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Revisiting the relationship between job demands and job performance: The effects of job security and traditionality

Chang-qin Lu, Dan-yang Du, Xiao-min Xu and Rui-fang Zhang

<sup>1</sup> School of Psychological and Cognitive Sciences and Beijing Key Laboratory of Behavior and Mental Health, Peking University, Beijing, China

<sup>2</sup> Institute of Psychology, Erasmus University Rotterdam, Rotterdam, the Netherland

<sup>3</sup> School of Psychological and Cognitive Sciences and Beijing Key Laboratory of Behavior and Mental Health, Peking University, Beijing, China

<sup>4</sup> School of Psychological and Cognitive Sciences and Beijing Key Laboratory of Behavior and Mental Health, Peking University, Beijing, China

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## Revisiting the relationship between job demands and job performance: The effects of job security and traditionality

### **Abstract**

The findings on the relationship between job demands and job performance have been inconsistent in previous studies. Drawing on social exchange theory, we examined the moderating effect of job security on the job demands - job performance relationship. Three studies with cross-sectional and time-lagged designs were conducted. The results of Studies 1 and 2 consistently demonstrated that job demands significantly improved employee performance in the context of higher job security, whereas job demands impaired performance to some extent when job security was lower. Study 3 replicated these findings and also showed that the positive moderating effect was stronger for employees with lower rather than higher levels of traditionality. The importance of job security to improving employees' performance in stressful workplaces was affirmed. These findings contribute to theories linking job demands to job performance and have practical implications for managers in high-stress environments, especially in developing countries.

**Key Words:** Job demands, Job performance, Job security, Traditionality

## **Practitioner points**

- Job demands may lead to good performance when employees' job security is high.
- Appropriate human resource practices should promise employees' perceived job security rather than only reducing job demands.
- Employers should pay more attention to maintaining the social exchange relationships with employees having lower traditional values.

## **Introduction**

To survive and succeed under the pressure of uncertain economic conditions and increasing global competition, organizations need employees to meet increasing job demands and maximize their efforts for better performance. However, the same pressures may make employees feel more stressed and harm their performance (see Rosen, Chang, Djurdjevic, & Eatough, 2010, for an overview). Recent studies have also suggested that job demands, as one type of challenge stressors, may promote job performance while increasing pressure on employees, consequently harming their performance (LePine, Podsakoff, & LePine, 2005). It is therefore important to understand how job demands affect employees' job performance. It is also critical for employers to know how to help employees deal with job demands and maintain high levels of performance.

Until now, the research on the relationship between job demands and job performance has yielded contradictory results, with empirical studies finding positive, negative, curvilinear and no relationships (see Gilboa, Shirom, Fried, & Cooper, 2008; Rosen et al., 2010, for overviews). These inconsistent findings may be explained by boundary conditions that moderate the relationship. Beyond stress theories, we would take the perspective of social exchange (Blau, 1964) to address this issue. The employee-employer exchange relationship involves employees' contributions in exchange for organizational inducements (Rousseau, 1990; Shore et al., 2004). Employees are frequently expected to meet highly challenging job demands and/or work overtime. What inducements do employers provide to reciprocate and balance the exchange relationship? We argue that the provision of long-term job security from employers is a critical one (e.g., Robinson, Kraatz, & Rousseau, 1994; Shaw, Dineen,

Fang, & Vellella, 2009). Annual surveys from 2008 to 2011 consistently reported that job security was the primary source of employees' motivation during the economic recession (SHRM, 2011). In addition, employees' implicit job security expectations remain a critical component of the employee-employer exchange relationship (Colquitt, Baer, Long, & Halvorsen-Ganepola, 2014; Kraimer, Wayne, Liden, & Sparrowe, 2005; Parks & Schmedemann, 1994; Shore et al., 2004), especially in the current uncertain environment (Keim, Landis, Pierce, & Earnest, 2014). It stands to reason that individuals whose job security is high are more likely to perform well when expected to meet stringent job demands. Equally, if job security is low, employees will experience unequal exchanges with employers (Ashford, Lee, & Bobko, 1989; Greenhalgh & Rosenblatt, 2010; Keim et al., 2014) and consequently respond with lower performance. This reflects the universal norm of reciprocity in the social exchange relationship (Blau, 1964; Gouldner, 1960).

However, not all individuals value reciprocity to the same degree. Some are more sensitive than others to equal exchanges. Existing evidence demonstrates that personal value orientation influences individuals' sensitivity and reactions to (un)equal employee-employer exchange (Cohen, & Keren, 2008; Farh, Hackett, & Liang, 2007; Thomas, Au, & Ravlin, 2003). Traditionality (traditional values), an individual-level construct of cultural value orientation, captures the extent to which an individual adheres to traditional values (Schwartz, 1992) and influences individuals' attitudes and behavior (e.g., Fischer & Smith, 2006; Spreitzer, Perttula, & Xin, 2005; Farh et al., 2007). As traditionality is prevalent in Chinese society (e.g., Farh, Earley, & Lin, 1997; Spreitzer et al., 2005; Yang, 2003), we aimed to investigate its moderating role. As we argue below, compared to employees with high

traditionality, employees with low traditionality are probably more sensitive to equal exchanges and place a higher priority on employers' obligations (i.e., the provision of job security) in exchange for their effort expenditure (Farh et al., 2007; Hui, Lee, & Rousseau, 2004; Zhang, Song, Tsui, & Fu, 2014). We hypothesize that a high level of traditionality attenuates the effects of job security in the context of high job demands in China. As a manufacturing hub of the world, and with more than 20% of the world's population, China is playing a critical role in global economies. Chinese employees are experiencing higher job demands and lower job security ever since (Wang, Lu, & Siu, 2015; Xie, Schaubroeck, & Lam, 2008). Thus, China provides an ideal setting to investigate this issue.

Our investigation examined the positive moderating effect of job security on the relationship between job demands and job performance, and the three-way interaction of job demands, job security and traditionality on job performance. This contributes to the existing literature in several ways. First, based on social exchange theory (Blau, 1964), we identified job security as a critical inducement and examined its moderating effect on the relationship between job demands and job performance. This extends previous studies, which have primarily used the perspectives of stress theories (Gilboa et al., 2008; Rosen et al., 2010). In addition, our findings may shed light on the inconsistent results found in the literature regarding the relationship between job demands and job performance (Gilboa et al., 2008), given the fact that job security is currently the most important job consideration for employees (Huang, Zhao, Niu, Ashford, & Lee, 2013; SHRM, 2011; Wang et al., 2015). Second, we investigated how traditionality influences the moderating effect of job security on the relationship between job demands and job performance in the Chinese context, to

demonstrate exactly to whom the beneficial effects of job security in the exchange relationship are most relevant. As Tsui (2007) suggested, any study conducted in a single country should consider the national context in its study design. Thus, investigating the moderating effect of traditionality thus advances our understanding of the employee-employer exchange relationship in a specific contextual environment (Johns, 2006; Zhang et al., 2014). Third, we used a multi-sample, multi-method study design to provide constructive replicated empirical evidence for our research model (Hochwarter, Ferris, & Hanes, 2011; Lykken, 1968).

## **Theory and hypotheses**

### ***The relationship between job demands, job security and job performance***

Job demands, such as requirements to work fast and hard, or regarding a heavy workload in general, are assumed to impair individuals' attitudes and behavior (Spector & Jex, 1998). High job demands have been found to be associated with physiological and/or psychological costs, leading to reduced performance. At the same time, challenge job demands may stimulate personal growth and development, potentially enhancing individuals' motivation and performance (LePine et al., 2005). In fact, the findings on the relationship between job demands and performance to date are mixed. Some studies have found negative relationship between job demands and job performance (e.g., Beehr, Jex, Stacy, & Murray, 2000), others have not found any significant relationship (e.g., Glaser, Tatum, Nebeker, Sorenson, & Aiello, 1999) and still others have reported a positive relationship (e.g., Spector, Dwyer, & Jex, 1988). Empirical support for the inverted U-shaped relationship between job demands and

job performance is very limited in the job stress literature (Rosen et al., 2010). These studies have demonstrated that the relationship between job demands and job performance is complex and boundary conditions need to be considered as moderating factors. A recent meta-analysis showed a large credibility interval for the effect of job demands (i.e., workload) on general job performance (-.38 to .22) (Gilboa et al., 2008), which suggests that an explanation is needed for the considerable variability in the findings to date. We chose job security as one important moderator of some of this variability and investigated whether job security might influence the relationship between job demands and job performance in a positive or negative way.

Job security refers to an employee's expectations about the stability and longevity of his or her job in an organization (Davy, Kinicki, & Scheck, 1997; Greenhalgh & Rosenblatt, 1984; Kraimer et al., 2005). Long-term job security remains an ideal for many employees, despite dramatic changes in the workplace (Shore et al., 2004). Employees' perceived job security might vary within an organization although the provision job security results from organizational practices (Greenhalgh & Rosenblatt, 1984; Kraimer et al., 2005). When employers fulfill their employees' expectations and make employees feel that their jobs are secure, the equal exchange relationships between employers and employees are established (Colquitt et al., 2014; Conway & Coyle-Shapiro, 2012). As one form of social exchange, the employee-employer exchange relationship reflects an employee's subjective belief about what contributions they are obliged to provide to their employers and what inducements their employers are obliged to provide in return (Rousseau, 1990; Shore et al., 2004; Zhang et al., 2014). Meeting challenging job demands, such as working hard, working overtime and



coping with work overload, is considered to be an employee's obligation (also referred to as "contribution") to the employer (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001; Robinson et al., 1994; Shore & Barksdale, 1998). In return, the provision of long-term job security is considered to be one of the employers' obligations (also referred to as "inducements") to their employees (Kraimer et al., 2005; Martin, Staines, & Pate, 1998; Shaw et al., 2009). Thus, when employees experience job security, they feel their employers have fulfilled their obligations. In the interest of reciprocity, employees are motivated to commit and perform well (Bultena, 1998; Kraimer et al., 2005; Liu, Kwan, Wu, & Wu, 2010). In contrast, when perceived job security is low, this can be considered to be the unfair exchange relationship between employees and employers (e.g., Ashford et al., 1989; Keim et al., 2014; King, 2000), because employees perceive that their employers have failed to deliver on their obligations no matter how much they work (De Cuyper & De Witte, 2006; Greenhalgh & Rosenblatt, 2010). Such a failure of an employer's obligations is shown to negatively affect employees' work attitudes and performance (see Zhao, Wayne, Glibkowski, & Bravo, 2007, for an overview).

Taking this view, when employees are working hard or overtime, and perceive their employers' provision of long-term job security, the equal exchange relationships between employees and employers are established, demonstrating the high quality of social exchange. Based on the norms of reciprocity underlying social exchange, employees are more likely to reciprocate with loyalty and good performance to benefit the organization (Conway & Coyle-Shapiro, 2012; Farh et al., 2007). When organizations threaten the employees with job insecurity or are unwilling to promise job security when job demands are high, a threat to the

employee-employer relationship happens and employees are less likely to work hard (i.e., perform better) or only maintain a level of performance high enough to avoid dismissal. There has been evidence to support that job security positively moderates the relationship between the quality of exchange and behavioral outcomes (e.g., Bartol, Liu, Zeng, & Wu, 2009; Kraimer et al., 2005; Lee & Peccei, 2007; Loi, Chan, & Lam, 2014; Loi, Ngo, Zhang, & Lau, 2011). In addition, Fried and colleagues (2003) found that job security strengthened the positive relationships between role clarity and job performance. Therefore, we expect that job security would change the relationship between job demands and job performance.

*Hypothesis 1: Job security moderates the relationship between job demands and job performance, such that job demands are more positively associated with job performance under high rather than low levels of job security.*

### ***The moderating effect of traditionality***

Long-term job security is a critical inducement that employers provide to reciprocate and balance the exchange relationship with their employees (e.g., Robinson et al., 1994; Shaw et al., 2009). Although people respond to the norm of reciprocity (Gouldner, 1960), the extent to which they reciprocate varies. It is suggested that individual difference variables influence employees' overall responses to their employers' behavior (e.g., Eisenberger et al., 2001; Thomas et al., 2003). Farh, Hackett and Liang's (2007) study showed that individual differences in traditionality ameliorated rather than amplified the positive relationships between organizational support and Chinese employees' job performance. Other evidence has shown that traditionality plays an important role in predicting Chinese people's attitudes and

behavior in highly stressful situations (e.g., Wang, Lu, & Lu, 2014; Xie et al., 2008).

As an individual-level construct of cultural values, traditionality captures the extent to which an individual maintains their respect for, commitment to and acceptance of the norms of a traditional society (Schwartz, 1992). In the Chinese context, traditionality refers to the degree to which individuals endorse traditional Chinese values (Yang, Yu, & Yeh, 1989). Traditionality here represents a continuum rather than an ‘either-or’ variable (Wang et al., 2014; Xie et al., 2008; Yang, et al., 1989). The essential characteristics of Chinese traditionality include submission to authority, fatalism and a general sense of powerlessness (Farh et al., 1997; Xie et al., 2008). It has been suggested that individual-level cultural value orientation affects the formation of the employee-employer exchange relationship and an individuals’ reaction to its failure (Thomas et al., 2003). Relative to individuals with low traditionality, those with high traditionality tend to feel a greater obligation to fulfill the expectations and responsibilities of their prescribed social roles whether or not their social exchange relationships have been fulfilled (Farh et al., 1997; Xie et al., 2008; Yang, 2003). Individuals with low traditionality tend to hold more modern values (Farh et al., 1997; Yang et al., 1989) and are more likely to adopt equal exchange views toward mutual obligations. Moreover, it was suggested that high-traditionality employees are less sensitive to equity norms, whereas employees with low traditionality prefer equity norms in social exchange (e.g., Chen, Tsui, & Zhong, 2008; Pillutla, Farh, Lee, & Lin, 2007)<sup>1</sup>. Empirical evidence supports the assertion that traditionality significantly attenuates the positive effects of inducements from organizations or supervisors. For example, Farh and colleagues (1997,

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<sup>1</sup> We thank one anonymous reviewer for pointing these out.

2007) found that traditionality lowered the effects of organizational justice and support on employees' organizational commitment, organizational citizenship behavior (OCB) and job performance. Chen and Aryee (2007) and Spreitzer et al. (2005) found that subordinates' traditionality attenuated the effects of positive leadership on leader effectiveness. Hui and colleagues (2004) found that traditionality lowered the positive relationships between leader-member exchange and subordinates' OCB. Zhang and colleagues (2014) found that traditionality lowered the effects of employee-organization exchange on mid-level managers' organizational commitment and job performance. In light of the evidence and the above arguments, we expect that traditionality moderates the positive interaction effect of job demands and job security on employee job performance.

*Hypothesis 2: Traditionality moderates the effect of job security on the relationship between job demands and job performance, such that high levels of traditionality attenuate the effects of job security on the relationship between job demands and job performance, while low levels of traditionality strengthen the effects of job security on the relationship between job demands and job performance.*

To test our hypotheses, we conducted three studies. In Study 1, we tested H1 using a cross-sectional study with employee and supervisor sources of data from diverse companies. In Study 2, we attempted to constructively replicate our Study 1 results by using a time-lagged design with archival sources of performance data from an insurance company. Study 3 built on the findings of Studies 1 and 2 to test H2 by using a time-lagged design with archival sources of performance data from a manufacturing company. Taken together, the

multi-sample design and multisource data enabled a robust test of the hypothesized model and better established the internal validity of our findings.

## **STUDY 1**

### **Methods**

#### *Participants and procedures*

Before administering the survey, the researcher explained the purpose of the project and asked for the participants' consent to participate. All of the participants were assured that their responses would remain confidential and that they had the right to withdraw from the study at any time (the same procedure was used for Studies 2 and 3). With the help of research assistants, we distributed 700 questionnaire packages to part-time MBA students working full time in various manufacturing, finance/ accounting, marketing, real estate, transportation and catering organizations in China, and asked them to send the performance evaluation questionnaires directly to their supervisors to rate their performance. The performance evaluation questionnaires instructed the supervisors to send their completed evaluations directly to the researchers in stamped envelopes. We ultimately received 513 valid matched responses (a response rate of 73.3%). There were responses from 265 males and 234 females; 14 questionnaires were missing data (2.7%). The participants' were from 20 to 59 years of age ( $M = 31.62$ ,  $SD = 7.02$ ). The participants were demographically diverse and 48% were non-management employees.

#### *Measures*

##### *Job demands*

Job demands were measured using the five-item Chinese version (Lu, Wang, Siu, Lu, & Du,

2015) of the scale developed by Spector and Jex (1998). The sample item was “How often does your job require you to do work very fast?” Each item was a statement about amount of work and participants indicated the frequency of each situation, with responses ranging from 1 (*less than once per month or never*) to 6 (*several times per day*) and high scores representing high job demands. Cronbach’s alpha was .91.

### *Job security*

Job security was measured using a five-item scale with the appropriate psychometric properties for the Chinese setting (Wang et al., 2014). The sample item was “Your job is likely to change in the future.” Participants were asked to indicate how often they had the experiences described in the item, choosing from a scale ranging from 1 (*less than once per month or never*) to 6 (*several times per day*). As in previous studies (e.g., Fried et al., 2003; Kraimer et al., 2005; Loi et al., 2011; Probst, 2003), the score of each item was reversed to indicate the level of job security, with high total scores indicating high levels of job security. Cronbach’s alpha was .82.

### *Job performance*

Employees’ job performance was rated by their supervisors using a five-item Chinese version (Lu et al., 2015; Siu, Lu, & Spector, 2013) of the scale from Viswesvaran, One and Schmidt (1996). Questions were asked about the employees’ work quantity, work quality and other characteristics. All of the items were rated on a 6-point Likert scale ranging from 1 (*very poor*) to 6 (*excellent*). Cronbach’s alpha was .78.

### *Control variables*

Age, gender, tenure and current position in the company were treated as control variables, as they have been shown to affect perceived job demands, job security and job performance (Cheng & Chan, 2008; Shirom, Gilboa, Fried, & Cooper, 2008).

### *Analysis and results*

The results of a confirmatory factor analysis using MPLUS 7 showed that the hypothesized three-factor model (job demands, job security and job performance) provided a good fit for the data ( $\chi^2/df$  (286.51/87) = 3.29; SRMR = .05; CFI = .94; RMSEA = .07), indicating the factorial validity of the measures. Table 1 presents the means, standard deviations and correlations of all of the variables.

**【Insert Table 1 about here】**

To avoid multicollinearity between the predictors and the interaction terms, we centered the predictor variables and multiplied them to form the interaction terms (Cohen, Cohen, West, & Aiken, 2003). The same procedure was used in Studies 2 and 3. As shown in Table 2, results of the hierarchical regression analysis showed that the interaction between job demands and job security was significant ( $\beta = .20$ ,  $\Delta R^2 = .03$ ,  $p < .01$ ).

To interpret the direction of the interaction effect of job demands and job security on job performance, we plotted this significant interaction at  $\pm 1 SD$  from the mean of the moderator variable (the same for the two-way and three-way interactions in Studies 2 and 3). As shown in Figure 1, when job security was high, there was a strong, positive relationship

between job demands and job performance ( $b = .10, p < .05$ ). When job security was low, this relationship was negative but not significant ( $b = -.06, p > .05$ ). Hypothesis 1 was therefore supported.

【Insert Table 2 and Figure 1 about here】

In Study 1, using a diverse sample from different organizations, we examined the moderating effect of job security on the relationship between job demands and job performance. The findings confirmed our expectations. When job security was high, job demands enhanced job performance; when job security was low, performance decreased, albeit non-significantly. However, these findings were limited by the cross-sectional design of the study and weak causal inference. Therefore, Study 2 was conducted to replicate the results of Study 1 using a time-lagged design and archival sources of performance data.

## **STUDY 2**

### **Methods**

#### *Participants and procedures*

Surveys were administered to employees from an insurance company at two different times. At Time 1 (T1), we collected 335 questionnaires (100% response rate). Three months later at Time 2 (T2), we gathered information from the organization's archived employee job performance records with the help of the human resources (HR) manager, yielding a final sample of 237 with a match rate of 70.7%. The average age in years was 32.47 ( $SD = 7.38$ ) and the average tenure was 5.22 years ( $SD = 3.19$ ). There were 153 females and 84 males, which included 183 (77.2%) non-management employees. We assessed the control variables



and the employees' job demands T1 and job security T2. The control variables were the same as in Study 1.

## ***Measures***

### *Job demands*

Job demands were measured using the same methods as Study 1. Cronbach's alpha was .81.

### *Job security*

Job security was assessed using the Chinese version (Lu, Wang, Lu, Du, & Bakker, 2014) of Caplan et al.'s (1975) four-item scale, which has shown high reliability and validity across different studies (e.g., Davy et al., 1997; Lu et al., 2014; Wang et al., 2015). The sample item was "How certain are you about what your future job looks like in this company?" These items were rated from 1 (*very uncertain*) to 6 (*very certain*), with high scores reflecting high levels of job security. Cronbach's alpha was .82.

### *Job performance*

Consistent with recent research (e.g., Colquitt, LePine, Piccolo, Zapata, & Rich, 2012; Wang et al., 2015), organizational archival data were used to assess employees' job performance. The organization's HR manager provided us with the participants' quarterly overall job performance ratings during the three-month period covered by the survey, as the company had established the quarterly job performance assessment system. The rating scale was 1 = "needs improvement," 2 = "acceptable," 3 = "above average," 4 = "effective" and 5 =

“outstanding.”

### ***Analysis and results***

The results of a confirmatory factor analysis using MPLUS 7 showed that the hypothesized two-factor model (job demands T1 and job security T2) provided a good fit for the data ( $\chi^2/df$  (58.09/26) = 2.23; SRMR = .04; CFI = .96; RMSEA = .07), indicating the measures' factorial validity. Table 1 presents the means, standard deviations and correlations of all of the variables.

Table 3 shows that the interaction between job demands T1 and job security T2 significantly affected job performance T2 ( $\beta = .18$ ,  $\Delta R^2 = .03$ ,  $p < .05$ ). Figure 2 shows that under a high level of job security T1, job demands T1 led to improved job performance T2. Under a low level of job security T2, job demands T1 led to reduced job performance T2. We further examined this effect with simple slope analyses and found that the slope for the high level line was significant ( $b = .18$ ,  $p < .05$ ), whereas the slope for the low level line was not ( $b = -.08$ ,  $p > .05$ ). These results are consistent with those from Study 1 and further demonstrate the positive moderating effect of job security. Overall, the results from Studies 1 and 2 support H1.

**【Insert Table 3 and Figure 2 about here】**

### **STUDY 3**

The goal of Study 3 was to replicate and extend the findings of Study 1 and Study 2 in several ways. First, we used a time-lagged design and controlled employees' job performance T1 as

the baseline to provide strong evidence for the validity of our findings. In addition to the control variables used in Studies 1 and 2, we also controlled individuals' employability T1 and contract type (due to some temporary employees in the sample). These variables have been shown to be associated with employees' perceived job security (De Cuyper, Baillien, & De Witte, 2009; Sverke, Hellgren, & Näswall, 2002). Second, and more importantly, we extended Studies 1 and 2 by examining the three-way interaction of job demands, job security and individual traditionality on job performance. Third, we sought to replicate our findings using a different measure of job security and different time-lagged design to triangulate our findings and strengthen our conclusions.

## **Methods**

### ***Participants and procedures***

A two-wave survey was conducted in a Chinese manufacturing company with two branches. At Time 1, we distributed 271 questionnaires and retrieved 266 valid responses. Six months later (Time 2), the second survey was conducted and 257 valid responses were returned. We gathered organizational archival data from job performance records with the help of the HR manager. The final usable sample size was 236 employees, with a match rate of 91.8%. The average age in years was 29.2 ( $SD = 5.7$ ) and the average tenure was 3.4 years ( $SD = 2.5$ ). There were 150 (63.6%) male respondents and 167 (70.8%) non-management employees. We assessed the employees' job demands, job security and traditionality, along with the control variables, at T1 and job performance at T1 and T2.

## *Measures*

### *Job demands*

Job demands were measured using the same methods as Studies 1 and 2. Cronbach's alpha was .83.

### *Job security*

Job security was assessed using a six-item scale developed in Chinese setting, and the scale is high reliable and valid (Cheng, Huang, Li, & Hsu, 2011). The sample item was "My job security is good." The items were rated from 1 (*strongly disagree*) to 6 (*strongly agree*), with high scores representing high levels of job security. Cronbach's alpha was .79.

### *Traditionality*

Traditionality was measured using the Chinese Individual Traditionality Inventory, which was developed by Yang, Yu and Yeh (1989). This scale has been used in studies of Chinese samples and has been shown to be reliable and valid (e.g., Farh et al., 1997; Liu, et al., 2010; Wang et al., 2014; Xie et al., 2008; Zhang et al., 2014). We used six items from a shortened version adapted by Xie et al. (2008). The sample items were "Powerful leaders are more important than a well-established legal system," and "The chief government official is like the head of a house-hold, the citizen should obey his decisions on all state matters." Responses ranged from 1 (*strongly disagree*) to 6 (*strongly agree*), with high scores representing high levels of traditionality. Cronbach's alpha was .76.

### *Job performance*

Overall job performance data were obtained from the HR department using the company's performance evaluation criteria. Aspects of employees' performance, such as quality of work, effectiveness, quantity of work and cooperation, were given a score out of 100 by their immediate supervisors. We got employees' scores of half-year job performance assessments as the company had established half-year job performance assessment system. Each score was weighted and a total score was calculated to represent overall job performance.

### *Employability*

The five-item Chinese version (Lu, Sun, & Du, 2016) of Rothwell and Arnold's (2007) employability scale was used to measure an employee's likelihood of securing and retaining a job. A six-point response scale was used, with high scores indicating high levels of employability. Cronbach's alpha was .72.

### *Analysis and results*

The results of a confirmatory factor analysis using MPLUS 7 showed that the hypothesized four-factor model (job demands T1, job security T1, traditionality T1, and employability T1) provided a good fit for the data ( $\chi^2/df$  (160.15/98) = 1.64; SRMR = .05; CFI = .95; RMSEA = .05), indicating the factorial validity of the measures. Table 4 presents the means, standard deviations and correlations of all of the study variables.

**【Insert Table 4 about here】**

A series of hierarchical regression analyses were conducted to test our hypotheses. We first

entered the control variables, then job demands T1, job security T1 and the job demands T1 × job security T1 interaction term. Next, we entered traditionality T1 and the two-way interaction terms of job demands T1 × traditionality T1 and job security T1 × traditionality T1. Finally, we entered the three-way interaction term of job demands T1 × job security T1 × traditionality T1.

The results in Table 5 show that the two-way interaction of job demands T1 × job security T1 was marginally significant ( $\beta = .10, p = .07$ ). More importantly, the three-way interaction of job demands T1, job security T1 and traditionality T1 was significant in predicting job performance T2 ( $\beta = -.14, p < .05$ ). The results of the slope difference tests indicate that the two-way interaction between job demands T1 and job security T1 was only significant in predicting the performance T2 of individuals with lower traditionality T1 ( $t = 3.02, p < .01$ ). We further examined this effect with simple slope analyses (Cohen et al., 2003) and found that when faced with high job demands, individuals with lower traditionality performed significantly better under conditions of high job security ( $b = .88, p < .05$ ). Job demands did not have a significant relationship with performance under lower job security ( $b = -.81, p > .05$ ). Following Cohen et al. (2003), the form of the moderator is shown in Figures 3a and 3b. For individuals with lower traditionality, job demands were more positively related to job performance when job security was high than when job security was low. However, for individuals with higher traditionality, job security did not have a moderating effect on performance. Thus, H2 was partially supported.

**【Insert Table 5, Figure 3a and 3b about here】**

## **General discussion**

The purpose of this study was to address the inconsistent relationship between job demands and job performance by integrating contextual and individual variables. We proposed that both job security (a contextual variable) and traditionality (an individual variable) influence the extent to which job demands are positively or negatively associated with job performance. Across three studies, we found that the relationship between job demands and job performance became positive as job security increased, but negative as job security decreased. However, the negative relationship between job demands and job performance was consistently non-significant when job security was low; that is, employees did not significantly lower their performance when job demands were high and job security was low. The possible reason is that employees had to work harder to keep their jobs even if their employers failed to meet their reciprocal exchange obligations (i.e., challenging job demands in exchange for secure employment), especially during the economic recession (the three studies were conducted between 2010 and 2012).

Furthermore, using a time-lagged design, we demonstrated that the positive effect of the interaction between job demands and job security on job performance was stronger for employees with lower rather than higher levels of traditionality. More specifically, individuals with low levels of traditionality showed better job performance under secure conditions when facing high job demands. Traditional employees did not change their behavior regardless of job security. As mentioned previously, employees with high traditionality feel an obligation to fulfill the expectations and responsibilities of their social roles, and thus maintain high levels of job performance even under high job demands and low

job security (see Figure 3b). However, employees with low traditionality or employees with more modern values performed well when both job demands and job security were high. Due to a greater sensitivity to equity, they positively reciprocated job performance in the context of high quality social exchange. This result is in line with previous findings (e.g., Farh et al., 2007; Hui et al., 2004; Zhang et al., 2014) that positive relationships between organizational support and employees' performance are stronger for individuals with low traditionality. In Rhoades and Eisenberg's (2002) view, job security "is expected to provide a strong indication of POS [perceived organizational support], particularly in recent years, when downsizing has been prevalent" (p.700).

The current study makes several theoretical contributions. First, by taking a social exchange perspective, we moved beyond the stress frameworks typically reported in the literature (e.g., Beehr et al., 2010; Gilboa et al., 2008; Rosen et al., 2010; Spector et al., 1988) and shed light on mixed findings by identifying an important boundary condition of the relationship between job demands and job performance. Cross-sample findings from studies with diverse designs and different measures consistently demonstrated that job security altered the relationship between job demands and job performance, such that job demands improved employees' performance in the context of higher job security but reduced performance in the context of lower job security, albeit non-significantly. To our knowledge, no study has examined job security as a boundary condition of the link between job demands and job performance through the lens of the social exchange framework. Accordingly, the social exchange perspective allows us to understand the nature of job demands and job performance from another angle.



Second, our study has advanced the knowledge of the employee-employer exchange relationship in uncertain environments. Job security has critical significance as an inducement in today's turbulent labor market (Keim et al., 2014; SHRM, 2011), especially in China (Greenhalgh & Rosenblatt, 2010; Huang et al., 2013; Wang et al., 2015), as circumstances where job security is not provided (i.e., job insecurity) can be particularly stressful and more harmful to individuals in countries with poor social safety nets (Debus, Probst, König, & Kleinmann, 2012; Wang et al., 2014). Therefore, on the one hand, job security is becoming a critical form of employer inducement (also referred to as "obligations") in the current workplace (De Cuyper & De Witte, 2006; Keim et al., 2014); on the other hand, employees need to fulfill their obligation to meet challenging job demands by contributing their time and effort to the exchange relationship (e.g., Eisenberger et al., 2001), especially when organizations face hardships during economic recessions. Although challenging job demands require employees' significant investment and possibly resulting in strain, employees are potentially able to receive a return on their investments (LePine et al., 2005; Rosen et al., 2010), typically in the form of secure employment, demonstrating that the exchange between employees and their employers is fair. Janssen (2000) found that job demands were positively related to work behavior only when employees were treated fairly in the social exchange relationship, thus supporting our argument. Moreover, there is growing literature on the study of the issue of job (in)security from a social exchange perspective rather than stress theories (e.g., De Cuyper & De Witte, 2006; Keim et al., 2014; Kraimer et al., 2015). Our findings, with a focus on the moderating (rather than direct) effect of job security, add to the growing literature.

Third, our study has helped advance the knowledge of the relationship between job demands and job performance by uncovering unique situational (job security) and individual (traditionality) boundary conditions, which have not previously received attention. Our findings show that job security may positively moderate the relationship between job demands and job performance. However, not all individuals are likely to respond in the same way to this positive moderation. We considered the effects of individual differences in traditionality, a unique individual-level traditional value, on these relationships. Employees with high traditionality are less likely to base their attitudes and behavioral responses on how authority figures or employers treat them (Farh et al., 2007; Hui et al., 2004; Zhang et al., 2014). Employees with lower traditionality, however, respond more sensitively to equal exchange with their employers. They see the provision of job security as an important form of support from their organization and demonstrate reciprocity by performing better under high demands in the workplace. If job security is threatened or low, they tend to withdraw from their jobs. Although traditionality reflects the emphasis of traditional values in Chinese society, it also captures the extent to which an individual adheres to traditional values in the world (Schwartz, 1992). There is evidence supporting the view that traditional values also affect individuals' attitudes and behavior in other societies (e.g., Germany, the United States and the United Kingdom) (Fischer & Smith, 2006; Spreitzer et al., 2005). Our findings add to the literature on the role of traditionality in the reciprocal exchange relationship. Taken together, by integrating situational and individual boundary conditions, we have provided information about how people and environments interact to alter job performance under high job demands.

The results of this study also have some practical implications. First, the purpose of the study is not to advocate that job demands are desirable, although some job demands may yield positive outcomes (LePine et al., 2005). Rather, our purpose is to examine the factors that may help employees effectively deal with job demands, which in the current environment may be inevitable. Perceived job security is an important inducement (De Cuyper & De Witte, 2006; Keim et al., 2014). When employment within an organization is secure, job demands encourage employees to work harder to increase their performance, making job demands as challenge stressors rather than hindrance stressors (Rosen et al., 2010). When the context is perceived as job security, the situation is reversed.

Second, it is worth noting that motivation generated by job security may help employees cope with job demands, which is of great importance to management. The provision of job security signals the organization's intention to establish a long-term exchange relationship with their employees (Hui et al., 2004; Kraimer et al., 2005). High-performance or guaranteed HR management practices that promise job security have been found to be positively associated with employees' work attitudes and performance (e.g., Gong & Chang, 2008; King, 2000; Zhang et al., 2014). In this study, although we focused on perceived job security rather than HR policies and practices promising job security, perceptions of these policies and practices have been consistently demonstrated to have a greater effect on employees' trust in their employers, work attitudes and behavior than do the actual policies themselves (e.g., Kraimer, Seibert, Wayne, & Liden, 2011). In addition, even if employers are not able to promise secure employment due to economic conditions beyond their control, they can adopt effective approaches (i.e., good communication, fair treatment) for maintaining

relatively high levels perceived job security among their employees (Keim et al., 2014; Sverke et al., 2002; Wang et al., 2015). Thus, increasing job security in line with high job demands is an effective way by which employers can develop and maintain high quality social exchange relationships with their employees. This is especially true in developing countries with challenging economic and development issues, where in some cases reducing demands is not really possible.

Third, when organizations want to motivate employees to meet the challenges of high job demands and perform better, employees' characteristics, such as their values, should be considered. Previous studies have also supported the view that the attitudes and behavior of Chinese people with high traditionality are determined more by perceived obligations than perceived treatment (Farh et al., 2007; Hui et al., 2004; Xie et al., 2008; Zhang et al., 2014). Our results showed that in stressful work environments, the performance of employees with low traditionality was based on their perceived job security, whereas job security did not affect the performance of employees with high traditionality. This is not to say that the provision of job security is not important to these people. Rather, their performance was less affected by whether or not organizations treated them fairly (i.e., provision of job security) in highly stressful situations.

### ***Strengths, limitations and implications for future research***

This study had several notable strengths. First, our multi-study design allowed for a robust test of our hypothesis of the interaction effects of job demands and job security in predicting job performance, as it addressed the difficulty of replicating complex interaction effects in

field studies (Aguinis, 1995; Hochwarter et al., 2011). Second, we tested our hypotheses in both cross-sectional and time-lagged studies in a variety of contexts, which strengthened both internal and external validities. Third, obtaining the same pattern of results across three studies using different operationalizations and measures of job security and job performance demonstrates that our findings were not an artifact of the particular measurement instruments used and increases our confidence in the robustness of the findings.

Despite its strengths, there are also limitations to this investigation. First, although the results were consistent across three studies with two effectively designed field studies, only the replication of findings with studies using longitudinal or experimental designs can decisively confirm their validity. Second, concerns regarding different measures of variables might be raised. Except job demands measures, we used different measures of both job security and job performance variables across the three studies. In addition, job performance was measured by a single item in Study 2, though the single-item measure is acceptable (e.g., Colquitt et al., 2012). However, given that our findings about the interaction effects of job demands and job security on job performance are consistent across the three studies, the different measures of variables should be less concern. Third, although statistically significant, the relatively small interaction effect sizes raised concerns about the power of our study (Combs, 2010). It should be noted that interaction effects in field studies were difficult to find (Aguinis, 1995) and that both the two- and three-way interactions in our study were above the median effect size of .002 reported by Aguinis, Beaty, Boik and Pierce (2005). Therefore, our findings are still meaningful and also have practical implications. Fourth, this study may be limited in its generalizability. Our findings in one country cannot simply be applied to

another country or society due to variability in traditionality (traditional values). Although our findings are consistent with Fischer and Smith's (2006) study demonstrating that traditional values lowered the positive relationship between organizational justice and organizational commitment in Germany, we recognize that this was an exploratory study. Thus, further research is needed to examine the cross-cultural generalizability of our findings. Fourth, this study established the joint roles of job security and traditionality on the relationship between job demands and job performance, but did not further investigate the mechanism of these relations. Work engagement or strain, or both, may play significant mediating roles. Future research may expand on this study by exploring the mediating effects of engagement and strain to enhance our understanding of the relationships as a whole.

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**Table 1.** Descriptive statistics and correlations of all variables (Study 1 and Study 2)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
<b>Study 1 (<i>N</i> = 513)</b>									
1.Job demands	2.35	1.09							
2.Job security	5.34	.83	-.40**						
3.Job performance	4.80	.62	-.02	.14**					
4.Gender	.47	.50	-.12**	.16**	.06				
5.Age	31.62	7.02	.01	.09*	.03	-.07			
6.Tenure	4.34	4.79	.11*	-.01	.03	-.01	.49**		
7.Position	.56	.40	.13**	.03	.16**	-.10*	.28**	.17**	
<b>Study 2 (<i>N</i> = 237)</b>									
1.Job demands T1	2.02	.85							
2.Job security T2	2.55	1.01	.12						
3.Job performance T2	4.38	.65	.02	.10					
4.Gender	.56	.38	-.10	.06	.13*				
5.Age	32.47	7.38	.08	-.00	-.02	-.15*			
6.Tenure	5.22	3.19	.07	-.08	-.10	.00	-.11		
7.Position	.21	.41	.22**	-.12	-.06	-.22**	.35**	.00	

Note. Gender: 0 = male, 1 = female; Position: 0 = non-management, 1 = management. T1 = Time 1, T2 = Time 2.

\*  $p < .05$ , \*\*  $p < .01$ .

**Table 2.** Interaction effect of job demands and job security on job performance (Study 1)

Variables	Standardized Coefficients			
	Step 1	Step 2	Step 3	Step 4
Gender	.06	.05	.04	.04
Age	-.01	-.02	-.03	-.03
Tenure	.02	.03	.03	.03
Position	.16**	.16**	.16**	.16**
Adjusted $R^2$	.02*			
Job demands		-.07	-.03	-.01
$\Delta R^2$		.01		
Job security			.11*	.01
$\Delta R^2$			.01*	
Job demands x Job security				.20**
$\Delta R^2$				.03**

Note. Gender: 0 = male, 1 = female; Position: 0 = non-management, 1 = management.

\*  $p < .05$ , \*\*  $p < .01$ .

**Table 3.** Interaction effect of job demands T1 and job security T2 on job performance T2 (Study 2)

Variables	Standardized Coefficients			
	Step 1	Step 2	Step 3	Step 4
Gender	.15*	.15*	.15*	.14
Age	-.04	-.04	-.03	-.05
Tenure	-.11	-.11	-.11	-.12
Position	-.04	-.06	-.05	-.01
Adjusted $R^2$	.02*			
Job demands T1		.08	.07	.07
$\Delta R^2$		.01		
Job security T2			.06	.06
$\Delta R^2$			.01	
Job demands T1 x Job security T2				.18*
$\Delta R^2$				.03*

Note. Gender: 0 = male, 1 = female; Position: 0 = non-management, 1 = management. T1 = Time 1, T2 = Time 2.

\*  $p < .05$ .

**Table 4.** Descriptive statistics and correlations of all variables (Study 3)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12
1. Job demands T1	2.08	.84												
2. Job security T1	4.33	1.10	-.16*											
3. Traditionality T1	4.07	1.06	.01	-.12										
4. Job performance T1	82.36	5.54	.00	-.02	-.02									
5. Job performance T2	84.85	3.74	-.10	.16*	-.04	.13*								
6. Employability T1	4.54	.76	-.02	.24**	.28**	-.06	.04							
7. Education	.78	.14	-.02	.17*	-.21**	.00	.26**	-.04						
8. Position	.22	.42	.16*	.18**	.09	.02	-.18**	.33**	-.05					
9. Tenure	30.92	22.60	.05	.01	.24**	.03	.10	.07	-.15*	.18*				
10. Contract type	.63	.31	-.05	.08	-.14*	.00	-.02	-.03	.26**	.00	-.06			
11. Weekly work hours	50.64	31.45	.05	-.15*	.14*	-.02	-.00	-.04	-.15*	-.05	.00	.06		
12. Subsidiary	.50	.50	-.03	-.12	.20**	-.09	.19**	-.03	.00	-.21**	.16*	-.16*	-.06	

Note. Education: 0 = below bachelor's degree, 1 = bachelor's degree or above; Position: 0 = non-management, 1 = management; Contract type: 0 = fixed term, 1 = temporary; Subsidiary: 0 = one branch of the company, 1 = another branch of the company. T1 = Time 1, T2 = Time 2.

\*  $p < .05$ , \*\*  $p < .01$ .

**Table 5.** Three-way interaction effect of job demands T1, job security T1, and traditionality T1 on job performance T2 (Study 3)

Variables	Standardized Coefficients					
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Education	.29**	.27**	.26**	.24**	.24**	.25**
Position	-.19**	-.20**	-.20**	-.19**	-.20**	-.20**
Tenure	.12*	.12*	.11*	.13*	.13*	.15*
Contract type	-.07	-.08	-.07	-.08	-.09	-.12
Weekly work hours	.05	.08	.07	.08	.09	.10
Subsidiary	.14*	.16*	.17*	.19*	.18*	.17*
Employability T1	.12†	.08	.07	.10	.11	.12
Job performance T1	.14*	.15*	.15*	.15*	.15*	.16*
Adjusted $R^2$	.14**					
Job demands T1		-.04	-.05	-.05	-.05	-.04
Job security T1		.17*	.17*	.15*	.14*	.15*
$\Delta R^2$		.02*				
Job demands T1 x Job security T1			.10†	.12*	.13*	.13*
$\Delta R^2$			.01†			
Traditionality T1				-.09	-.10	-.08
$\Delta R^2$				.01		
Job demands T1 x Traditionality T1					-.04	.01
Job security T1 x Traditionality T1					-.04	-.05
$\Delta R^2$					.00	
Job demands T1 x Job security T1 x Traditionality T1						-.14*
$\Delta R^2$						.02*

Note. Education: 0 = below bachelor's degree, 1 = bachelor's degree or above; Position: 0 = non-management, 1 = management; Contract type: 0 = fixed term, 1 = temporary; Subsidiary: 0 = one branch of the company, 1 = another branch of the company. T1 = Time 1, T2 = Time 2.

†  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ .

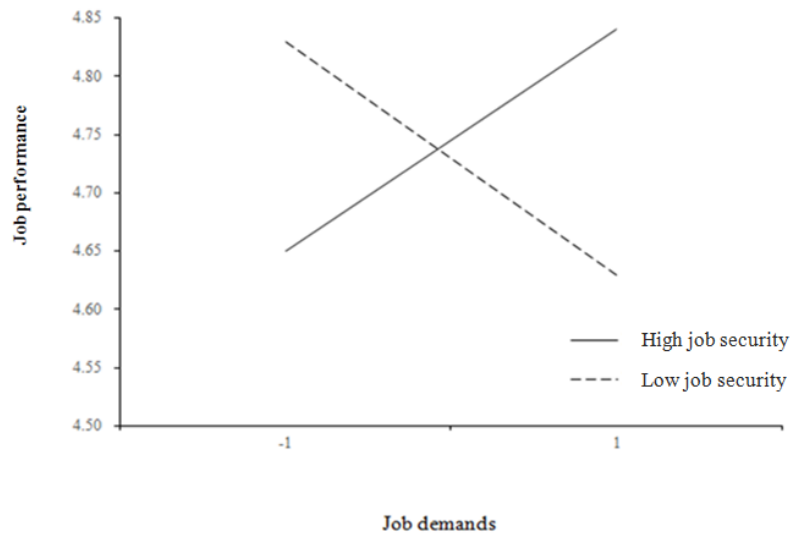


Figure 1. Interactive effect of job demands and job security on job performance in Study 1.

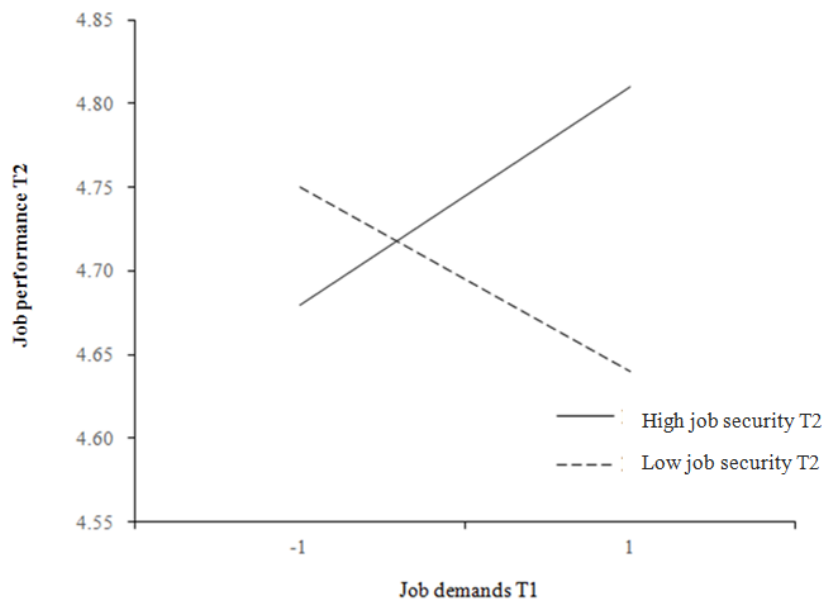


Figure 2. Interactive effect of job demands T1 and job security T2 on job performance T2 in Study 2.



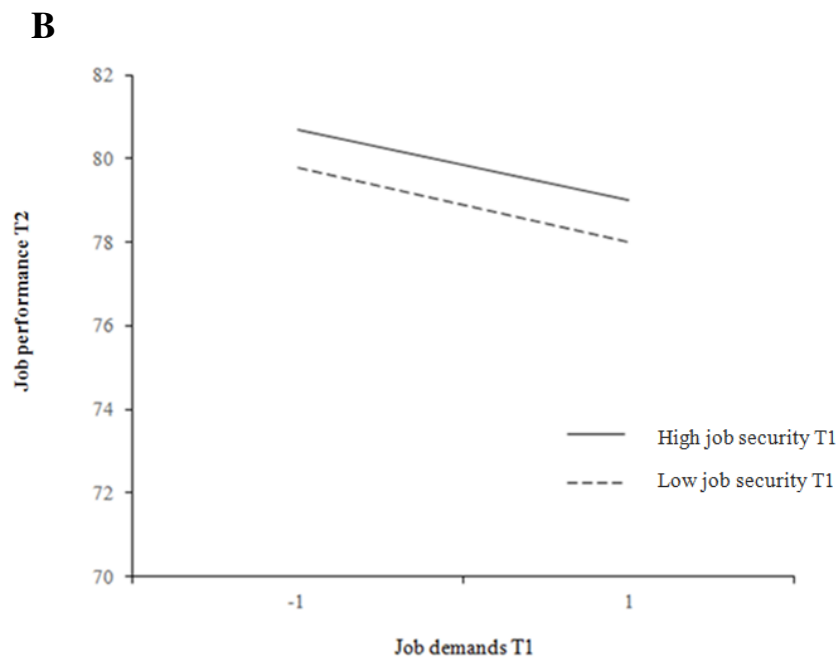
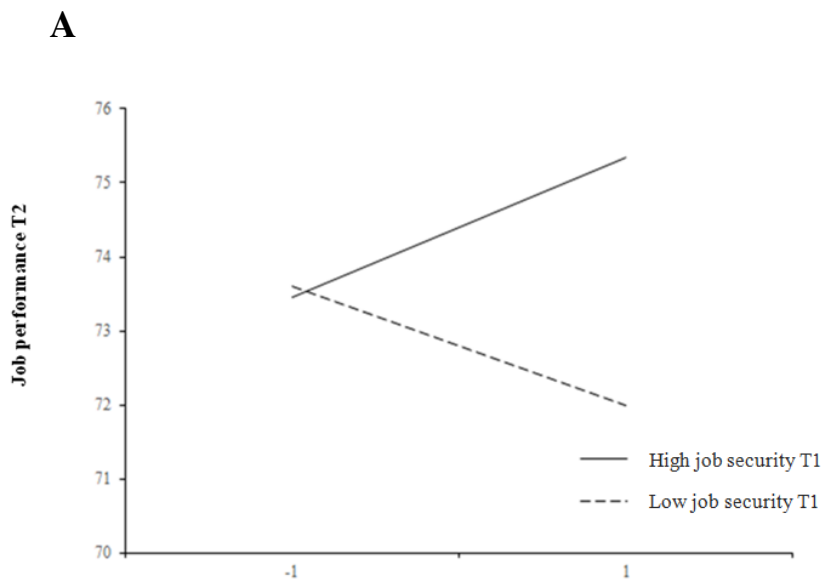


Figure 3. Interactive effect of job demands T1 and job security T1 on job performance T2 for individuals with lower traditionality (A) and higher traditionality (B) in Study 3.