

Under pressure

An international comparison of job security, social security, and extra effort

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Introduction

Even though several theories imply that the security that workers experience affects their work behavior, there is disagreement concerning at least two questions, namely: (1) is there a negative or positive relationship between job security and employee effort?; and (2) what are the theoretical mechanisms explaining this relationship? These two questions are interrelated and in the existing literature two sides of the debate can be identified. On the one hand, there are economic approaches to employee behavior and motivation, like agency theory (Eisenhardt, 1989; Jensen and Meckling, 1976; Shapiro, 2005). Proponents of such economic approaches argue that security drives out motivation, thus decreasing the effort that workers put into their work. Therefore, insecurity may motivate employees and gives them an incentive to work. On the other hand, there are authors adhering to sociological and social-psychological theories like social exchange theory (Cropanzano and Mitchell, 2005) arguing that ongoing and secure employee-organization relationships are a necessary requirement for worker motivation and that increasing job insecurity therefore decreases work effort.

Clearly these two approaches of worker motivation differ in quite a number of respects, for example with regards to the behavioral assumptions on which they are based. Nevertheless, what seems to be most relevant if they are applied to the impact of job security are their basic assumptions about the interactions taking place between employers and employees. Future interactions between employees and organizations are central to the arguments underlying agency theory as it emphasizes the motivating role of future rewards that employees may receive if they work hard. In contrast, social exchange theory is more concerned with how past interactions in the employee-organization relationship affect employee behavior, thus focusing on the disruptive effect that job insecurity can have. In other words, while the agency argument regards job insecurity as instrumental and motivational, social exchange theory views job insecurity as part of the employment relationship that can drive out motivation. Therefore, examining the relationship

between job security and work effort helps to shed a light on the relative importance of these facets of employee-organization relationships and along with that on the opposing theories concerning employee motivation and behavior. What is more, although these positions may seem contradictory at first sight, it can also be the case that they both apply and only hold under certain conditions or differ across social contexts. The present study investigates to what extent this is the case.

With regard to job security, there is a debate among researchers and policy makers whether one should look at its objective or subjective characteristics (Boeri and Van Ours, 2008; De Cuyper, De Witte, Vander Elst and Handaja, 2010; Klandersmans, Klein Hesselink and Van Vuuren, 2010; Scheve and Slaughter, 2004). Both aspects – having a secure position through a permanent contract and the individual's perception about the continuation of the current job – are at the core of the security that employees face. They do, however, entail different experiences (Jacobson, 1991; Saloniemi and Zeytinoglu, 2007; Sverke, Hellgren and Näswall, 2002) and may lead to different outcomes for employees (Beard and Edwards, 1995; Kochan, Smith, Wells and Rebitzer, 1994; Koster, 2005). This means that objective and subjective job security do not overlap completely. It is possible that employee with permanent positions (are objectively secure) face job insecurity (are subjectively insecure), for example because of organizational restructuring. Despite the differences between the contractual employment relationship and the level of job security that employees experience, their theoretical predictions are closely related. This is particularly clear in the studies that regard temporary contracts as a source of job insecurity. In the present study, the focus is not on comparing the outcomes of objective and subjective job security. To take into account that temporary contracts may lead to insecurity, the emphasis is put on subjective security in the empirical analyses.

As suggested by both agency theory and social exchange theory, job security may have consequences for the amount of effort employees put into their work. Work effort is investigated under different headings and in this study the focus is on a particular kind of work effort, namely

the willingness to work harder to make the organization succeed. This kind of preparedness is closely related to what is known as Organizational Citizenship Behavior (OCB), a term that refers to different kinds of extra effort that employees are willing show in their work situation (Organ, 1988). Most of the empirical research of OCB concentrates on the individual or team level, using data from a single organization (Podsakoff, MacKenzie, Paine and Bachrach, 2000). This study contributes to OCB research as it examines the willingness to show extra effort at work using data of a large number of respondents from several countries. Investigating data from 22 countries provides the possibility to investigate the link between job security and extra effort. Besides that, it enables to take into account whether institutional characteristics, in terms of the level of social security that is present within a country, affects the extra effort of employees either directly or indirectly.

In summary, the present paper aims at providing the following contributions to the literature. First it aims at shedding more light on the relationship between security and work effort by elaborating two theoretical positions that lead to opposing predictions and explanations about this relationship at first sight. Secondly, it aims at providing a better understanding of how the institutional context may affect the relationships between job security and work effort. By doing so, the analyses also aim at contributing to the field of OCB, and similar concepts, as it using cross national rather than organizational level data.

Extra effort

Showing extra effort at work refers to the willingness of employees to do more tasks than those stated in their formal job description. This kind of behavior is often defined and conceptualized as one of the core dimensions of Organizational Citizenship Behavior (OCB) (Organ, 1988). With regard to the extra effort that employee show, it makes sense to distinguish in-role behavior from extra-role behavior. According to this distinction, extra effort refers to behavior that can be regarded

as extra-role behavior as it concerns behavior that is not specified in the employment contract (Van Dyne, Cummings and McLean-Parks, 1995). Furthermore, to define extra effort more strictly, another distinction of work effort is in place. It is also important to explore whether extra effort can be regarded as involuntary work effort or as voluntary work effort instead (Ollo-Lopez, Bayo-Moriones and Larraza-Kintana, 2010; Vigoda-Gadot, 2007). While the first kind of effort refers to the minimal effort that employees need to show in order not to get fired and to stay with the organization, the second kind of effort includes those types of behavior that go beyond the formal requirements. As such, there seems to be a close relationship between voluntary work effort and discretionary work efforts like extra-role behavior (Macky and Boxall, 2007).

Although researchers have made such theoretical distinctions, the question remains to what extent they hold in reality. It turns out that defining and separating in-role and extra-role behavior is not always easy in practice, for example because the opinions of employers and employees diverge about what is part of the contractual obligation and what does not (Koster and Sanders, 2006; Pond, Nacoste, Mohr and Rodriguez, 1997). This clearly applies to extra effort as employees may view this as doing something extra for the organization, while employers can expect from their employees to do some extra tasks if this is necessary for the survival and success of the organization. Furthermore, it can be argued that the extent to which tasks are performed voluntarily varies across organizational settings. This is also likely to hold for extra effort. Whereas there are many situations in which employees will volunteer to help others in the organization, it is not difficult to imagine situations in which employees feel they are forced to do so, for example because there is competition between employees. Hence, although extra effort can be thought of in terms of both extra-role behavior and voluntary work effort, there are instances in which it is regarded as in-role behavior (in particular by employers) and there are situations in which it is shown involuntarily (if the employee has very little possibilities to do otherwise).

The (de)motivating effect of job insecurity

The issue of voluntary and involuntary work effort is relevant for understanding part of the difference between the two broad theoretical frameworks explaining employee effort examined in this study. Agency theory, like other economic approaches of organizations, assumes that employees are reluctant to work and as such it seems to view work effort as being involuntary.

Social exchange theory, and other sociological and psychological approaches based on a broader set of work motivations, is based on the assumption that employees can show effort at work in response to the behavior of employers, leaving more room for the possibility of voluntary work effort. This means that agency theory and social exchange theory have different interpretations of work effort and provide different explanations why employees show it. These interpretations are further elaborated by theorizing its relationship with job security.

Agency theory

Agency theory is a general framework that can be applied to relationships in which one actor (the agent) operates on behalf of another actor (the principal) (Shapiro, 2005). The core assumptions of this theory are that the interests of the principal and the agent diverge, that the relationship is characterized by asymmetric information (the agent has more information about how much effort is put in the task than the principal), and that the agent is risk averse (Eisenhardt, 1989; Petersen, 1993; Shapiro, 2005). Applied to the employment relationship, this means that employers (principals) hire employees (agents) to perform certain tasks and that the employer has incomplete information about the effort shown by the employee. A potential solution from the employer perspective is to create a contract that directly links the level of pay to the effort of the employee. The problem, however, is that many jobs involve tasks that cannot be easily measured and besides that, there are many jobs in which the outcomes do not perfectly depend on the effort of the employee but also on random factors. Given that employees are risk averse, they will not accept a

contract that is completely based on their own performance. On the other hand, principals may not be willing to offer contracts with a flat-rate payment as it may decrease the effort of employees. Hence, employers may use other mechanisms to motivate employees and to increase their performance. One means of doing that is by promising future rewards in return for extra effort. Receiving a secure position is among these potential rewards; in particular if employees have to compete for a limited number of secure positions. By making the transformation from an insecure to a secure position contingent upon the effort that employees is according to this framework an effective means to motivate employees to show extra effort.

Prior research investigated the consequences of agency theory's assumptions for work effort by applying it to the duration and the status of the employment relationship. In part, this research focuses on the effect that job insecurity, in terms of having a temporary contract, has on the behavior of employees. The outcomes of some of the empirical studies are in line with agency argument. For example, starting from the assumption that temporary jobs are of lower quality than permanent jobs (Booth, Francesconi and Frank, 2002), it can be expected that employees have a strong incentive to show extra effort to achieve a better position. This expectation is confirmed in studies focusing on unpaid overtime and employee absenteeism (Bradley, Green and Leeves, 2007; Engellandt and Riphahn, 2005). Hence, there is research evidence confirming the theoretical notions of agency theory applied to temporary contracts. Therefore, from this literature, it can be argued that job insecurity may be one means to achieve extra effort. Or, the other way around, too much job security may take away the incentive to show extra effort for employees. These considerations lead to the following hypothesis.

Hypothesis 1a: Extra effort is negatively related to job security.

Social exchange theory

Social exchange theory provides a general framework for analyzing relationships within organizations (Cropanzano and Mitchell, 2005). This framework brings together different strands of the organizational literature, such as research on psychological contracts and the employee-organization relationship (Rousseau, 1995; Tsui, Pearce, Porter and Tripoli, 1997). While literature on psychological contracts concerns the perceptions that employees have about the employment relationship, the employee-organization relationship literature focuses more on the actual and formal exchange relationship between employees and their organization. These different research traditions can shed a light on the question to what extent and how the employees' willing to show extra effort relates to organizational practices and employer behavior (Cropanzano and Mitchell, 2005). The basic assumption of social exchange theory is that behavior can be understood by focusing on the interactions between actors and that reciprocity is a central part of social exchange relationships (Blau, 1964; Gouldner, 1960; Homans, 1961). This implies that the behavior that individuals show is a response to past behavior of others. An important aspect of the reciprocity principle is that individuals are willing to cooperate with those who are cooperating with them, but also that they are not cooperative towards those who do not cooperate with them. This principle then results in balanced relationships. Following this logic, it can be understood why violation of the psychological contract is likely to lead to less employee effort and may even result in deviant employee behavior (Turnley, Bolino, Lester and Bloodgood, 2003; Zhao, Wayne, Glibkowski and Bravo, 2007).

The principle of reciprocity also underlies the fourfold model of employee-organization relationships based on the expectations that employees and employers have about how much effort they should put into their relationship (Tsui, Pearce, Porter and Tripoli, 1997). This model distinguishes the quasi-spot relationship (both parties have low expectations about each other's investments), the underinvestment relationship (the organizations expects high effort of the employee, but is not willing to invest in the employee), the over-investment relationship (the

organization invests a lot in the employee, without expecting extra effort in return) and the mutual investment relationship (the organization is willing to invest in the employee and expects the employee to show extra effort). For the present analyses, a twofold distinction suffices to understand extra effort based on social exchange theory. The first two employee-organization relationships are likely to lead to little extra effort, while the latter two are likely to lead to higher levels of extra effort (even in the over-investment relationship).

The provision and withholding of job security can be applied to the social exchange relationship between employers and employees. While not providing job security will be perceived as an under-investment on part of the employer, the provision of job security is part of the over-investment and mutual investment relationship. Hence, job insecurity can affect the relationship between employers and employees (Ashford, Lee and Bobko, 1989; Barling and Kelloway, 1996; Hartley, Jacobson, Klandermans and Van Vuuren, 1991; Lim, 1996). And, this may explain why studies find that job insecurity is negatively related to the wellbeing of employees and increases stress at work (Chirumbolo and Areni, 2010; De Witte, 1999; Ferrie, Shipley, Marmot, Stansfeld and Smith, 1998; Hansen and Ingebrigtsen, 2008; Heany, Israel and House, 1994; Hellgren, Sverke and Isaksson, 1999) and that OCB is higher among employees with more job security (Organ and Ryan, 1993). This leads to the next hypothesis.

Hypothesis 1b: Extra effort is positively related to job security.

Combining agency theory and social exchange theory

Although Hypotheses 1a and 1b seem contradictory, since they lead to contrasting predictions about the relationship between job security and extra effort, it is also an option that both of them apply but that the outcomes depend on the conditions or contexts in which they appear. In the following, these conditions and contexts are further explored, first by focusing on how different levels of job

security may relate to extra effort and then by hypothesizing how social security (as a characteristic of an employees' social context) may affect the relationship between job security and extra effort.

For that purpose, the difference between extra effort as voluntary or involuntary work effort is relevant. Whereas agency theory predicts that any kind of work effort is shown involuntary and needs to be externally motivated, social exchange theory focuses on voluntary work effort resulting from productive exchange relationships between employers and employees. As a result, instead of arguing that there is a linear relationship between job security and extra effort, the following can be hypothesized as well. On the one hand, the employees facing the highest level of job insecurity may show higher levels of extra effort as predicted by agency theory. The reason for this is that working extra hard may be the only way for them to achieve a somewhat more secure position (or it can be a way to avoid unemployment). Here it can be argued that employees involuntarily show extra effort. At the same time, there are employees facing high levels of job security. For this group of employees, the predictions from social exchange theory may hold. They are in the position that is required to establish a mutual investment or over-investment employee-organization relationship in which they are willing to voluntarily show extra effort in response to the investments that their employer offers.

These theoretical considerations show that both arguments can apply. The agency argument applies to the most insecure workers and social exchange arguments to the employees having a secure position. This raises the question what may happen to the employees that have a moderate level of job security. Based on agency theory and social exchange theory, the expectation is that they are too secure to be externally motivated (the agency argument) and experience a quasi-sport or an underinvestment employee-organization relationship preventing them from showing voluntary work effort (the social exchange argument). Combining these arguments leads to the next hypothesis.

Hypothesis 2: Extra effort is curvilinearly (U-shaped) related to job security.

The role of the welfare state

The employment relationship, and the level of job security and employee effort associated with it, is part of a wider set of institutions that may affect its functioning and outcomes (Marsden, 1999). The welfare state consists of institutional arrangements to assure that citizens have a reasonable standard of living, even if they are not able to earn their own income (Lindbeck, 2006). Such arrangements are based on a set of rights and obligations and are financed with public resources (Swank, 1998). Part of the welfare state arrangements are specifically related to employment and the labor market, for example government rules concerning the dismissal of employees (e.g. employment protection) and the benefits that employees receive if they become unemployed (Boeri and Van Ours, 2008). More in general, welfare state arrangements concern social policies related to schooling, pensions, health and housing. Together, the social policies aimed at protecting the public against misfortune can have an impact on their attitudes about work as well as the level of job insecurity that people experience (Anderson and Pontusson, 2007; Erlinghagen, 2008). What is more, it may also have a direct effect on people's work effort (Ichino and Riphahn, 2005; Johansson and Palme, 2002). Besides that, the welfare state and the level of security it offers to citizens may moderate the relationship between job insecurity and extra effort. This is also suggested by theories focusing on labor-management conflicts (e.g. Korpi and Palme, 2003). The extent to which these conflicts are present in society, arguably depend on the level of social security. And, in turn, a reduction of such conflicts may affect the extra effort shown by employees. Given the hypotheses stated above, different hypotheses can be formulated.

The first possibility is that the welfare state can strengthen the relationship between job security and extra effort. In line with the agency hypothesis, stating that insecurity is positively related to extra effort, this means that social security leads to even lower levels of extra effort. Or,

the other way around, employees show more extra effort if they experience job insecurity and live in a country with low levels of social security. The hypothesis based on social exchange theory predicts the opposite and leads to the expectation that extra effort requires security. Extending this to the welfare state, the expectation is that extra effort is the highest among employees experiencing high levels of job security and who live in country with high level of social security. Hence, the perspective that the welfare state can strengthen the relationship between job security and extra effort, leads to the following two hypotheses, which depend on the initial relationship between job security and extra effort (as stated in Hypothesis 1a and 1b).

Hypothesis 3a: The negative relationship between extra effort and job security is stronger as the level of social security at the national level is lower.

Hypothesis 3b: The positive relationship between extra effort and job security is stronger as the level of social security at the national level is higher.

These two hypotheses are based on the assumption that job security and social security add up to more security for the individual employees. And, therefore, having more of it leads to less or more extra effort, depending on the theoretical starting point. In contrast to that, it can also be that job security and social security have opposing effects. This cannot be excluded beforehand given the contrasting theoretical positions of agency theory and social exchange theory. Considering that social security, just like job security, may be negatively or positively related to extra effort, but that these outcomes are not necessarily similar to those of job security, two other hypotheses can be formulated. These hypotheses are based on the theoretical possibility that the relationship between job security and extra effort may be the opposite of the relationship between social security and extra effort.

Hypothesis 4a: The negative relationship between extra effort and job security is weaker as the level of social security at the national level is lower.

Hypothesis 4b: The positive relationship between extra effort and job security is weaker as the level of social security at the national level is higher.

Hypotheses 3 and 4 include the effect that social context has on the relationship between job security and extra effort, which were formulated in Hypothesis 1a and 1b. In a similar fashion, it is possible to add the moderating effect of social context to Hypothesis 2. According to Hypothesis 2, combining agency and social exchange arguments, the effect of job security on extra effort depends on the level of job security: both employees facing the lowest and those experiencing the highest level of job security show more extra effort compared to employees experiencing moderate levels of job security. Also in this case, the level of social security may have an impact on this relationship. The same possibilities as in Hypotheses 3 and 4 are explored, meaning that the welfare state either strengthens or weakens the curvilinear relationship between job security and extra effort. If social security strengthens the curvilinear relationship, it leads to the prediction that in countries where there is more social security, the insecure and secure show more extra effort compared to those in countries with lower levels of social security. And, if the relationship is weakened, it means that extra effort is particularly high among the insecure and secure employees living in insecure countries. Hypotheses 5a and 5b summarized these two theoretical positions.

Hypothesis 5a: The curvilinear (U-shaped) relationship between extra effort and job security is strengthened by social security at the national level.

Hypothesis 5b: The curvilinear (U-shaped) relationship between extra effort and job security is weakened by social security at the national level.

Data and method

Data

To test the hypotheses, data from two sources are combined. The individual level data are gathered through the International Social Survey Programme (ISSP, 2005), which is an international comparative survey that is held each year since 1985. In every round, the ISSP investigates a specific topic. In 2005, a module called “Work Orientations” was included in the survey. This model includes a list of items asking employees questions about their work situation. These individual level survey data are combined with national level data that are available through the OECD (OECD, 2005). Some of the countries that were investigated in the ISSP round of 2005 could not be analyzed in this study. In some countries the dependent variables was not measured and other countries dropped out because information about the country level independent variable are missing. The total dataset includes information about 19,731 employees from 22 advanced countries around the globe.

Measures

Dependent variable: extra effort

The dependent variable of this study, *extra effort*, is measured with the following question: “I am willing to work harder to let the firm succeed”. The answer categories range from (1) strongly agree and (5) strongly disagree. The item is reverse coded to ensure that higher scores reflect higher levels of extra effort.

Independent variable: job security

The variable *job security* is measured with responses to the item: “My job is secure”. Respondents could score between (1) strongly agree and (5) strongly disagree. The answers are reverse coded and a higher score means more job security.

Moderating variable: social security

The level of *social security* in a country is measured with the level of spending on social security as a share of gdp.

Control variables

Several variables are included that may influence the level of extra effort that employees are willing to show. These control variables measure a standard set of background characteristics of the respondents, namely *gender* (0 = male; 1 = female), *age* (in years), *educational level* (0 = no formal qualification; 5 = university degree completed), characteristics of the work situation, namely *hours of work* (the number of hours that the respondents works weekly), *supervisory job* (0 = no; 1 = yes), and the *labor market position* of the respondents. This latter variable is measured with an item asking about the ease with which someone can find a job of the same quality as the current one. Respondents can scores between 1 (very easy) and 5 (very difficult). The variable is recoded as such that a higher scores indicates a stronger labor market position (meaning that someone can more easily find a similar job). Furthermore, characteristics of the organization are controlled for by including a variable measuring *organization type*, indicating whether the respondent works for the government, is employed at a public organization, or works for a private firm.

At the national level, the variable *gdp per capita* is included to account for the possibility that prosperity may decrease the willingness to show extra effort at work.

Method

Multilevel analysis (DiPrete and Forristal, 1994; Goldstein, 2003; Snijders and Bosker, 1999) is applied because the dataset includes information belonging to two different levels of aggregation, namely the individual level (level 1) and the national level (level 2). The analyses are performed in a number of steps. First an empty model (model 0) is computed. This model does not include independent variables and serves as baseline to compare the rest of the models. Secondly, the individual and national level control variables are added (model 1). The next model includes the effects of job security and social security (model 2). Then, in model 3, the squared term of job security is added to investigate whether extra effort is curvilinearly related to job security. In model 4, the cross level interaction between job security and social security is added to investigate whether the welfare state weakens or strengthens the relationship between job security and extra effort. And, finally, the cross level interaction effect of social security with the squared term of job security is added (model 5). The cross level interactions are investigated following procedures offered by Aguinis, Gottfredson and Culpepper (2013). Particularly, we grand mean centered the predictors (except the dummy variables) and graph the interaction effects to ease the interpretation of the findings.

The parameters of the models are estimated by the maximum likelihood method (Goldstein, 2003) and the regression coefficients are tested by Wald tests (Snijders, 2003). The deviance between the models (the differences in -2 log likelihood) evaluates the fit of the different models. The intraclass correlation coefficient (ICC) is calculated by computing the variance at level 2 as a share of the total (level 1 and level 2) variance. The data are analyzed using STATA.

Results

Descriptive results

Table 1 shows the number of respondents, the country level means of extra effort and job security, and the level of social security per country. Extra effort ranges from 2.56 in France to 4.05 in the

United States. On average, the employees in Denmark report the highest level of job security ($m = 3.95$) and the employees in South Korea experience the lowest level of job security ($m = 3.28$) across this sample of countries. Furthermore, Table 1 shows that the lowest level of spending on social security is found in South Korea and that Sweden has the highest level of social security of the countries in the dataset.

[Table 1 about here]

Multilevel analyses

[Table 2 about here]

Table 2 presents the outcomes of the multilevel analyses. From the empty model can be read that about 9 percent of the variation in extra effort is due to between-country variance ($ICC = 0.09$). Adding the control variables (model 1) significantly improves the fit of the model (Deviance = 184.953; $p < 0.001$). The results show that extra effort is related to a number of the control variables at the individual level, but not to the economic wealth of a country (effect of gdp per capita is not significant). Extra effort is higher among men, higher educated employees, those who work more hours, supervisors, employees with a weaker labor market position, and employees working in the private sector (compared to employees in government and public organizations, these employees report higher levels of extra effort).

Model 2 includes the two kinds of security central to this study. Adding job security and social security to the model, significantly improves its fit (Deviance = 65.155; $p < 0.001$). The ICC drops to 0.052, indicating that these two variables account for about 40 percent of the country variance in extra effort. Model 2 shows that job security and social security have an opposite

relationship with extra effort. While job security is positively related to extra effort ($b = 0.088$; $p < 0.001$), social security is negatively related to extra effort ($b = -0.034$; $p < 0.001$). In addition to that, model 3 tests whether there is a curvilinear relationship between job security and extra effort. It turns out that adding this variable does not improve the fit of the model (Deviance = n.s.). Furthermore, the variable itself is also not significantly related to extra effort. The outcomes from the analyses reported in models 2 and 3 provide support for Hypothesis 1b (based on social exchange theory) and lead to a rejection of Hypothesis 1a (based on agency theory). Furthermore, Hypothesis 2 (stating that the relationship between job security and extra effort is U-shaped) is rejected (as the pattern is a reversed U-shape).

In model 4, the interaction effect between job security and social security is investigated. First, adding this interaction effect improves the fit of the model significantly (Deviance = 7.708; $p < 0.001$) and secondly, the interaction effect itself is significant ($b = -0.005$; $p < 0.001$). Since the sign of the interaction effect is negative, this result means that the relationship between job security and extra effort is weakened by the level of social security at the national level (Figure 1 shows the graph representing the interaction effect). While model 4 investigates whether there is a linear interaction effect between job security and social security, model 5 tests whether this relationship is curvilinear by adding the interaction between the squared term of job security and social security to the model. Including this variable further improves the fits of the model (Deviance = 4.629; $p < 0.001$). The interaction effect itself is negative and significant ($b = -0.003$; $p < 0.05$). This outcomes shows that there is a curvilinear relationship between job security and extra effort, depending on the level of social security of a country. A further visual inspection of this effect (represented in Figures 1 and 2) leads to the following insights about it. While in countries where there is more social security, the level of job security does not have an effect on the level of extra effort that employees are willing to show, there is a curvilinear relationship between job security and extra effort in countries with lower levels of social security. Therefore, it is concluded that social security does not

strengthen the curvilinear relationship between job security and extra effort, but that this relationship is weakened by it. With the outcomes of models 4 and 5 it is possible to assess Hypotheses 3, 4 and 5. While model 4 provides evidence in support of Hypothesis 4b, the results of model 5 show that adding the squared term of job security leads to a better fit of the model. Hence, it is not concluded that there is a linear interaction effect of job insecurity and social security on extra effort, as predicted by Hypothesis 4b. Instead, the results are more in line with the expectation of Hypothesis 5b. The hypotheses and the empirical results are summarized in Table 3.

[Figures 1 and 2 about here]

[Table 3 about here]

Conclusion and discussion

This study has brought together different parts of the literature to advance and test a theory of the relationship between job security and extra effort. Based on two seemingly conflicting approaches to the employment relationship and employee behavior – agency theory and social exchange theory – the results show that they may complement each other in some respects. Examining the direct relationship between job security and extra effort, the outcomes are supportive of social exchange theory. Nevertheless, acknowledging that agency theory and social exchange theory may focus on different sides of the relationship between job security and employee performance and taking into account the social context of this relationship, the analysis shows that combining these theories improves our understanding of the functioning and outcomes of the employment relationship. These results have a number of theoretical and practical implications and also lead to new questions for future research.

First, the two broad theoretical frameworks guiding this research are not necessarily in

conflict with each other, hence suggesting that they may apply to different situations. This finding leads to the conclusion that there may be different interpretations to what extra effort means. While the two theoretical frameworks may seem to focus on similar behavior, it may be that in reality there is a further distinction underlying employee behavior. This distinction itself is not new, but relating it to different theoretical frameworks can lead to new insights. Agency theory takes effort evasion as the starting point and focuses on the means that employers have to motivate their personnel. Therefore, the class of behavior it investigates can be regarded as involuntarily work effort. Social exchange theory, in contrast, leaves more room for voluntary work effort as it argues that employees may respond with such behavior if they believe that their employer is taking their wellbeing into consideration by fulfilling the psychological contract or investing in them. To understand this distinction additional research is needed in which more attention is paid to issues such as why employees show certain behavior and that investigates how this behavior depends on the circumstances. Ideally, such research can be performed using different methodologies. With additional survey research it is possible to relate employee behavior, like extra effort, to other independent variables than the ones investigated here to see whether involuntary and voluntary work effort can be distinguished. Using experimental research enables to gather more information to test whether the arguments about security hold. And, finally, qualitative research will be of importance to ask employees about the meaning of the extra effort they show and what role they assign to voluntary work effort in relation to job insecurity and job security.

Secondly, this study expands research on employee behavior, like organizational citizenship behavior, by using a large sample of employees working in different institutional settings. Instead of focusing on cultural differences (Tsui, Nifadkar & Ou, 2007) between these countries, the focus is on the way in which the welfare state (in terms of the level of social security) affects employee behavior. About the impact of social security, several conclusions can be drawn based on the results of this study. Although it was not the main part of the theoretical discussion investigated in this

study, the negative relationship between social security and extra effort is worth mentioning. That levels of extra effort are lower in countries with more social security suggests that there are fewer incentives to do so. This interpretation is basically in line with the agency argument. Seemingly, there is less at stake for employees in these countries. This is either because the existence of a social safety net softens the effects of job loss, for example employees experience a less severe drop in income if they become unemployed, or employees in these countries are able to find employment more easily if they become unemployed, for example because they live in a country with passive and active labor market policies (Van Vliet and Koster, 2011) that assists them to find a job. In that sense, the welfare state protects people against exploitation, as they are less dependent on the organization they work for. Instead of being in a position that makes them work as hard as possible to attain their job, as is the case with employees in countries with low levels of social security, employees in countries with extensive social security experiences far less pressure to show extra effort. Hence, this study underlines the importance of the welfare state with regard to the security that employees face. While the positive relationship between job security and extra effort is shown across welfare states, the analyses show that the impact of job security differs depending on the security offered by the social security system. In countries with extensive social security systems, the extra effort of secure and insecure workers differs far less than in countries offering less social security. This means that there is a welfare state effect with regard to the effort that employees show at work. This effect is present in two ways: (1) directly, as the level of extra effort is lower in countries with more extensive social security; and (2) indirectly, since higher levels of social security dampen the effects of job security.

The influence of the institutional context also puts agency theory and social exchange theory in a different light and has consequences for prior research. The curvilinear relationship between job security in countries with low levels of social security, indicates that employees assign extra weight to the level of job security that they experience. For those with low job security, this means

that they have an extra incentive to work hard, even though they are in an insecure position, to make sure that they do not get in a situation that is even worse. And, those with a secure position seem to be more willing to reciprocate cooperative behavior by showing extra effort. For the study of organizations and employee behavior this part of the research suggests that it is fruitful to go beyond single country studies (which most of these studies are). Researchers are therefore strongly encouraged to focus on how employee behavior and organizational strategies depend on national characteristics. By doing so, future research will shed more light on issues like citizenship behavior and human resource practices. With its focus on the micro level, a large part of the management literature overlooks the question how macro level circumstances play out. Recent research, however, provides evidence for such links (e.g. Koster and Wittek, 2016). While this body of research is growing, there are many roads to explore, ranging from economic circumstances, social policies, and cultural differences. Focusing on these aspects will also have theoretical implications in line with the present study. As theoretical mechanisms may depend on social contexts – as is the case in this study – additional cross national work incorporating these contexts will inform us about the conditions under which these mechanisms work.

The results of the multilevel analyses can be summarized as follows. Overall, there is a positive relationship between job security and extra effort. This relationship is linear and not curvilinear. Besides that, the analyses show that social security moderates the relationship between job security and extra effort, in the sense that in countries with lower levels of social security, both secure and insecure workers are willing to show extra effort. While these results provide support for the hypotheses based on social exchange theory, there is also some evidence in support of the predictions of agency theory. Nevertheless, this seems to apply only to the situation in which employees experience insecurity both in their job and in their country in general (in the sense of low levels of social security).

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Tables**Table 1.** Descriptive statistics

Country	# of respondents	Extra effort	Job security	Social security
Australia	983	3.54	3.62	16.50
United Kingdom	404	3.69	3.77	20.60
United States	858	4.05	3.80	15.80
Hungary	401	3.42	3.47	22.60
Ireland	478	3.82	3.92	15.80
Norway	877	3.51	3.62	21.70
Sweden	751	3.23	3.70	29.10
Czech Republic	588	3.37	3.36	19.50
Slovenia	464	3.45	3.91	21.90
New Zealand	700	3.68	3.68	18.10
Canada	505	3.65	3.67	17.00
Israel	504	3.70	3.58	16.50
Germany	742	3.61	3.70	27.20
Japan	423	3.59	3.60	18.60
Spain	475	2.85	3.73	21.40
France	931	2.56	3.43	29.00
Portugal	886	3.51	3.60	22.90
Denmark	1029	3.60	3.95	27.20
Switzerland	594	3.83	3.68	20.20
Belgium	667	3.27	3.70	26.40
Mexico	435	3.92	3.87	6.90
South Korea	548	3.72	3.28	6.40
Total	19731	3.49	3.66	20.73

Sources: ISSP and OECD

Table 2. Results of the multilevel analysis of extra effort

	(1)	(2)	(3)	(4)	(5)
Country level					
Gdp per capita	0.004 (0.008)	0.010 (0.006)	0.010 (0.006)	0.010 (0.006)	0.010 (0.006)
Social security		-0.034*** (0.009)	-0.034*** (0.009)	-0.035*** (0.009)	-0.031*** (0.009)
Cross level interactions					
Social security X Job security				-0.005*** (0.001)	-0.007*** (0.002)
Social security X Job security ²					-0.003* (0.001)
Individual level					
Job security		0.088*** (0.008)	0.098*** (0.010)	0.088*** (0.008)	0.098*** (0.010)
Job security ²			0.013* (0.006)		0.013* (0.006)
Gender (1 = female)	-0.053** (0.019)	-0.056** (0.019)	-0.056** (0.019)	-0.057** (0.019)	-0.056** (0.019)
Age	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Educational level	0.034*** (0.007)	0.031*** (0.007)	0.031*** (0.007)	0.030*** (0.007)	0.030*** (0.007)
Number of hours	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)	0.002* (0.001)
Supervisory job	0.282*** (0.020)	0.268*** (0.020)	0.268*** (0.020)	0.269*** (0.020)	0.269*** (0.020)
Labor market position	-0.047*** (0.008)	-0.050*** (0.008)	-0.050*** (0.008)	-0.050*** (0.008)	-0.050*** (0.008)
Organization type					
Government	-0.126*** (0.023)	-0.160*** (0.023)	-0.164*** (0.023)	-0.159*** (0.022)	-0.161*** (0.023)
Public	-0.067* (0.032)	-0.087** (0.032)	-0.088** (0.032)	-0.085** (0.032)	-0.086** (0.032)
Private (reference)	--- (---)	--- (---)	--- (---)	--- (---)	--- (---)
Intercept	2.497*** (0.068)	2.498*** (0.053)	2.483*** (0.056)	2.498*** (0.053)	2.482*** (0.053)
Deviance ^{(a)(b)}	184.953***	65.155***	2.122	7.708***	4.629*
Variance level 2	0.096	0.055	0.055	0.055	0.054
Variance level 1	1.001	0.992	0.992	0.991	0.990
Intraclass correlation	0.087	0.052	0.052	0.052	0.052

Sources: ISSP and OECD

N: 19,731 respondents in 22 countries

Statistics for the empty model: -2 log likelihood = 18,559.400; Intercept = 2.527 (0.069); Variance level 2 = 0.104 (0.032); Variance level 1 = 1.031 (0.013); Intraclass correlation = 0.092

^(a) Model 3 and 4 are compared with model 2^(b) Model 5 is compared with model 4

* p < 0.05; ** p < 0.01; *** p < 0.001

Table 3. Summary of the hypotheses and results

	Hypothesis	Result
1a	Extra effort is negatively related to job security	rejected
1b	Extra effort is positively related to job security	supported
2	Extra effort is curvilinearly (U-shaped) related to job security	rejected
3a	The negative relationship between extra effort and job security is stronger as the level of social security at the national level is lower	rejected
3b	The positive relationship between extra effort and job security is stronger as the level of social security at the national level is higher	rejected
4a	The negative relationship between extra effort and job security is weaker as the level of social security at the national level is lower	rejected
4b	The positive relationship between extra effort and job security is weaker as the level of social security at the national level is higher	supported
5a	The curvilinear (U-shaped) relationship between extra effort and job security is strengthened by social security at the national level	rejected
5b	The curvilinear (U-shaped) relationship between extra effort and job security is weakened by social security at the national level	supported

Figures

Figure 1. Interaction effect of job security and social security on extra effort.

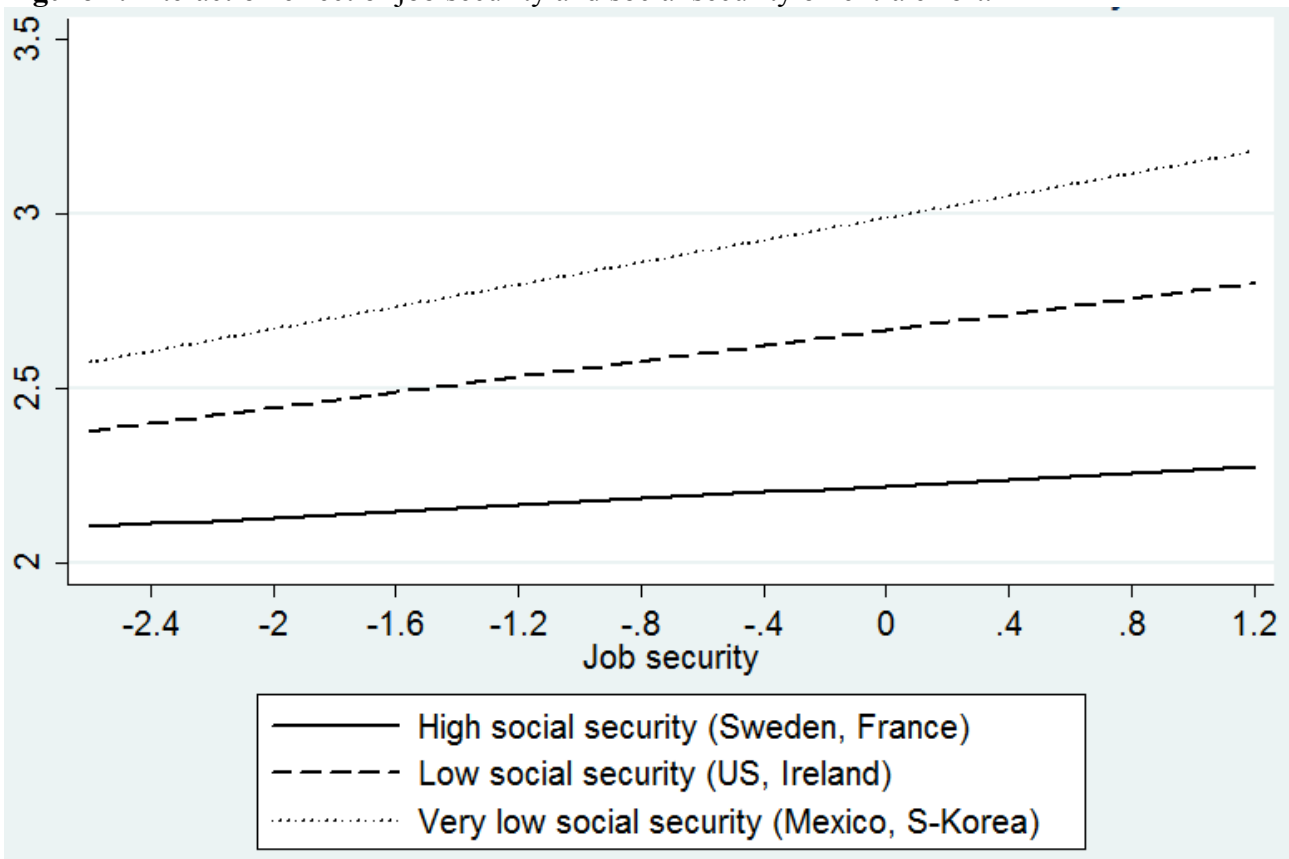


Figure 2. Curvilinear interaction effect of job security and social security on extra effort.

