

The moderating role of intrinsic work value orientation on the dual-process of job demands and resources among Chinese employees

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Abstract

Purpose – The moderating roles of personal resources in the Job Demands-Resources (JD-R) model are relatively rarely examined, especially in non-western countries. The purpose of this paper is to investigate the moderating effect of a personal resource (i.e. intrinsic work value orientation) on the relationships between job demands, job resources, and job satisfaction among a large sample of Chinese employees from both mainland China and Taiwan.

Design/methodology/approach – Structured questionnaire survey was carried out to collect data from 402 employees in mainland China and 306 employees in Taiwan.

Findings – The authors found that intrinsic work value orientation amplified the negative relationship between work constraints (a job demand) and job satisfaction. Meanwhile, intrinsic work value orientation strengthened the positive relationship between autonomy (a job resource) and job satisfaction.

Originality/value – This is one of the few studies that explored the role of personal resources in the JD-R model. One unique contribution of the study is that the authors extended the JD-R model to include the intrinsic work value orientation as a resourceful work value for Chinese employees in two major Chinese societies. Based upon the findings, the authors suggest that personal resources such as work value orientation should be taken into account in the research of the JD-R model. Managerial implications of the findings are also discussed.

Keywords Chinese employees, Job satisfaction, JD-R model, Work value orientation

Paper type Research paper

Work stress has been one of the most significant issues of modern societies, therefore, organizational behavior scholars have garnered rising interest in the work stressor-strain process. However, almost all of the work stress theories are developed and empirically tested in western industrialized countries (see review by Rosen *et al.*, 2010). A major limitation in the occupational stress literature is thus the lack of rigorous research embedded in different cultural contexts. As the Greater China Region constitutes nearly a quarter of the world's population and is under rapid economic and social changes, it provides a suitable context to test and extend western work stress theories.



The Job Demands-Resources (JD-R) model

Following a comprehensive review of the work stress literature, Bakker, Demerouti and coworkers proposed the JD-R model which delineates the dual underlying psychological processes in work contexts, namely, the health impairment process and the motivational process (Bakker and Demerouti, 2007; Bakker *et al.*, 2003; Demerouti *et al.*, 2001). Job demands refer to physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills (Bakker and Demerouti, 2007). Job demands consume individual resources to meet those requirements which might result in employees' mental and physical deterioration, thus setting in an "impairment process." Job resources refer to physical, psychological, social, or organizational aspects of the job that are either/or functional in achieving work goals, reducing job demands and the associated physiological and psychological costs, or stimulating personal growth, learning, and development (Bakker and Demerouti, 2007). Job resources may motivate employees to pursue more challenging tasks and to perform better, thus setting in a "motivational process."

Research on the JD-R model has provided empirical support for the dual-process, across occupations and industries (see reviews by Bakker and Demerouti, 2007; Bakker and Evangelia, 2008; Van den Heuvel *et al.*, 2010). For example, job demands (e.g. work pressure, emotional demands and changes in tasks) are the most significant predictors of health problems (Bakker *et al.*, 2007; Hakanen *et al.*, 2008), exhaustion (Xanthopoulou *et al.*, 2007), reduced job satisfaction (Lu *et al.*, 2010), and reduced job performance (Lu *et al.*, 2010) for both the Chinese and western employees. However, while most existing studies focussed on the physical and psychological aspects of job demands, such as workload and emotional demands, other potentially demanding aspects of the work environment have received less research attention. We believe that work constraints represent an important feature of the work environment which deserves more exploration in the impairment process of the JD-R model. As defined by Spector and Jex (1998), any events or situations at work which prevent employees from transforming efforts and capabilities to high performance can be considered as work constraints. Work constraints have been found to hamper performance, raise feelings of frustration (Peters and O'Connor, 1980), increase job dissatisfaction and turnover intention (Carsten and Spector, 1987; Villanova and Roman, 1993). It is conceivable that work constraints might force employees to work harder and longer to make up for the insufficient supply of equipment, consumables, information, training, and manpower, thus heighten strains. Therefore, work constraints are used to indicate job demands in the present study.

Regarding the motivational process of the JD-R model, existing research has confirmed that job resources have motivational potential and are likely to induce higher work engagement (Bakker and Demerouti, 2007; Bakker and Evangelia, 2008; Van den Heuvel *et al.*, 2010). In both the theoretical underpinning of the JD-R model (e.g. Bakker and Demerouti, 2007) and its subsequent empirical research (e.g. Van den Heuvel *et al.*, 2010), autonomy is formulated as a key job resource, often operationalized as job control (Mauno *et al.*, 2007) or skill discretion and decision authority (Xanthopoulou *et al.*, 2007). Autonomy refers to employees' ability to make their own decisions and the degree of control they have over work independence (Hackman and Oldham, 1975). The beneficial effect of autonomy is one of the most robust findings of research on the JD-R model in the West. For example, autonomy was found to lead to higher levels of work engagement, job satisfaction, more organizational citizenship behaviors, better job performance, and lower exhaustion (Aube *et al.*, 2007; Bakker and Evangelia, 2008; Van Prooijen, 2009).

In a two-year longitudinal study, job control proved to be the best lagged predictor of work engagement for Finnish health care personnel (Mauno *et al.*, 2007).

Although the importance of work autonomy has been highlighted in western theories and research such as the JD-R model and the Job Characteristics Model (Hackman and Oldham, 1975), we believe its significance to the quality of work life is underrated in the Chinese context. The idea of self-determination at work is counterintuitive when viewed in the context of the Chinese tradition of collectivism and large power distance (Hofstede, 2001). The cultural collectivism emphasizes interpersonal interdependence and prioritizing group welfare over individual needs and desires (Oyserman *et al.*, 2002). Power distance describes the degree to which people in a society accept that power is distributed unequally (Hofstede, 2001). Under the combined influences of cultural collectivism and large power distance, Chinese employees normally have very few opportunities to exercise control at work (Lu *et al.*, 2003, 2008). However, with rapid social changes researchers have now found that traditional (collectivism/respect for authority) and modern values (individualism/equality) coexist in both mainland China and Taiwan (see reviews by Leung and Bond, 2004; Lu and Yang, 2006). More importantly, the integration of traditional and modern values is advantageous for the well-being of Chinese people living in a quickly changing society (e.g. Lu, 2008; Lu *et al.*, 2012), thus underlining the long overlooked importance of autonomy in the Chinese work context. A nationwide survey in Taiwan further revealed that a special form of autonomy, i.e., flexibility to allow employees attending to family matters, greatly helped reduce work and family conflict (Lu *et al.*, 2008). Another study covering all three main Chinese societies (i.e. mainland China, Taiwan, and Hong Kong) also found that autonomy was indeed beneficial for Chinese employees' job performance (Lu *et al.*, 2010). We thus focus on work autonomy, reflecting the extent of perceived control at work with an attempt to highlight the emerging trend of democratizing in the Chinese work context. We hypothesized that:

H1a. Work constraints as job demands will be negatively related to job satisfaction.

H1b. Work autonomy as a job resource will be positively related to job satisfaction.

Work value orientation as a personal resource in the JD-R model

The JD-R model was recently expanded to include personal resources (Bakker and Evangelia, 2008; Van den Heuvel *et al.*, 2010; Xanthopoulou *et al.*, 2007). Personal resources refer to an individual's traits that are generally linked to resiliency (Hobfoll *et al.*, 2003). So defined, researchers have focussed on a variety of positive personality characteristics, including self-efficacy, optimism, self-esteem, and resilience (van den Heuvel *et al.*, 2010). However, unlike the unequivocal support for the dual-process involving job demands and job resources, roles of personal resources in the JD-R model are relatively understudied and findings inconsistent so far. Bakker and Evangelia (2008) found that job and personal resources are the main predictors of work engagement, and these resources gain their salience in the context of high job demands, thus suggesting a buffer effect of the resources. However, Xanthopoulou *et al.* (2007) found that personal resources did not offset the relationship between job demands and exhaustion for Dutch employees. In other words, they found no moderating (buffer) effects of personal resources. Recently, some scholars have urged a rethinking of the role of personal resources in line with the person-situation perspective (van den Heuvel *et al.*, 2010). They suggested that as the person and the work environment are mutually influencing each other, personal resources may even function as vulnerability factors. One possible explanation for the disparate

theoretical and empirical standings is that personal resources are not always the buffer in the stressor-work outcome relationship. In fact, researchers have found only modest support for the “buffer hypothesis” of personal resources (Xanthopoulou *et al.*, 2007). De Jonge and Dormann (2006) therefore proposed that in general, the buffer effects of both job and personal resources should only occur when similar types of demands match similar types of resources. This is known as the “matching hypothesis.” Not all resources can offset the detrimental effects of job demands. In certain specific stressful work context, personal traits and characteristics might even worsen the impact of stressors. For example, Lu *et al.* (2011) found that Chinese employees who were high in self-efficacy were more vulnerable when encountering work situations which deprive them of control. Thus, the right type of personal resources should be targeted to counter the damaging effects of a specific job demand in a particular study.

Another problem of the research on personal resources in work stress is that a large amount of studies have focussed on the buffering mechanisms of personality traits (see review by Cooper *et al.*, 2001), while the possibility of work-related values and attitudes as moderators has been largely overlooked. As Lazarus and Folkman (1984) argued, personal agenda (e.g. goals and beliefs) would account for a considerable amount of variance in the work stress process. Work value orientation is one of such factors that may alter the stressor-strain relationship. Previous occupational stress research has indeed found some evidence for both direct and moderating effects of work values. For instance, Lu and Lin (2002) showed that Taiwanese employees who endorsed higher work values such as achievement, autonomy, and altruism, reported higher job satisfaction and lower turnover intention. Focussing on a specific set of work values termed Chinese Work Values (CWV), which has its root in the Confucian tradition and including values such as collectivism, endurance, hard work, and *guanxi*, Huang *et al.* (1998) found that CWV predicted job performance of workers in Taiwan and Hong Kong. CWV was also found to attenuate the damaging effects of both workload and interpersonal conflict on job satisfaction in a sample of employees from mainland China, Taiwan, and Hong Kong (Lu *et al.*, 2011). In another study with Taiwanese workers, Lu (1999) demonstrated that different work value orientations moderated relationships between stressors and strains differently. Specifically, Taiwanese employees with higher intrinsic work value orientation (e.g. valuing personal accomplishment, challenge at work, interesting jobs) suffered more from anxiety symptoms when they were deprived of job autonomy, while those with higher extrinsic work value orientation (e.g. valuing monetary reward, social status, job security) suffered more from depressive symptoms when they were forced to take on a heavy workload. Taken together, limited empirical evidence supports the beneficial effects of certain work values, but the theoretical underpinning of the categorization of these work values and their potential differential effects in work stress and adaptation need greater attention. We thus explore the possibility of intrinsic work value orientation as both a vulnerability factor and a buffer on the dual-process of the JD-R model.

Our reasoning is based on the theoretical perspective that views work values as a coping resource (Roe and Ester, 1999). Specifically, employees who are high on certain work values, such as achievement, hard work, and concern for others would focus more on the content of their jobs and less affected by work stress (Hui, 1992; Lu, 1999). Despite the plethora of labels, organizational researchers have empirically distinguished intrinsic work value orientations, which are oriented toward self-actualization and self-expression, from extrinsic work value orientations, which are focussed on security and material acquisition (e.g. Alderfer, 1972; Gagné and Deci, 2005; Herzberg *et al.*, 1959; Lu, 1999; Lu and Lin, 2002; Vansteenkiste *et al.*, 2007),

although a number of other work value frameworks have been proposed (see Dose, 1997 for an overview). However, intrinsic work value orientation needs to be distinguished from intrinsic work motivation (Gagné and Deci, 2005). There is evidence that work environment can influence motivation, in the sense that people who are granted autonomy at work are more likely to be intrinsically motivated as their needs are met, rather than these factors being a preference for workers who come with intrinsic motivation (Vansteenkiste *et al.*, 2007). We thus define work value orientation as the willingness to exert high levels of effort toward organizational goals, conditioned by the person's ability to satisfy individual needs (Lu, 1999). Specifically, in line with the intrinsic/extrinsic dichotomy of work value orientations mentioned above, an intrinsic work value orientation in the current study encompasses factors that are intrinsic to the job (e.g. use of ability, interesting and challenging jobs, self-actualization).

Within the theoretical framework of the JD-R model, an intrinsic work value orientation, such as setting self-fulfillment and self-growth as work goals, may function as a vulnerability factor in the job demands-strain process, while function as a buffer in the job resources-motivation process. This is possible because employees with a high intrinsic work value orientation usually have higher performance expectations and greater achievement needs (Latham, 2007). Therefore, when these employees encounter job demands that impede these work goals, they may feel dissatisfied with the fear of not being able to maintain high quality work outputs. Specifically, when employees with high intrinsic work value orientation encounter job demands such as work constraints, they will feel more frustrated as environmental constraints make task completion more difficult. On the contrary, employees who have strong intrinsic work value orientation will thrive in a work environment which grants them job control over their tasks in order to meet their performance targets (Lu, 1999). Specifically, employees with high intrinsic work value orientation will benefit more from job resources such as autonomy which facilitate task completion. As Vansteenkiste *et al.* (2007) found, holding an extrinsic, relative to an intrinsic work value orientation was detrimental to employees' job outcomes because such orientation thwarted the satisfaction of the basic psychological needs for autonomy, competence, and relatedness at work (Alderfer, 1972). We thus hypothesized:

H2a. Intrinsic work value orientation will exacerbate the negative relationship between job demands (work constraints) and job satisfaction, such that the relationship will be more negative for individuals with high intrinsic work value orientation.

H2b. Intrinsic work value orientation will enhance the positive relationship between job resources (work autonomy) and job satisfaction, such that the relationship will be more positive for individuals with high intrinsic work value orientation.

Method

Procedure and participants

We used a self-administered structured questionnaire to collect data from employees in mainland China (PRC) and Taiwan. For the sample recruited in the PRC, a total of 540 questionnaires were distributed to employees in various industries in several cities, and 402 questionnaires were returned, making a response rate of 74.40 percent. The PRC sample consisted of 209 males and 182 females (11 unidentified), with a mean age of 31.90 years ($SD = 7.40$ years). The mean of current job tenure was 4.30 years ($SD = 5.20$). For the sample recruited in Taiwan, a total of 520 questionnaires were

distributed to employees in various industries, and 306 questionnaires were returned, making a response rate of 60 percent. The Taiwan sample consisted of 134 males and 172 females, with a mean age of 32.90 years (SD = 6.70 years) and mean current job tenure of 6.30 years (SD = 6.30). Respondents were invited to participate through the personnel manager or a contact person known to the researchers in each organization. This designated person was responsible for distributing and retrieving the questionnaires. The participants in the two regions were informed about the purpose of the study and participation was in a voluntary basis.

Instruments

The survey was administered in Chinese, and all the Chinese-version scales have been back-translated and validated in previous studies with satisfactory reliability and validity. These references will be given along with the original English version when every scale is introduced below. The Cronbach α for each scale for the current sample is presented in Table I.

Job demands and resources. We used existing western scales to assess job demands and resources: work constraints (11 items; Spector and Jex, 1998; e.g. “Without the organizational resources, I can’t finish the task”); and autonomy (three items; Hackman and Oldham, 1975, e.g. “I decide on my own how to go about doing the work”). Each item was rated on a six-point scale (1 = less than once per month or never, 6 = several times per day), with higher scores indicating higher work constraints and higher job autonomy. The Chinese versions of the two scales were used in Lu *et al.*’s (2010) study with good psychometric property.

Job satisfaction. Job satisfaction was assessed with a three-item scale developed by Cammann *et al.* (1979). A sample item is “All in all, I am satisfied with my job”. Each item was rated on a six-point scale (1 = strongly disagree, 6 = strongly agree), with higher scores indicating higher job satisfaction. The Chinese version of this scale was also used in Lu *et al.*’s (2010) study with good psychometric property.

Intrinsic work value orientation. Intrinsic work value orientation was measured with four items comprising a subscale in the “Work values scale” (Hui, 1992) developed in Chinese for Chinese workers, contrasting the extrinsic work value orientation subscale (not used in this study). The stem reads “Considering an ideal job, how important is each factor for you when you choose an ideal job?” The four factors listed are: challenging tasks which provide a sense of accomplishment, realization of my ideal, making use of my ability, and fitting my interest. Each item was rated on a six-point scale (1 = unimportant, 6 = absolutely important), with high scores representing higher intrinsic work value orientation. This scale was used in a study of Taiwan and Hong Kong comparison, and yielded acceptable reliability and construct validity for both Chinese samples via confirmatory factor analysis (Lin *et al.*, 2013).

Variables	Scale mean	SD	1	2	3	4
1 Work constraints	2.13	0.99	<i>0.93</i>			
2 Autonomy	4.17	1.04	-0.24***	<i>0.86</i>		
3 Intrinsic work value orientation	4.65	0.78	-0.09*	0.16***	<i>0.78</i>	
4 Job satisfaction	4.23	1.00	-0.37***	0.41***	0.04	<i>0.78</i>

Notes: $n = 708$. Diagonal is Cronbach’s α . * $p < 0.05$; *** $p < 0.001$

Table I.
Intercorrelations
among main
variables for the
combined sample

Results

The aim of the present study was to investigate the moderating effects of personal resources (i.e. intrinsic work motivation) on the relationships between job demands, job resources, and job satisfaction in the Greater China Region. Scale reliabilities were first computed separately for the PRC and Taiwan sample, yielding acceptable coefficients (ranging from 0.74-0.93) in both samples. The comparison of means (*t*-tests) revealed that the only significant difference between the two regions was that employees in Taiwan reported higher autonomy ($t=2.77, p < 0.01$). Separate correlation analysis among main variables was again first conducted in each of the two samples. This analysis revealed generally similar patterns, with a small number of correlations being significant in one sample but not in the other (these data may be obtained from the authors). We thus repeated the analysis in the combined sample, and report results in Table I, incorporating the means, standard deviations, and internal consistency α coefficients of main variables. All relationships between work constraints, autonomy and job satisfaction were significant and in the expected direction.

Before testing hypotheses, we examined differences in jobs. *t*-Tests revealed that managers had more autonomy than non-managers ($t=2.75, p < 0.01$), while non-managers reported more constraints than managers ($t=3.68, p < 0.001$). Nonetheless, the two groups were not different in either intrinsic work value orientation ($t=1.39, ns$), or job satisfaction ($t=1.90, ns$). We thus controlled for differences in jobs in the subsequent hypotheses testing.

Following Baron and Kenny's (1986) suggestion for testing and reporting moderating effects, we conducted a series of hierarchical regression analysis to test the moderating effects of work motivation on job demands-job satisfaction and job resources-job satisfaction relationships while controlling for sex, marital status, tenure and position (i.e. managers vs non-managers). We conducted four steps to predict job satisfaction. All predictor variables were standardized to minimize multicollinearity among them (Cohen *et al.*, 2003). Interaction terms were then created from these standardized predictors. First, we entered demographics as control variables. Second, we entered work constraints (WC) or job autonomy (AU). Third, we entered intrinsic work value orientation (IN). Finally, we entered the interaction terms (e.g. WC \times IN or AU \times IN).

In both regression analyses, work constraints and job autonomy showed significant direct (main) effects on job satisfaction (Tables II and III). In agreement with *H1a* and

Table II.
Moderated
regression with
intrinsic work
value orientation as
the moderator of the
relationship between
work constraints and
job satisfaction

Step	Predictor	Job satisfaction	
		Standardized β	R^2 change
1	Sex	-0.02	
	Marital status	0.06	
	Tenure	-0.09*	
	Position	0.08	0.02*
	Work constraints (WC)	-0.37***	0.13***
2	Intrinsic work value orientation (IN)	0.07	0.01
3	WC \times IN	-0.12**	0.01**
4	R^2		0.17
	$F_{(df)}$		17.19*** (7,589)

Notes: Sex: 0 = female, 1 = male; marital status: 0 = single, 1 = married; position: 0 = non-manager, 1 = manager. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

H1b, work constraints had a significant negative association with job satisfaction. Meanwhile, autonomy had a significant positive association with job satisfaction. Therefore, *H1a* and *H1b* were supported.

Results in Table II also showed that intrinsic work value orientation significantly moderated the work constraints-job satisfaction relationship. The significant interaction is then plotted in Figure 1. The negative relationship between work constraints and job satisfaction is stronger (as demonstrated by the steeper regression line) for people with high intrinsic work value orientation. Simple slope analysis indicated that the two slopes significantly differed from each other ($t = -2.10, p < 0.05$).

Results in Table III further showed that intrinsic work value orientation had a significant moderating effect on the relationship between autonomy and job satisfaction. The autonomy-job satisfaction relationship is more positive for individuals with high intrinsic work value orientation (plotted in Figure 2). Simple slope analysis indicated that the two slopes significantly differed from each other ($t = 2.21, p < 0.05$). Therefore, *H2a* and *H2b* were supported.

Step	Predictor	Job satisfaction	
		Standardized β	R^2 change
1	Sex	-0.03	
	Marital status	0.05	
	Tenure	-0.07	
	Position	0.08	0.01
2	Autonomy (AU)	0.41***	0.17***
3	Intrinsic work value orientation (IN)	-0.03	0.00
4	AU \times IN	0.10**	0.01**
	R^2		0.19
	$F_{(df)}$		20.11*** _(7,607)

Notes: Sex: 0 = female, 1 = male; marital status: 0 = single, 1 = married; position: 0 = non-manager, 1 = manager. ** $p < 0.01$; *** $p < 0.001$

Table III. Moderated regression with intrinsic work value orientation as the moderator of the relationship between autonomy and job satisfaction

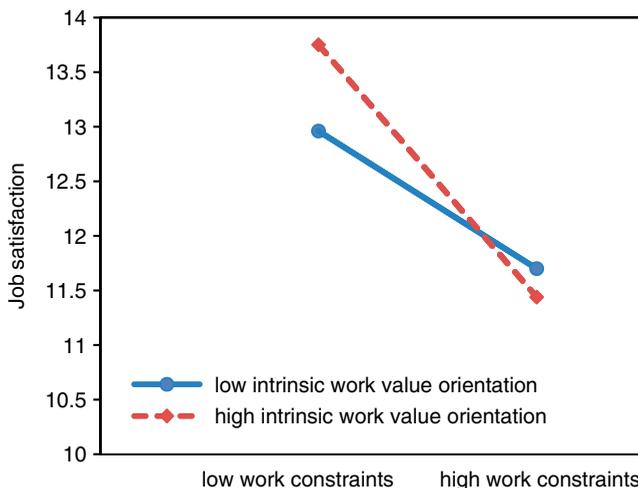
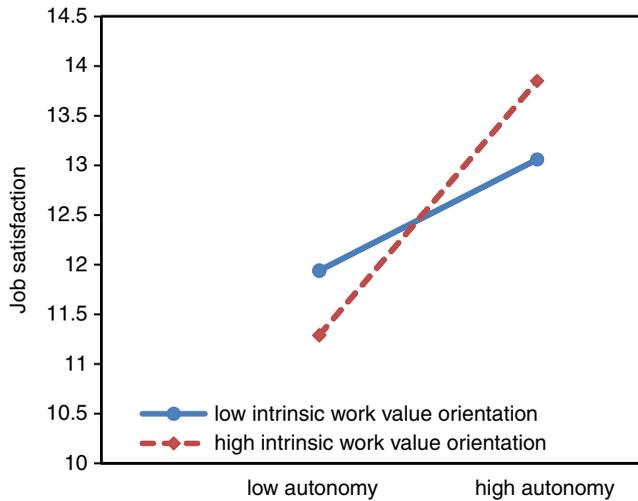


Figure 1. The moderating effect of intrinsic work value orientation on the relationship between work constraints and job satisfaction

Figure 2.
The moderating effects of intrinsic work value orientation on the relationship between autonomy and job satisfaction



Discussion

The purpose of the present study was to test the moderating effects of intrinsic work value orientation in the relationships between job demands (work constraints), job resources (autonomy) and work outcomes (job satisfaction). Our focus on the moderating effects of work value orientation as a personal resource is rare in the JD-R literature. One more added value of the present study is that our pooled sample came from two major Chinese societies (mainland China and Taiwan) representing the diversity in the Chinese societies, while previous studies mostly covered only one society (e.g. Lu, 1999).

We found that job demands (work constraints) had a negative impact on job satisfaction; and job resources (autonomy) had a positive impact on job satisfaction. These findings were consistent with previous studies conducted in western societies (e.g. Boyd *et al.*, 2011; Wrzesniewski and Dutton, 2001). In other words, job demands and resources are stable predictors of employees' work attitudes irrespective of their cultural contexts. As predicted, our results confirmed that job demands damage employees' job satisfaction, while job resources nurture employees' positive attitude toward work (cf. Boyd, *et al.*, 2011). Thus the main nexus of the JD-R model was supported in our diverse sample of Chinese employees.

We also found that intrinsic work value orientation differentially moderated the job demands-work outcomes and job resources-work outcomes relationships, specifically on the work constraints, job autonomy and job satisfaction relationships (see Table II and Figure 1, Table III and Figure 2). On the one hand, people who possess high intrinsic work value orientation in the high work constraints condition had the lowest job satisfaction. On the other hand, people who possess high intrinsic work value orientation in the high work autonomy condition had the highest job satisfaction. While previous studies focussed on contrasting intrinsic vs extrinsic work value orientations and found the latter having detrimental effects on work outcomes (Lin *et al.*, 2013; Vansteenkiste *et al.*, 2007), the present study take into account the environmental factors (job demands vs resources) in clarifying the role of intrinsic work value orientation as a personal resource in the overarching theoretical framework of the JD-R model. Our findings support the "matching hypothesis" (De Jonge and

Dormann, 2006), that argues the buffer effects of resources should only occur when similar types of demands (e.g. emotional demands) match with similar types of resources (e.g. emotional support). Not all resources can offset the detrimental effects of job demands, and some resources may even worsen the impact of stressors. Previous research has demonstrated that certain job resources such as social support could buffer the negative impact of job demands (Xanthopoulou *et al.*, 2007). We however, found that intrinsic work value orientation as a personal resource, made employees vulnerable when facing a work condition of high structural constraints. It is conceivable that since people with high intrinsic work value orientation strive for goal achievement, growth and self-actualization at work, they would be frustrated by environmental constraints such as lack of sufficient equipments and materials to complete the tasks. In effect, work constraints block their paths to success and thwarted personal accomplishment, thus eliciting more intense negative reactions. In a previous study of Taiwanese employees, such negative reactions were also manifested as anxiety when those with intrinsic work value orientation were deprived of work autonomy (Lu, 1999). However, employees with high intrinsic work value orientation benefitted more from gaining job resources (autonomy) which facilitate task completion. The positive side of having an intrinsic work value orientation was not revealed in Lu's (1999) earlier study.

Taken together, the exacerbating effect of intrinsic work value orientation on the work constrains-job satisfaction relationship and the amplifying effect of intrinsic work value orientation on the work autonomy-job satisfaction relationship seem to suggest a role of "double-edged sword" for this largely overlooked work-related value. In a recent study with Taiwanese employees, a similar role of "double-edged sword" was identified for self-efficacy, a well-researched personal characteristic in the work stress context (Lu *et al.*, 2011). Specifically, these researchers found that self-efficacy exacerbated the negative impact of lack of control (a stressor) on job satisfaction, but buffered the negative impact of this stressor on job performance. These patterns involving self-efficacy and those of our results pertaining to intrinsic work value orientation are inconsistent with existing western findings. It is also worth noting that the differential effects of intrinsic work value orientation found in the current study do not vary for different jobs. Although it is true that managers had more autonomy and non-managers were working under greater constraints, the moderation effects hold after "job position" was accounted for in the regression equations. Thus, we need to take an *emic* Chinese cultural perspective to understand the mechanisms underlying such an intriguing differential effects of the intrinsic work value orientation.

In accordance with the Confucian tradition, most Chinese organizations institute a well-structured and rigid authorization system. From the perspective of individuals striving for personal fulfillment and growth (i.e. high intrinsic work value orientation and/or high self-efficacy), the issue of "control" is a contagious one. Lack of the desired level of control, whether caused by structural constraints or authoritative supervision, may damage their job satisfaction to a greater degree, compared to those who are more in tune with the dominant cultural value of obedience (Lu, 2006). In other words, those individuals with higher self-expectations may be more prone to distress when perceived control over their jobs/tasks is lower. However, the potential of such individuals may be liberated and realized when they are granted control over their jobs/tasks. As the role of personal resources is relatively understudied in research of the JD-R model, we need to be cautious about the generalizability of the "double-edged sword" thesis (cf. Lu *et al.*, 2011) regarding intrinsic work value orientation.

Readers should also keep in mind that the present study has limitations. First, the survey design was cross-sectional, thus no causal conclusions are legitimate. Second, our survey was conducted using a self-report method. Self-assessed scales mainly tap individual subjective experiences, which reflect the reality an individual observes rather than the reality it actually exists (Podsakoff *et al.*, 2003). Therefore, we conducted the Harman's single-factor test to determine whether there was a general factor beyond the research variables that accounted for the majority of covariance among the measures (Podsakoff *et al.*, 2003). All items were entered into an exploratory factor analysis with an unrotated principal axis factoring procedure, and six factors emerged with eigenvalues > 1. The six factors together accounted for 69.91 percent of the variance, and the first factor accounted for only 23.20 percent of the total variance. Thus, common method variance was not a great concern, and it was unlikely to be significantly confounding the interpretation of results in the present study.

In sum, the current study explored the moderating effects of intrinsic work value orientation on relationships between job demands, job resources, and work outcomes in non-western societies. Although there has been previous work on the impact of job demands and job resources, our perspective is distinct in focussing on the moderating roles of personal resources in the JD-R model, embedded in a Chinese work context. As we have demonstrated in this study, work constraints would depress job satisfaction while autonomy would enhance job satisfaction. Intrinsic work value orientation performed a two-way moderating role in the relationships between work constraints, autonomy and job satisfaction: exacerbating the damaging effects of job demands while enhancing the beneficial effects of job resources. Thus, we suggest that organizations and managers can take a dual-approach in re-designing jobs: to enhance autonomy and to remove constraints. Furthermore, educating employees to be more aware of the pros and cons of their own work-related values may help them better adjust to work situations, as work environment can influence employees' motivation (Vansteenkiste *et al.*, 2007). Our concluding message is that individual psychological characteristics such as personal values should be more systematically examined and managed in our quest for better work adjustment.

References

- Alderfer, C.P. (1972), *Existence, Relatedness, and Growth: Human Needs in Organizational Settings*, Free Press, New York, NY.
- Aube, C., Rousseau, V. and Morin, E.M. (2007), "Perceived organizational support and organizational commitment: the moderating effect of locus of control and work autonomy", *Journal of Managerial Psychology*, Vol. 22 No. 5, pp. 479-495.
- Bakker, A.B. and Demerouti, E. (2007), "The job demands-resources model: state of the art", *Journal of Managerial Psychology*, Vol. 22 No. 3, pp. 309-328.
- Bakker, A.B. and Evangelia, D. (2008), "Towards a model of work engagement", *Career Development International*, Vol. 13 No. 3, pp. 209-223.
- Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2003), "Dual processes at work in a call centre: an application of the job demands-resources model", *European Journal of Work and Organizational Psychology*, Vol. 12 No. 4, pp. 393-417.
- Bakker, A.B., Hakanen, J.J., Demerouti, E. and Xanthopoulou, D. (2007), "Job resources boost work engagement particularly when job demands are high", *Journal of Educational Psychology*, Vol. 99 No. 2, pp. 274-284.
- Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-1182.

- Boyd, C.M., Bakker, A.B., Pignata, S., Winefield, A.H., Gillespie, N. and Stough C. (2011), "A longitudinal test of the job demands-resources model among Australian university academics", *Applied Psychology: An International Review*, Vol. 60 No. 1, pp. 112-140.
- Cammann, C., Fichman, M., Jenkins, D. and Klesh, J. (1979), "The Michigan organizational assessment questionnaire", University of Michigan, Ann Arbor, MI.
- Carsten, J.M. and Spector, P.E. (1987), "Unemployment, job satisfaction, and employee turnover: a meta-analytic test of the Muchinsky model", *Journal of Applied Psychology*, Vol. 72 No. 3, pp. 374-381.
- Cohen, J., Cohen, P., West, S.G. and Aiken, L.S. (2003), *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, 3rd ed., LEA Inc., Mahwah, NJ.
- Cooper, C.L., Dewe, P. and O'Driscoll, M.P. (2001), *Organizational Stress: A Review and Critique of Theory, Research and Applications*, Sage, Thousand Oaks, CA.
- De Jonge, J. and Dormann, C. (2006), "Stressors, resources and strain at work: a longitudinal test of the triple match principle", *Journal of Applied Psychology*, Vol. 91 No. 6, pp. 1359-1374.
- Demerouti, E., Bakker, A.B., Nachreiner, F. and Schaufeli, W.B. (2001), "The job demands-resources model of burnout", *Journal of Applied Psychology*, Vol. 86 No. 3, pp. 499-512.
- Dose, J.J. (1997), "Work values: an integrative framework and illustrative application to organizational socialization", *Journal of Occupational and Organizational Psychology*, Vol. 70 No. 3, pp. 219-240.
- Gagné, M. and Deci, E.L. (2005), "Self determination theory and work motivation", *Journal of Organizational Behavior*, Vol. 26 No. 4, pp. 331-332.
- Hackman, J.R. and Oldham, G.R. (1975), "Development of the job diagnostic survey", *Journal of Applied Psychology*, Vol. 60 No. 2, pp. 159-170.
- Hakanen, J.J., Schaufeli, W.B. and Ahola, K. (2008), "The job demands-resources model: a three-year cross-lagged study of burnout, depression, commitment, and work engagement", *Work and Stress*, Vol. 22 No. 3, pp. 224-241.
- Herzberg, F., Mausner, B. and Snyderman, B. (1959), *The Motivation to Work*, John Wiley, New York, NY.
- Hobfoll, S.E., Johnson, R.J., Ennis, N. and Jackson, A.P. (2003), "Resource loss, resource gain, and emotional outcomes among inner city women", *Journal of Personality and Social Psychology*, Vol. 84 No. 3, pp. 632-643.
- Hofstede, G.H. (2001), *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*, 2nd ed., Sage, Thousand Oaks, CA.
- Huang, H.J., Eveleth, D.M. and Huo, Y.P. (1998), "Chinese work-related value system: developing a "GCF-LEACH" framework for comparative studies among Chinese societies", paper presented at The Inaugural Conference of the Asia Academy of Management, Hong Kong, July.
- Hui, C.H. (1992), "Values and attitudes", in Westwood, R.I. (Ed.), *Organisational Behaviour: Southeast Asian Perspectives*, Longman, Hong Kong, pp. 63-90.
- Latham, G.P. (2007), *Work Motivation: History, Theory, Research, and Practice*, Sage, Thousand Oaks, CA.
- Lazarus, R.S. and Folkman, S. (1984), *Stress, Appraisal and Coping*, Springer Publishing Company, New York, NY.
- Leung, K. and Bond, M.H. (2004), "Social axioms: a model for social beliefs in multicultural perspective", *Advanced Experimental Social Psychology*, Vol. 36, pp. 119-197.
- Lin, H.Y., Lu, L., Siu, O.L. and Wu, P.Y. (2013), "Work stressors and strains of Taiwanese and Hong Kong employees: the moderating roles of work motivation and coping strategies", in Lee, J. (Ed.), *Comparative Humanity and Management in Taiwan and Hong Kong*, Yuan-Liou Publishing, Taipei, pp. 169-208.

- Lu, L. (1999), "Work motivation, job stress and employees' well-being", *Journal of Applied Management Studies*, Vol. 8 No. 1, pp. 61-72.
- Lu, L. (2006), "Cultural fit: individual and societal discrepancies in values, beliefs and subjective well-being", *Journal of Social Psychology*, Vol. 146 No. 2, pp. 203-221.
- Lu, L. (2008), "Culture, self, and subjective well-being: cultural psychological and social change perspectives", *Psychologia*, Vol. 51 No. 4, pp. 290-303.
- Lu, L. and Lin, K.C. (2002), "Work values and job adjustment of Taiwanese workers", *Research and Practice in Human Resource Management*, Vol. 10 No. 2, pp. 79-87.
- Lu, L. and Yang, K.S. (2006), "The emergence and composition of the traditional-modern bicultural self of people in contemporary Taiwanese societies", *Asian Journal of Social Psychology*, Vol. 9 No. 3, pp. 167-175.
- Lu, L., Chang, T.T. and Chang, Y.Y. (2012), "The meanings of work and family and their roles in coping with work and family conflict: practicing the Chinese bicultural self", *Indigenous Psychological Research in Chinese Societies*, Vol. 37, pp. 141-192.
- Lu, L., Chang, Y.Y. and Lai, S.Y.L. (2011), "What differentiates success from strain: the moderating effects of self-efficacy", *International Journal of Stress Management*, Vol. 18 No. 4, pp. 396-412.
- Lu, L., Siu, O.L. and Lu, C.Q. (2010), "Does loyalty protect Chinese workers from stress? The role of affective organizational commitment in the greater China region", *Stress & Health*, Vol. 26, pp. 161-168.
- Lu, L., Cooper, C.L., Kao, S.F. and Zhou, Y. (2003), "Work stress, control beliefs and well-being in greater China: an exploration of sub-cultural differences between the PRC and Taiwan", *Journal of Managerial Psychology*, Vol. 18 No. 6, pp. 479-510.
- Lu, L., Kao, S.F., Siu, O.L. and Lu, C.Q. (2010), "Work stressors, Chinese coping strategies, and job performance in the greater China", *International Journal of Psychology*, Vol. 45 No. 4, pp. 294-302.
- Lu, L., Kao, S.F., Siu, O.L. and Lu, C.Q. (2011), "Work stress, chinese work values, and work well-being in the greater China", *Journal of Social Psychology*, Vol. 151, pp. 767-783.
- Lu, L., Kao, S.F., Chang, T.T., Wu, H.P. and Cooper, C.L. (2008), "Work/family demands, work flexibility, work/family conflict, and their consequences at work: a national probability sample in Taiwan", *International Journal of Stress Management*, Vol. 15 No. 1, pp. 1-21.
- Mauno, S., Kinnunen, U. and Ruokolainen, M. (2007), "Job demands and resources as antecedents of work engagement: a longitudinal study", *Journal of Vocational Behavior*, Vol. 70 No. 1, pp. 149-171.
- Oyserman, D., Kimmelmeier, M. and Coon, H.M. (2002), "Cultural psychology, a new look: reply to Bond (2002), Fiske (2002), Kitayama (2002), and Miller (2002)", *Psychological Bulletin*, Vol. 128 No. 1, pp. 110-117.
- Peters, L.H. and O'Connor, E.J. (1980), "Situational constraints and work outcomes: the influences of a frequently overlooked construct", *The Academy of Management Review*, Vol. 5 No. 3, pp. 391-397.
- Podsakoff, P., MacKenzie, S., Lee, J. and Podsakoff, N. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.
- Roe, R.A. and Ester, P. (1999), "Values and work: empirical findings and theoretical perspective", *Applied Psychology: An International Review*, Vol. 48 No. 1, pp. 1-21.
- Rosen, C.C., Chang, C.-H., Djurdjevic, E. and Eatough, E.M. (2010), "Occupational stressors and performance: an updated review and recommendations", in Perrewe, P.L. and Ganster, D.C. (Eds), *Research in Occupational Stress and Well Being: New Developments in Theoretical and Conceptual Approaches to Job Stress*, Vol. 8, Emerald, Bingley, pp. 1-60.

-
- Spector, P.E. and Jex, S.M. (1998), "Development of four self-report measures of job stressors and strain: interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory", *Journal of Occupational Health Psychology*, Vol. 3 No. 4, pp. 356-367.
- Van den Heuvel, M., Demerouti, E., Bakker, A.B. and Schaufeli, W.B. (2010), "Personal resources and work engagement in the face of change", in Houdmont, J. and Leka, S. (Eds), *Contemporary Occupational Health Psychology: Global Perspectives on Research and Practice*, Vol. 1, Wiley-Blackwell, Chichester, pp. 124-150.
- Van Prooijen, J.W. (2009), "Procedural justice as autonomy regulation", *Journal of Personality and Social Psychology*, Vol. 96 No. 6, pp. 1166-1180.
- Vansteenkiste, M., Neyrinck, B., Niemiec, C.P., Soenens, B., Witte, H. and Broeck, A. (2007), "On the relations among work value orientations, psychological need satisfaction and job outcomes: a self-determination theory approach", *Journal of Occupational and Organizational Psychology*, Vol. 80 No. 2, pp. 251-277.
- Villanova, P. and Roman, M.A. (1993), "A meta-analytic review of situational constraints and work-related outcomes: alternative approaches to conceptualization", *Human Resource Management Review*, Vol. 3 No. 2, pp. 147-175.
- Wrzesniewski, A. and Dutton, J.E. (2001), "Crafting a job: revisioning employees as active crafters of their work", *Academy of Management Review*, Vol. 26 No. 2, pp. 179-201.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2007), "The role of personal resources in the job demands-resources model", *International Journal of Stress Management*, Vol. 14 No. 2, pp. 121-141.
- Xanthopoulou, D., Bakker, A.B., Dollard, M.F., Demerouti, E., Schaufeli, W.B., Taris, T.W. and Schreurs, P.J.G. (2007), "When do job demands particularly predict burnout? The moderating role of job resources", *Journal of Managerial Psychology*, Vol. 22 No. 8, pp. 766-786.

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