Hungary	0,189	0,426
Greece	0,258	0,696	Latvia	0,198	0,629
Ireland	0,130	0,405	Lithuania	0,144	0,544
Italy	0,220	0,535	Malta	0,072	0,414
Luxembourg	0,110	0,375	Poland	0,260	0,337
Netherlands	0,251	0,491	Romania	0,151	0,309
Portugal	0,155	0,576	Slovakia	0,079	0,505
Spain	0,294	0,462	Slovenia	0,278	0,572
Sweden	0,156	0,290			
UK	0,119	0,372			