

Culture and the way of granting job autonomy: Goal or execution?

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Funding information

National Natural Science Foundation of China, Grant/Award Numbers: 71971225, 72071086, 72132001

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Abstract

Researchers have assumed that Westerners exercise higher job autonomy than Easterners. However, recent studies have reported mixed and even contradictory findings. The authors distinguish between two types of job autonomy, namely goal and execution autonomy, to examine the relevant cultural differences. The former denotes participation in setting work goals and making plans for meeting those goals, while the latter denotes the ability to complete tasks flexibly. Four studies with a total sample of 1,192 participants working in financial or insurance companies were conducted. Study 1a generated items for a new measure of the two-types of job autonomy and explored its factor structure. Studies 1b and 1c verified its construct validity and predictive capacity. Study 2 confirmed the structural and metric equivalence of the measure between samples from the United Kingdom and China. The results of Study 2 suggested that the Chinese workers were likely to have high execution autonomy but low goal autonomy, whereas the British workers tended to have high goal autonomy but low execution autonomy. The theoretical and practical implications of job autonomy in cross-cultural contexts are discussed.

Keywords: culture; execution autonomy; goal autonomy

Practitioner points

- Jobs should be designed to consider both goal and execution autonomy.
- Differentiation between goal and execution autonomy is critical for maintaining employees' psychological involvement with an organization.
- Different cultures tend to grant different types of autonomy.
- Chinese societies tend to control goal-setting tightly but remain flexible about task execution. In contrast, British society is more likely to encourage managerial participation in goal-setting but tightly control task execution.

BACKGROUND

The development of the Internet and information technology has rapidly changed the business world. To meet the challenges, many organizations are increasingly giving employees greater freedom, independence, discretion, and autonomy in their jobs (Berg et al., 2013). Although job autonomy aligns with the individualism and low-power distance cultural values typical in Western societies, where people tend to value independence and equal distribution of power, it conflicts with the allocentrism, authoritarianism, and collectivism typical in Eastern cultures such as China (Liu et al., 2011; Nauta et al., 2010). Research supporting the existence of this cultural difference has shown that job autonomy is more prevalent and has more positive outcomes in Western societies such as America and Australia rather than in Eastern societies such as China and India in terms of enhancing job satisfaction (Hui et al., 2004; Robert et al., 2000; Wu et al., 2015), reducing work stress (Liu et al., 2011), and alleviating job strain (Nauta et al., 2010; Tripathi et al., 2018).

Empirical findings pertaining to variation in job autonomy and its effects across cultures are far from being unequivocal. Some studies have found that Chinese, Japanese, and Indian workers have similar or even more job autonomy than American or British workers (Hirst et al., 2008; Li, 2019). Moreover, positive impacts of job autonomy have also been observed in Eastern societies, which are remarkably greater than those in Western countries in terms of job satisfaction (Liu et al., 2007) and alleviating job strain, depression, and emotional exhaustion (Charoensukmongkol, 2021; Nauta et al., 2010).

These mixed findings challenge the fundamental propositions of the traditional cultural value systems (e.g., individualism/collectivism, power distance), suggesting the need to reconsider the content of job autonomy and its cultural specificities. Therefore, the current paper fills this gap by arguing that the discrepancies between studies are the result of conflating two types of job autonomy, which we call goal autonomy and execution autonomy. *Goal autonomy* grants employees the management participation to set their work goals and make plans for meeting those goals. It represents the extent to which employees can strengthen the bonds between their work goals and career objectives, interests, and values, express concerns about their performance evaluation, and control or modify the difficulty of goals. *Execution autonomy* has little to do with how employees determine their work goals but indicates the manner in which they implement those goals. It represents employees' flexibility in choosing the procedures, methods, and time schedules that they follow to complete their tasks. With this two-type conceptualization of job autonomy, we go beyond the traditional frameworks of individualism and power distance to examine relevant

culture-specific institutional factors. In four studies, we test our propositions that job autonomy consists of two types, namely goal and execution autonomy, and that culture affects the prevalence of each type.

THEORY AND HYPOTHESES

Fallacious explanations of cultural differences in job autonomy by traditional cultural value system

Individualism–collectivism

Accumulating research displays that individualists prioritize self-relevant goals over collective ones (Markus & Kitayama, 1991) and demonstrate lower social embeddedness (Heu et al., 2019). In contrast, collectivists value personal traits that reflect collective goals (Oyserman et al., 2002) and display higher social embeddedness by performing social roles and obligations (Heu et al., 2019). Moreover, collectivists are likely to obey authorities (Gumusluoglu et al., 2020). Consequently, it is commonly believed that workers in collectivist cultures exercise relatively lower job autonomy than those in individualist cultures (Liu et al., 2011; Tripathi et al., 2018).

Power distance

Another cultural dimension widely used to explain cultural differences in job autonomy is power distance. It refers to the extent to which unequal power distribution among different people is viewed as a natural or even desirable social norm (Hofstede, 2001). Subordinates in high-power distance cultures are more likely to yield to leaders' decisions about daily work and to be more accustomed to performing tasks as assigned. In contrast, subordinates in low-power distance cultures may insist on taking part in decision-making. For example, Brockner et al. (2001) found that people in the U.S. and Germany (low-power distance countries) were more discontented with low levels of voice atmosphere than those in China, Mexico, and Hong Kong (high-power distance countries). Similarly, Hsiung and Tsai (2017) observed that Taiwanese workers with higher power distance orientation tended to engage in lower promotive voice. Relatedly, individuals from high-power distance countries have also been found to be more task-oriented than those from low-power distance countries, in terms of adhering to managers' assignments without sharing their views (Bochner & Hesketh, 1994; Nguyen et al., 2019).

Individualism–collectivism and power distance serve as the theoretical foundations on which arguments have been made for the compatibility of job autonomy with Western societies. Specifically, it has been argued that individualistic and low-power distance values highlight the virtue of job autonomy, as it offers individuals the chance to control their environments. In contrast, the collectivist and vertical cultural values of Chinese people have been argued to be less compatible with autonomy at work, as it may be perceived to indicate managerial inadequacy and undermine hierarchical structures. As noted earlier, however, a large body of research has undermined these arguments. In collectivist countries, where job autonomy has been expected to be exercised less frequently and bear less value, it has been found to not only be similar or even more prevalent than in individualistic countries (Hirst et al., 2008; Li, 2019) but also to have equally beneficial effects on work effectiveness (Gagné & Bhave, 2011) and physical health (Williams et

al., 2011). The mixed findings suggest the need to revisit culture-specific institutional factors (e.g., governance regulations and labour market practices) that may profoundly shape the construction and prevalence of autonomy at work (Hirst et al., 2008).

The following section reviews conceptualizations and measures of job autonomy and highlights that studies have predominantly focused on execution autonomy but ignored goal autonomy. Furthermore, we examine culture-specific institutional environments to clarify how they may affect the two types of job autonomy.

Previous conceptualizations and measures of job autonomy

Literature suggests that past measurements focus on execution but not goal autonomy. Referring to their earlier work, Hackman and Oldham (1974) assumed that job autonomy evokes a psychological state of experienced responsibility for work outcomes. Accordingly, they developed a 3-item scale for diagnosing execution-related autonomy, including reverse-scored items such as “The job denies me any chance to use my personal initiative or judgment in carrying out the work.” Adapting this scale, Idaszak and Drasgow (1987) replaced the reverse scoring by using three items such as “The job gives me considerable opportunity for independence and freedom in how I do the work.” All these items were designed to probe the extent to which workers can carry out their work independently.

Breaugh (1985) criticized the single-faceted structure as confounding autonomy with independence and developed a multifaceted measurement comprising (1) *work method* autonomy, the ability of individuals to design their work procedures, (2) *work scheduling* autonomy, their ability to control the scheduling and timing of their jobs, and (3) *work criteria* autonomy, their ability to choose how their performance is evaluated. The work method and scheduling dimensions considerably overlap with the single-faceted measures discussed in the previous paragraph and similarly concern execution autonomy. The third dimension, work criteria autonomy, also focuses on task execution rather than goal-setting. For example, the item “I have some control over what I am supposed to accomplish (what my supervisor sees as my job objectives)” suggests that workers passively accept the goals set by their leaders. Thus, Breaugh's (1985) scale does not consider workers' autonomy in goal-setting.

In their work on organizational climate, DeCotils and Koys (1980) defined job autonomy as “the perception of self-determination with respect to work procedures, goals, and priorities” (p. 173), which indicates a goal-related aspect to job autonomy. However, their measurements still predominantly focus on procedures and scheduling, with sample items being “I determine my own work procedure,” “I schedule my own work activities,” and “I organize my work as I see best.”

More recently, Morgeson and Humphrey (2006) assessed job autonomy in three aspects similar to Breaugh's (1985), namely autonomy in work scheduling, decision-making, and work methods. While decision-making autonomy could by definition relate to management participation or goal autonomy, the items still focus on execution. For example, execution is the subject of “The job gives me a chance to use my personal initiative or judgment in carrying out the work.” Furthermore, the other item of this dimension, “The job allows me to make a lot of decisions on my own,” does not explicitly specify whether the decisions relate to goal-setting or execution only. It is an ambiguous statement that lacks context-specific information. Therefore, although Morgeson and Humphrey labelled one dimension of job autonomy as pertaining to decision-making, their measure fails to differentiate between goal and execution autonomy.

Should the construct of job autonomy include goal-related aspects? In favour of this inclusion, the early job autonomy literature clearly highlighted a goal-setting component. For example, Sashkin (1976) identified autonomy in

terms of (1) *setting goals*, (2) making decisions, (3) solving problems, and (4) developing and implementing organizational changes. Hackman (1986) further identified *setting organizational goals* as one of the four controls workers have over their jobs, thereby emphasizing the importance of relevant managerial participation. Latham et al. (1994) also revealed that workers felt more self-efficacious when they set their own goals. Thus, *goal autonomy* should be considered a core facet of job autonomy. It is reasonable to assume that the absence of differentiation between goal and execution autonomy may have contributed to the mixed empirical findings on cultural differences in job autonomy, as these two types of autonomy may have different patterns of prevalence across cultures. In the next section, we explain how culture-specific institutional environments may affect the implementation of job autonomy.

Culture-specific institutional environments and job autonomy

Institutions have varying governance regulations and work orientations, which may affect goal and execution autonomy, respectively.

Governance regulations: collective bargaining

In the 18th century, throughout Europe, there has been a long tradition for employees to negotiate with employers regarding the regulation of work-related issues, such as payments, working conditions, compensation, and workers' rights. This negotiation process is commonly called collective bargaining and indicates the degree to which workers participate in management (Doellgast & Benassi, 2020; Wilkinson et al., 2014). Collective bargaining developed with the rise of trade unions in Europe and then spread to North America. In the U.S. National Labor Relations Act of 1935, employers and employees in private sectors were required to negotiate management practices such as payments and workers' rights. Collective bargaining mainly aims to replace unilateral decisions made on behalf of employers with agreed compromises between employees and employers. Workers serve as representatives on supervisory boards to reach collective agreements with managers on management-level decisions and goals.

Collective bargaining has thus expanded job autonomy in Western societies by instituting codetermination, which is the strategy of combining labour with management practices. Research has shown that in Nordic countries such as Norway, Sweden, and Denmark, workers are encouraged to set their own goals (Hilson et al., 2017). In the United Kingdom (U.K.), collective bargaining focuses on individual rights and liberties (Ackers, 2019; Cullinane, 2014). Moreover, driven by the requirement of collective bargaining, many Western countries, such as the U.K., Norway, Sweden, Australia, and Germany, legally mandate workers' basic rights to participate in management (Buschmann, 1993; Dobbin & Boychuk, 1999; Industrial Democracy in Europe International Research Group, 1993).

Although the extent of collective bargaining varies in Western countries (Doellgast & Benassi, 2020), Western–Eastern discrepancies remain highly salient. Collective bargaining can be implemented only if the economy is somewhat independent of governmental control, most people concur that workers should participate in management (Dobbin & Boychuk, 1999), and laws mandate worker representation on management boards (Cullinane, 2014).

Many Eastern developing countries, particularly China, fail to meet these conditions. First, the Chinese economy largely depends on the central government's 5-year economic and social development plans, which strictly regulate key national projects and productivity goals. Second, China has a typical tight culture in which citizens strongly adhere to

social norms, and the government fully controls all economic sectors (Triandis, 1989). For example, to meet the demands of the COVID-19 pandemic, the Chinese government strongly controls both state-owned enterprises and private sectors, mandating temperature screening upon entering buildings and tracing contacts over two-week periods.

Such practices, which are inconducive to collective bargaining, may derive from the Chinese familistic orientation in which family members tend to subordinate their personal goals to family interests (Sun, 2017; Yang, 1993). Moreover, Chinese societies have undergone a pan-familization process in which their familistic orientation has spread to affect employee relationships with their leaders and organizations (Lin et al., 2019). That is, organizational leaders play parental roles in having unchallenged, absolute power over subordinates. Consequently, the Chinese are more likely to accept that they should obey, depend on, and venerate the absolute power supposedly inherent in authority. Indeed, Chinese organizations endorse a highly paternalistic leadership style (Cheng et al., 2004), so leaders are expected to set goals and convey their expectations to workers (Lin et al., 2019), while workers avoid questioning, disagreeing with, or negotiating with supervisors regarding the setting of work goals and making plans.

In summary, we suggest that governance regulations as influenced by cultural traditions have caused Chinese society to become strongly centralized and to lack the foundation for collective bargaining. Consequently, compared with Westerners, Chinese workers may be expected to have less opportunity to participate in goal-setting, that is, have lower goal autonomy.

Labour market practices: rule-governed vs. skill-governed work orientations

Labour market practices, which can be differentiated in terms of whether they have rule-governed or skill-governed orientations (Fligstein & Byrkjeflot, 2018), may account for the variances in execution autonomy across cultures.

Practices with a rule-governed orientation refer to those that define and control execution tightly with rules. Liberal market economies, such as those of the U.S.A. and the U.K., tend to be rule-governed. They have employment systems in which the work processes, procedures, and schedules are clearly described by guidelines, such that workers have little discretion in doing their jobs (Dobbin & Boychuk, 1999; Kwok, 2020).

In contrast, China has a strongly skill-governed system that emphasizes work ability and encourages employees to control work processes and do their jobs with high flexibility. In the *Analects*, Confucius (1938/2005) wrote “Govern the people by regulations, keep order among them by chastisements, and they will flee from you, and lose all self-respect” (p. 88). In *The Book of Rites*, Confucius also said, “When the grand course was pursued, a public and common spirit ruled all under the sky; they chose men of talents, virtue, and ability” (80/2015, p. 93). Aligned with this traditional thought, Chinese management practices deemphasize detailed regulations and emphasize the skills needed to solve problems and complete complex tasks (Liu, 2019; Shenkar & Glinow, 1994). Nowadays, Chinese citizens greatly admire people who circumvent regulations and constraints to achieve greatness rather than strictly adhere to routines.

Managers in Chinese organizations commonly establish goals without providing details about how the work should be done or process controls. For example, a cross-cultural comparison displayed that compared with Americans, the Chinese are less concerned about process controls and are generally indifferent to adversarial legal procedures (Leung & Lind, 1986; Yamaguchi & Sawaumi, 2019). To reiterate, Chinese employees are more prone to bypass work rules to enact pro-organization behaviours (Zhang, 2020). Thus, both traditional orientations and empirical findings suggest that compared with Westerners, workers in Chinese organizations may have relatively more freedom in deciding on their procedures and methods for accomplishing assigned tasks, that is, have higher execution autonomy.

In response to the mixed cross-cultural findings on job autonomy, we further argue that cultural differences with regard to collective bargaining and rule- and skill-governed orientations have different effects on goal and execution autonomy. Specifically, the collective bargaining and rule-governed orientation prevalent in Western societies may evoke higher goal autonomy but lower execution autonomy. In contrast, the absence of collective bargaining and skill-governed orientation in Chinese society may evoke lower goal autonomy but higher execution autonomy. In support of our argument, the analysis of U.K. data from 1992 to 2001 by Gallie et al. (2004) showed a decrease in task discretion, which is similar to execution autonomy, and an increase in consultative involvement, which is similar to goal autonomy. Zhou (2006) similarly found that consultative involvement increased while task discretion declined from 1980 to 2001.

A new construct for job autonomy

Drawing on the above literature and discussion, we propose a two-type construct that captures the goal and execution aspects of job autonomy.

Specifically, goal autonomy denotes the degree to which workers participate in setting work goals and making plans for meeting those goals, such as by voicing their own interests or values, communicating clear, self-selected career objectives, discussing work plans with supervisors, and modifying tasks according to their personal judgement. Leaders can grant goal autonomy by giving subordinates opportunities to speak out as representatives in trade unions or on management boards, consulting with subordinates or team members when making decisions, or providing feedback on subordinates' concerns about work goals.

Execution autonomy denotes the extent to which workers control how they carry out specific tasks, such as choosing methods, scheduling time blocks, deciding on task sequences, and modifying processes. Employees may practice high execution autonomy through work-from-home arrangements. For example, since 2011, China's largest travel agency Ctrip International has allowed its Shanghai call centre employees to telecommute from home without direct supervision. They found that employees reported greater work satisfaction as a result (Bloom et al., 2015). Thus, we propose the following hypothesis:

Hypothesis 1. Job autonomy can be differentiated into goal autonomy, meaning the degree to which workers participate in setting their work goals and making plans for meeting those goals, and execution autonomy, which is flexibility in carrying out specific tasks in terms of procedures and time schedules.

Furthermore, regarding the possible effects of culture-specific institutional factors on job autonomy, we propose the following hypothesis with respect to our study contexts (China and the U.K.):

Hypothesis 2. The two types of job autonomy vary across cultures. That is, British workers have more goal autonomy than execution autonomy, whereas Chinese workers have more execution autonomy than goal autonomy.

THE PRESENT RESEARCH

The present research consists of four empirical studies to investigate employees' job autonomy with two objectives. First, we proposed a measure for our two-type job autonomy construct and verified its construct validity and predictive

capacity. Second, we examined whether the construct is applicable beyond Chinese society and investigated the interaction between culture and job autonomy types.

In Study 1, we developed a new scale, namely the Goal or Execution Autonomy Test (GREAT). We performed exploratory factor analysis (EFA) and item analysis¹ with Sample 1 ($N=190$). Then, we conducted confirmatory factor analysis (CFA) to confirm the scale's construct validity with Sample 2 ($N=200$). Test-retest reliability was tested using Sample 3 ($N=217$). Using Sample 4 ($N=195$) and combining four previously established measures, we examined the new scale's convergent, discriminant, criterion, and incremental validities. After validating the new scale, in Study 2 ($N=390$), we examined the differences in goal and execution autonomy between Chinese and British work cultures.

Our analytic strategies varied across the studies. In Study 1, we used EFA and correlation analysis to test the reliability of the two-type job autonomy measure. We also used CFA and hierarchical regression analysis to examine its construct and incremental predictive validity. In Study 2, we used analysis of variance to compare the mean scores of each type of job autonomy across cultures.

STUDY 1: SCALE (GREAT) DEVELOPMENT

Study 1a

In Study 1a, we first developed the GREAT and identified its factor structure. We then conducted item analysis to examine whether high- and low-scoring participants responded differently to each item.

¹We conducted an item discrimination analysis using Kelley's "27% of sample" group size. Due to the limited space, the results are not reported here but are available from the author upon request.

Method

Participants and procedures

According to Dobbin and Boychuk's (1999) survey, workers in the business services sector (e.g., financial services) demonstrate moderate to high job autonomy. Therefore, for Studies 1 and 2, we recruited participants working in financial or insurance companies. In doing so, we ensured that we would not be measuring job autonomy in an industry with little autonomy (e.g., agriculture, fishing, and forestry) or extremely great autonomy (e.g., professional services). Our focus on financial/insurance services also controlled for the confounding effects of industry type.

We chose our Study 1 sample sizes with reference to the following factors: (1) the suggestion of Comrey and Lee (1992) that 200 is a fair size for factor analysis studies, and (2) our budget. Accordingly, we collected four samples, each of which had about 200 participants. Table 1 displays the characteristics and purposes of our samples in Study 1.

For Study 1a, we recruited 190 employees (Sample 1). Of these participants, 47.9% were men and 56.3% had a bachelor's degree or above. In terms of age, 37.9% were under 30 years old, 23.7% were 31–40, 23.2% were 41–50, and 15.2% were above 50. The mean work experience was 14.42 years ($SD=9.88$).

Measures

Goal or execution autonomy test (GREAT)

We generated 34 GREAT items. The items were generated based on: conceptualization; literature concerning job autonomy measurements, such as a work design questionnaire (Morgeson & Humphrey, 2006), an organizational climate survey (DeCotils & Koys, 1980), a job diagnostic survey (Hackman & Oldham, 1974), a work autonomy survey (Breugh, 1985), and interviews with eighteen employees in the financial sector (no more new information popped up after the fifteenth interviewee, so we stopped at the eighteenth). The interviewees were asked to report on two items: (1) “Please provide examples where you have the freedom to set your work-related goals” and (2) “Please provide examples where you have the freedom to choose how to complete your job.” Two organizational experts reviewed the 34 items independently and then combined, revised, and deleted items in discussions with the first author, leaving

TABLE 1 about here

21 items. A Ph.D. candidate majoring in Chinese language and literature then proofread the 21 items, revised inaccuracies, and clarified ambiguous wordings. We administered the final 21-item survey to four independent samples to explore factor structure, validity, and reliability. Respondents evaluated to what extent they agreed with each statement on a 7-point Likert scale (1=*totally disagree*, 7=*totally agree*).

Results and discussion

Exploratory factor analysis (EFA)

EFA results indicated a structure of two distinct factors, that is, the first factor with nine items and the second with 12 items. The eigenvalues of the two factors were 7.54 and 3.42, respectively. The two factors explained 52.20% of the total variance. Table 2 shows items, EFA loadings, percentage of variance explained, and reliabilities.

To examine the factor structure of the GREAT, Varimax rotation was used to investigate the two-factor model. More precisely, the nine items loaded on the first factor accounted for 35.89% of the total variance. These items capture the extent to which employees have control over their task procedures, time schedules, and methods and can be labelled Execution Autonomy (EA). The other 12 items loaded on the second factor accounted for 16.31% of the total variance. These items capture the extent to which employees set goals, make decisions with supervisors, and participate in management and can be labelled Goal Autonomy (GA).

TABLE 2 about here

Study 1b

To validate the factor structure of the GREAT, we investigated its discriminant validity and reliability. We also administered four well-established job autonomy scales for comparison, namely from the Work Design Questionnaire (WDQ), Organizational Climate Questionnaire (OCQ), Job Diagnostic Survey (JDS), and Work Autonomy (WA)

questionnaire.

Method

Participants and procedures

We first recruited 200 employees (Sample 2). Of these participants, 50% were men and 51% had a bachelor's degree or above. In terms of age, 42.5% were under 30 years old, 23% were 31–40, 24% were 41–50, and 10.5% were above 50. The mean work experience was 13.41 years ($SD=9.23$). To examine test–retest reliability, we recruited another sample of 217 employees (Sample 3). Of these participants, 50.7% were men and 51.1% had a bachelor's degree or above. In terms of age, 43.3% were under 30, 26.3% were 31–40, 20.7% were 41–50, and 9.7% were above 50. The mean work experience was 12.93 years ($SD=9.07$). This sample was tested twice at an interval of 4 weeks.

Measures

GREAT

The scale developed in Study 1a was used. Cronbach's alphas were .89 for EA and .91 for GA.

Work Design Questionnaire (WDQ)

As one of the 21 job characteristics identified by Morgeson and Humphrey (2006), job autonomy is assessed by nine items in the WDQ. Sample items are “The job allows me to make my own decisions about how to schedule my work” and “The job allows me to decide on my own how to go about doing my work.” Cronbach's alpha was .92.

Organizational Climate Questionnaire (OCQ)

DeCotils and Koys (1980) developed a four-dimension organizational climate scale in which job autonomy is measured with five items. A sample item is “I schedule my own work activities.” Cronbach's alpha was .87.

Job diagnostic survey (JDS)

In the revised version (Idaszak & Drasgow, 1987) of the JDS (Hackman & Oldham, 1974), three items are used to assess job autonomy. A sample item is “The job gives me a chance to use my personal initiative and judgment in carrying out the work.” Cronbach's alpha was .79.

Work autonomy (WA)

Breaugh (1985) developed this scale to assess job autonomy in three dimensions, namely method autonomy (e.g., “I am able to choose the way to go about my job”), scheduling autonomy (e.g., “I have control over the scheduling of my work”), and criteria autonomy (e.g., “My job allows me to modify the normal way we are evaluated so that I can emphasize some aspects of my job and play down others”). Cronbach's alpha was .80.

TABLE 3 about here

Results and discussion

To confirm the factor structure of the GREAT, we tested two models using CFA with our Sample 2 responses. Specifically, we tested a one-factor model in which all 21 items were represented by one job autonomy factor, and the two-factor EA and GA model was used to load items into their respective factors.

To interpret the fit of our model, we used the five fit indicators: the χ^2/df ratio, incremental fit index (IFI), comparative fit index (CFI), standardized root-mean-square residual (SRMR), and root-mean-square error of approximation (RMSEA). Table 3 displays the CFA results. The one-factor model showed poor fit, as all of the fit statistics failed to meet acceptable levels. In comparison, the two-factor model showed adequate fit, as all four indicators reached acceptable levels. Accordingly, the two-factor model showed significantly better fit than the one-factor model ($\Delta\chi^2=274.24$, df change=1, $p<.001$). The average variances extracted (AVE) for EA and GA were .50 and .52, respectively, suggesting an acceptable convergent validity of the two factors (Fornell & Larcker, 1981). This result also indicated that the variances explained by the model were larger than those caused by measurement error. Moreover, the square roots of AVE were .70 and .72, which were larger than the correlation coefficients between EA and GA (.46) and thus suggested a good discriminant validity of the two factors.

To test our one- and two-factor models against the four widely used measurements listed above, we combined our models with the four measures and tested the resulting four two-factor models and four corresponding one-factor models (Table 3). Generally, the two-factor models had better fitness than the one-factor models. The model comparison results demonstrated that the GREAT differed from the other four measures, suggesting its high discriminant validity.

With Sample 3, we measured the GREAT twice at a 4-week interval. The Time 1 and Time 2 results showed correlations of .89 for EA and .92 for GA, suggesting high test–retest reliability.

Study 1c. Criterion and incremental validity

Next, we investigated the GREAT's incremental contribution to the prediction of criteria beyond those predicted by well-established measures of job autonomy. As may be expected from the use of job autonomy to refer to the degree of freedom with which employees determine their work processes, schedules, and plans, job autonomy has commonly been found to facilitate positive job outcomes and buffer negative outcomes. For example, job autonomy was found to promote extra-role job performance, that is, organizational citizenship behaviour (Chen & Chiu, 2009), and to be associated with higher life satisfaction and less work–family conflict (Thompson & Prottas, 2006). Similarly, as employees with higher autonomy may have enough control over their work or chances to implement their goals or plans, they are more likely to proactively craft job tasks, that is, change the boundaries and conditions of their work (Tims & Bakker, 2010). Job autonomy was also found to be negatively associated with burnout, thus buffering against work stress (Thomas et al., 2014). Therefore, we combined our scale with the four well-established job autonomy scales discussed above to measure organizational citizenship behaviour, life satisfaction, job crafting, and job burnout as

external criteria.

Method

Participants and procedures

We recruited 195 employees (Sample 4). Of these participants, 51.3% were men and 57.4% had a bachelor's degree or above. In terms of age, 44.1% were under 30 years old, 26.7% were 31–40, 23.1% were 41–50, and 6.1% were above 50. The mean work experience was 12.62 years ($SD=8.67$).

Measures

GREAT

The measurement developed in Study 1a was used. Cronbach's alphas were .89 for both EA and GA.

Work Design Questionnaire (WDQ), Organizational Climate Questionnaire (OCQ), Job Diagnostic Survey (JDS), and Work Autonomy (WA)

These measurements were identical to those used in Study 1b. Cronbach's alphas were .91, .86, .87, and .81, respectively.

Organizational citizenship behaviour (OCB)

Organizational citizenship behaviour (OCB) refers to desirable behaviour that is not explicitly recognized by formal job descriptions but facilitates the development and effective functioning of organizations. We used the 22-item scale developed by Coyle-Shapiro (2002) to measure OCB. Cronbach's alpha was .88.

Life satisfaction (LS)

Life satisfaction (LS) was measured with a 5-item scale developed by Diener et al. (1985). This scale has been widely used to capture individuals' judgmental processes concerning their overall happiness and life satisfaction. Cronbach's alpha was .88.

Job crafting (JC)

Job crafting (JC) refers to proactive behaviours for coping with the challenges and constraints posed by a job. We measured job crafting with a 10-item scale developed by Petrou et al. (2012). Cronbach's alpha was .80.

TABLE 4 about here

Job burnout (JB)

Job burnout (JB) refers to the physical or emotional exhaustion caused by work stressors. It was assessed with the 15-item scale developed by Li (2003). Cronbach's alpha was .94.

Results and discussion

We tested the correlations between the two factors of GREAT and LS, OCB, JC, and JB. As shown in Table 4, the results indicated that all these variables were moderately intercorrelated. As expected, only JB was negatively correlated with the other variables.

We also ran a hierarchy regression to test the incremental validity of our new scale in relation to the other four job autonomy measures (Table 5). We included several demographic factors as control variables, as the literature has identified their importance in explaining workers' perception of job autonomy. For example, Dong et al. (2021) found that employees with long working hours benefited more from job autonomy. Aspøy (2020) found that employees without higher education exercised less job autonomy. Ng and Feldman (2015) found that older workers experienced greater levels of the positive outcomes of job autonomy. Adler (1993) highlighted the gender gap in job autonomy. Thus, to facilitate the precise examination of job autonomy, gender, age, education, and working length were included in the hierarchy regression as control variables. The results suggested that our two-type job autonomy measure provided significant predictive capability beyond that of the well-established measurements.

In sum, in Studies 1a and 1b, the results of the EFA and CFA verified the two-type structure of the GREAT and demonstrated its construct validity, respectively. The measure was also shown to have a high test–retest reliability. Furthermore, Study 1c verified its criterion and incremental validity by showing that it provided significant predictive capability beyond that of well-established measurements.

STUDY 2: CULTURAL COMPARISONS

As Studies 1a, 1b, and 1c were all conducted in China, we wanted to extend the investigation of the GREAT to Western society, specifically the U.K., to examine whether the measure is applicable beyond Chinese society. In addition, we wanted to test if there were cultural differences in the prevalence of the two types of job autonomy.

Method

Procedures and measures

In total, we collected data from 390 participants. The Chinese sample consisted of 182 participants, 58.2% of whom were women. In terms of age, 23.6% of the Chinese group were 18–30 years old, 67% were 31–40, 8.8% were 41–50, and .5% were 51–60. The U.K. sample consisted of the remaining 208 participants, 71.6% of whom were women. In terms of age, 35.6% were 18–30 years old, 40.4% were 31–40, 20.2% were 41–50, and 3.8% were 51–60.

We recruited our Chinese participants from financial companies located in Beijing and Shanghai, and our U.K. participants from the worker populations on the online platform Prolific, where we set our prescreening condition as working in financial and insurance companies. We used the GREAT scale developed in Study 1 to measure job autonomy. Following the translation and back-translation procedure, we obtained the English version of the scale for use with the U.K. sample. Cronbach's alphas for execution and goal autonomy were .90 and .93, respectively. The participants were also asked to provide their demographic information, specifically their age, gender, and nationality.

Results and discussion

Prior to further analysis, we checked whether the two-type construct in the British sample was similar to that in the Chinese sample in Study 1. Specifically, we examined both the structural and metric equivalence of the measurement between Chinese and British samples. Structural equivalence reflects whether the same construct emerges in different cultures. Metric equivalence further entails the possibility of making relative comparisons of items' equivalence between cultural groups (Van de Vijver & Leung, 1997). Regarding structural equivalence, as in Study 1, we tested two models with the British sample. A one-factor model showed that all 21 items indicated one factor. The second was a two-factor model in which items were loaded onto their respective EA and GA factors. As expected, results indicated that the two-factor model was better than the one-factor model, confirming that the British sample also included the two-type construct (Table 6).

TABLE 6 about here

Regarding metric equivalence, following the recommendations of Fischer and Fontaine (1997), we first conducted EFA and obtained the factor loadings of each item for the British participants. Combining these loadings with those of the Chinese sample in Study 1, we then rotated the British data towards the Chinese matrix. The results indicated that the square root of the mean squared difference per item ranged from .02 to .28. The low value of the difference suggested good correspondence of items across the samples. We also examined the various agreement coefficients to check the congruence of the two-type measure between the two samples. According to the common cut-off criteria, values lower than .85 are seen as indicative of incongruence (Ten Berge, 1986). The results showed that the coefficients were .95 and .96 for identity, .88 and .91 for additivity, .96 and .96 for proportionality, and .88 and .91 for correlation. Thus, the current measurement showed acceptable factor similarity across the two samples.

We also conducted a multigroup CFA (China vs. the U.K.). The results showed that the $\Delta\text{CFI}=.001$ and $\Delta\text{RMSEA}=.007$. According to the criteria suggested by Chen (2007) and Cheung and Rensvold (2002), measurement invariance can be evidenced if $\Delta\text{CFI} \leq .01$ and $\Delta\text{RMSEA} < .015$. Thus, the results suggested that the GREAT maintained structural and metric equivalence across the two cultures.

We conducted a 2 (autonomy: goal vs. execution) \times 2 (country: China vs. the U.K.) ANCOVA with autonomy as a repeated measure and age and gender as covariates. Age and gender had nonsignificant effects, age: $F_{(1,386)}=1.96$, $p=.163$, partial $\eta^2=.005$; gender: $F_{(1,386)}=1.36$, $p=.244$, partial $\eta^2=.004$. Moreover, the main effect of autonomy type was nonsignificant, $F_{(1,386)}=1.22$, $p=.271$, partial $\eta^2=.003$. However, the main effect of country was significant, $F_{(1,386)}=229.73$, $p<.001$, partial $\eta^2=.37$, indicating that the Chinese workers exercised more autonomy than their British counterparts. More importantly, country had a significant interaction effect with autonomy type, $F_{(1,386)}=18.55$, $p<.001$, partial $\eta^2=.05$. The simple main effect analysis indicated that the Chinese participants exercised higher execution autonomy ($M=5.77$, $SD=.07$) than goal autonomy, $M=5.63$, $SD=.06$; $F_{(1,386)}=5.34$, $p=.021$, partial $\eta^2=.01$, whereas the British participants exercised higher goal autonomy ($M=4.50$, $SD=.06$) than execution autonomy, $M=4.29$, $SD=.07$; $F_{(1,386)}=14.98$, $p<.001$, partial $\eta^2=.04$.

As expected, the significant interaction between country and autonomy type confirmed that the Chinese workers, who presumably displayed low levels of collective bargaining and high levels of skill-governed orientation, demonstrated higher EA and lower GA. In contrast, the British workers, who presumably displayed high collective bargaining and high rule-governed orientation, exhibited higher GA and lower EA. Moreover, the results indicated that

the Chinese participants generally scored higher in both types of autonomy than the British participants. This may be due to the higher tendency of Chinese samples to acquiesce, that is, agree rather than disagree with statements in general (Harzing, 2006).

GENERAL DISCUSSION

Taking into account the integrated effects of two culture-specific institutional factors, specifically collective bargaining and rule- versus skill-governed orientation, we re-conceptualized job autonomy with a two-type construct consisting of goal and execution autonomy and examined how they distribute across cultures. Using six independent samples, we validated our new construct of job autonomy. We found robust evidence of scale reliability, construct validity, and predictive capability beyond that of well-known job autonomy measures. Our cross-cultural comparisons confirmed the stability of the scale and suggest that Chinese (British) workers tend to exercise relatively high (low) execution autonomy and low (high) goal autonomy.

Theoretical contributions

Since the 1970s, researchers have recognized that goals affect job autonomy but have largely failed to provide relevant empirical measures (Sashkin, 1976). We offer a new perspective and contribute theoretically by providing a comprehensive construct for job autonomy that incorporates the goal aspect. We integrate the literatures on management participation and task discretion to show that job autonomy can refer to either goal or execution autonomy. For instance, our construct can explain how British workers might lack discretion in deciding how to complete tasks but still have relatively high autonomy (Au & Cheung, 2004; Gallie et al., 2004; Zhou, 2006).

The distinction between goal and execution autonomy calls for careful investigations of the boundary conditions that may influence the effects of job autonomy on work performance. Langfred and Møye (2004) summarized that factors such as trait and state-based personal differences, information asymmetry, task structures, and organizational structures (e.g., formalization) could all serve as moderators affecting the relationship between job autonomy and work performance. In particular, organizational structures, which represent the degree of rule constraint, may greatly influence the implementation of goal autonomy. Similarly, organizational culture, justice, climate, and incivility may also moderate the relationship between goal autonomy and performance. More broadly, we argue that examinations of the two types of job autonomy must consider national employment systems (Dobbin & Boychuk, 1999) in terms of management practices, bargaining, training, and unemployment.

According to self-determination theory (SDT, Deci et al., 2017), autonomy is one of the fundamental human psychological needs. When satisfied, it helps promote employees' working motivation, wellness, and effective performance. Cultural relativists and universalists have long disagreed on whether job autonomy is a universally desired characteristic or prevalent and beneficial mainly in Western societies (Li, 2019; Tripathi et al., 2018). Our two-type framework provides new directions for cross-cultural comparisons of job autonomy. We challenge the cultural relativistic view as it is not reasonable to expect that a society is

completely autonomy-supportive or autonomy-thwarting. Rather, a society may both support and thwart autonomy but with respect to different aspects of autonomy, such as goal and execution autonomy. Our framework thereby advances the universalist, SDT view of autonomy. In line with the SDT argument, future work may explore how the two types of autonomy we posit are related to intrinsic or extrinsic motivations. In addition, our work facilitates the cultural comparison of job autonomy and makes it more meaningful. Rather than focus on a broad and somewhat ambiguous construct of autonomy across cultures, future researchers should examine different aspects of job autonomy within and between cultures.

To explain cultural differences in job autonomy as represented by the two-type construct, we controlled for industry type by recruiting participants working in finance and insurance, and put forward culture-specific institutional factors. A country's level of economic development, however, is an alternative variable that may explain these differences. Given that we only collected data from two countries, we could not address this concern with our samples. Thus, we further analysed data from a multi-country survey, namely the *International Social Survey Program: Work Orientation* (ISSP Research Group, 2013, 2017). In this survey, job autonomy is measured by two items: flexibility in working hours (e.g., "I am entirely free to decide when I start and finish work") and in the organization of a working day (e.g., "I am free to decide how my daily work is organized"; ISSP Research Group, 2013, 2017). The two items are averaged to index job autonomy. We used the data of the 2005 and 2015 waves, as they were collected from more countries compared with those of other waves. The 2005 dataset covers 35 Eastern and Western countries ($N=44,365$), while the 2015 dataset covers 37 countries from a similarly wide geographical range ($N=51,668$). To represent the level of economic development, we used each country's GDP per capita (World, 2017). The results of our regression analysis indicated that at the country level, for both the 2005 ($\beta=.16, p=.442, ns$) and 2015 surveys ($\beta=.14, p=.404, ns$), the levels of economic development were not associated with job autonomy. These results may thus rule out countries' levels of economic development as an alternative explanation and suggest that culture-specific institutional factors are indeed the critical factor determining cultural differences in job autonomy.

Practical implications

Our new GREAT construct has implications for managers who want to grant employees autonomy in the workplace. Our model distinguishes between execution autonomy, in which employees choose their work methods, processes, and schedules, and goal autonomy, in which employees are involved in making plans and setting goals. We believe that this differentiation is critical for maintaining employees' psychological involvement in organizational matters. Bloom et al. (2015) found that employees with higher task discretion worried that they were "out of sight, out of mind" to their managers. This finding suggests that such employees may prefer to be tightly bonded with their organizations and become involved in management practices. Execution autonomy may only lead them to feel less noticed by their supervisors and to worry about their performance evaluation. However, as goal autonomy may allow them to participate in goal-setting and increase their consultative involvement in management, it may eliminate their worry of being ignored when carrying out tasks independently.

Our model suggests that jobs should be designed to consider both execution and goal autonomy. Although execution autonomy has been the predominant focus in job design, goal-setting theory (Locke & Latham, 1990) suggests that goal attainment is strongly associated with well-being (Brunstein, 1993), self-efficacy, and expectations for

success (Demerouti, 2014). Therefore, employees who are granted goal autonomy may be motivated to perform better as their work goals are concordant with their values.

Differences in culture-specific institutional factors may cause cultural differences in the granting of each type of autonomy. For example, Chinese societies tend to control goal-setting tightly but remain flexible about execution. In contrast, liberal market economies (e.g., the U.K.) are likely to encourage managerial participation but tightly control processes. Considering that both types of autonomy are beneficial to a certain degree, multinational companies should balance both to become more competitive rather than adhere to traditional practices that favour only one type.

Although we highlight the importance of goal autonomy, we do not deny nor diminish employers' ownership of their companies. As suggested by the literature on voice and participative leadership, managers may improve workers' goal autonomy by encouraging them to communicate concerns and suggestions (Morrison, 2014). Leaders may also do so by consulting with employees or inviting their representatives to make joint decisions about plans and goals, thereby ensuring that they feel respected and become involved in organizational matters (De Jong & Den Hartog, 2007).

Limitations, future research, and conclusion

Awareness of our shortcomings may motivate future research. First, while we examined and reconstructed the job autonomy concept, researchers should more thoroughly investigate a clear nomological network for the concept. This work may be carried out by drawing on two approaches to job autonomy. The first is the job design approach, in which job autonomy varies with contextual factors such as organizational atmosphere, job structure, and leadership (DeCotils & Koys, 1980). The other is the humanism approach, in which job autonomy is regarded as a need of human nature. Job identification, feedback, and the significance of work may all impact this need. This approach is similar to the organismic-dialectical perspective, which views people as proactive, autonomy-seeking organisms (Vansteenkiste & Ryan, 2013). It also stresses the effects of individual differences in personality, autonomous motivation, personal skills, and abilities.

Second, in Study 1c, we showed that job autonomy was positively associated with organizational citizenship behaviour, job crafting, and life satisfaction, and negatively associated with job burnout. However, a more comprehensive picture requires an investigation of its associations with more potential downsides such as unethical behaviours (Lu et al., 2017), undermined team performance (Langfred, 2004), and weakened conflict resolution (Langfred, 2007).

Third, the patterns of Chinese high execution/low goal autonomy and British high goal/low execution autonomy should not be generalized simply to Eastern and Western cultures, respectively (Beugelsdijk & Welzel, 2018; Smith et al., 2014). The cultural prevalence of the two types of autonomy should be scrutinized in terms of institutional factors (i.e., governance regulations and work orientations) rather than the traditional constructs (e.g., individualism/collectivism) used to differentiate between cultural value systems. For example, China, India, and Brazil (Borges-Andrade et al., 2019) share similar value systems (e.g., high collectivism and high-power distance) but differ in government regulations and work orientations may lead to different or even opposite ways of granting two types of job autonomy.

Fourth, rather than investigating the separate effects of goal and execution autonomy, future research could examine how the degree of fit affects organizational outcomes. Polynomial regression and response surface techniques

could be used to detect the effects of combined high or low goal/execution autonomy (Barranti et al., 2017), and potentially provide a new perspective for observing different aspects of work participation. Fourth, the British data in Study 2 were collected from the Prolific online platform. Online surveys are often only completed by those who are interested in the survey topic. This may hamper the generalizability of our findings. Future studies, particularly those conducting cross-cultural comparisons, would benefit from using more representative and comparable samples.

In conclusion, by considering the integrated effects of two culture-specific institutional factors, namely collective bargaining and rule- vs. skill-governed orientation, we provide a new perspective for understanding the content of job autonomy and its cultural specificities.

AUTHOR CONTRIBUTIONS

Feng Jiang, Su Lu: Writing—original draft. **Li-Jun Ji, Hai-Jiang Wang:** Writing—review and editing. All authors have contributed to the revision of the manuscript.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest associated with this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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How to cite this article: Jiang, F., Lu, S., Ji, L.-J., & Wang, H.-J. (2023). Culture and the way of granting job autonomy: Goal or execution? *Journal of Occupational and Organizational Psychology*, 00, 1–22. <https://doi.org/10.1111/joop.12438>

TABLE 1
Characteristics and purposes of samples in Study 1

| | Sample 1 | Sample 2 | Sample 3 | Sample 4 |
|---------------------------|--------------------|--|--------------------------|----------------------------------|
| Sample Size | 190 | 200 | 217 | 195 |
| Men | 47.9% | 50.0% | 50.7% | 51.3% |
| Age:<30 | 37.9% | 42.5% | 43.3% | 44.1% |
| 31-40 | 23.7% | 23.0% | 26.3% | 26.7% |
| 41-50 | 13.2% | 24.0% | 20.7% | 23.1% |
| >50 | 15.2% | 10.5% | 9.7% | 6.1% |
| Education: | 11.1% | 18.5% | 9.7% | 11.8% |
| High school | | | | |
| Associate degree | 32.6% | 30.5% | 39.2% | 30.8% |
| Bachelor degree and above | 56.3% | 51.0% | 51.1% | 57.4% |
| Mean Work Tenure (SD) | 14.42(9.88) | 13.41(9.23) | 12.93(9.07) | 12.62(8.67) |
| Purpose | EFA, Item analysis | CFA, Construct/Convergent/Discriminant validity, | Test-re-test reliability | Validity (Criteria/ Incremental) |

TABLE 2
Exploratory factor analysis results of job autonomy with sample 1 (N = 190)

| Factors and items | EFA Loadings | |
|--|--------------|-------------|
| | Factor 1 | Factor 2 |
| Factor 1 | | |
| 1. I am able to decide the sequencing of my work activities. | .114 | .692 |
| 2. I am able to choose the way I prefer to get my job done. | .091 | .752 |
| 3. I am able to decide when I want to finish my work. | .028 | .755 |
| 4. I am able to decide when I want to start work. | .086 | .792 |
| 5. I am able to choose the pace of my work. | .052 | .755 |
| 6. I can choose whether I want to work overtime. | .201 | .659 |
| 7. At work, I have the power to make my own decisions. | .138 | .665 |
| 8. I have control over my business expenses. | .151 | .607 |
| 9. I am able to modify my job based on task effectiveness. | .289 | .447 |
| Factor 2 | | |
| 10. I am able to modify my work goals. | .638 | .290 |
| 11. I am able to decide the criteria of performance evaluation. | .767 | .105 |
| 12. I am able to decide which aspects of my performance will be evaluated. | .725 | .050 |
| 13. I have control over my performance goals. | .749 | .130 |
| 14. I have control over the difficulty of my job tasks. | .743 | .090 |
| 15. I am able to align goals with my interests and values. | .740 | .057 |
| 16. I am able to set goals in line with my career objectives. | .775 | .048 |
| 17. I have control over my long-term (e.g., one year) working goals. | .770 | .052 |
| 18. I have control over my short-term (e.g., one week) working goals. | .621 | .217 |
| 19. I have the freedom to set my own work goals. | .565 | .264 |
| 20. Using my judgment and initiative, I am able to set my work goals. | .740 | .157 |
| 21. I am able to discuss my work plans with my supervisor. | .726 | .108 |
| % variance explained | 35.89 | 16.31 |
| Reliability | .87 | .92 |

Note: Extraction method: principal component analysis. Rotation method: varimax with Kaiser normalization.

TABLE 3
CFA results for scale validation of GREAT with sample 2 (N = 200)

| | χ^2/df | $\Delta\chi^2$ | IFI | CFI | SRMR | RMSEA |
|--|-------------|----------------|-----|-----|------|--------------|
| CFA Results of Great | | | | | | |
| One-factor model of GREAT | 3.49 | | .78 | .78 | .12 | .11 |
| Two-factor model of GREAT | 1.97 | .92 | .92 | .06 | .07 | 274.24(1)*** |
| Models used to discriminate GREAT from alternative measures | | | | | | |
| Two-factor model: GREAT and Morgeson and Humphrey (2006)'s Work Design Questionnaire | 1.73 | | .92 | .92 | .09 | .06 |
| One-factor model: two factors merged | 2.47 | 268.08(1)*** | .84 | .84 | .07 | .09 |
| Two-factor model: GREAT and Decotils and Koys (1980)'s Organizational Climate | 1.97 | | .91 | .91 | .07 | .07 |
| One-factor model: two factors merged | 2.87 | *** 237.11(1) | .82 | .82 | .08 | .10 |
| Two-factor model: GREAT and Idaszak and Draszgow (1987)'s Job Diagnostic Survey | 2.07 | | .91 | .90 | .08 | .07 |
| One-factor model: two factors merged | 2.51 | 97.24(1)*** | .86 | .86 | .08 | .09 |
| Two-factor model: GREAT and Breugh (1985)'s work autonomy | 1.99 | | .91 | .91 | .07 | .07 |
| One-factor model: two factors merged | 2.49 | *** 108.45(1) | .87 | .86 | .08 | .09 |

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

TABLE 4**Correlations between execution and goal autonomy and outcome variables in sample 4 (N =195)**

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|--|------|------|---------|---------|---------|---------|---------|---|
| 1.Execution autonomy | 5.00 | 1.15 | 1 | | | | | |
| 2. Goal autonomy | 4.76 | 1.11 | .493** | 1 | | | | |
| 3. Organizational citizenship behavior | 3.46 | 0.51 | .526** | .548** | 1 | | | |
| 4.Life satisfaction | 4.49 | 1.33 | .360** | .373** | .280** | 1 | | |
| 5.Job crafting | 3.59 | 0.65 | .452** | .476** | .550** | .338** | 1 | |
| 6.Job burnout | 3.70 | 0.82 | -.608** | -.509** | -.589** | -.347** | -.680** | 1 |

Note: ** $p < .01$.

TABLE 5
Incremental prediction of execution autonomy and goal autonomy with sample 4 (N = 195)

| | OCB | | | Life satisfaction | | | Job crafting | | | Job burnout | | |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|-------------------|---------------------|---------------------|----------------------|-----------------------|-----------------------|-----------------------|
| | Mod el 1 | Mod el 2 | Mod el 3 | Mod el 1 | Mod el 2 | Mo del 3 | Mo del 1 | Mo del 2 | Mo del 3 | Mod el 1 | Mod el 2 | Mod el 3 |
| Constant | 3.52 *** (.000) | 2.20 *** (.000) | 1.86 *** (.000) | 3.38 *** (.000) | .82 (.18) | .25 (.6) | 3.7 4*** (.0) | 2.0 9*** (.0) | 1.76 *** (.00) | 4.14 *** (.000) | 4.49 *** (.000) | 4.67 *** (.000) |
| Age | .01 (.909) | .04 (.459) | -.01 (.877) | .14 (.379) | .16 (.27) | .07 (.6) | -0 7 (.4) | -0 2 (.7) | -.06 (.32) | -.07 (.507) | -.11 (.256) | -.06 (.584) |
| Gender | -.15* (.041) | -.06 (.268) | -.09 (.092) | .17 (.372) | .32 (.06) | .28 (.0) | -0 8 (.4) | .04 (.6) | .01 (.91) | -.08 (.489) | -.12 (.298) | -.13 (.240) |
| Education | .06 (.220) | -.02 (.649) | .004 (.909) | .11 (.369) | .01 (.91) | .04 (.7) | .06 (.3) | -0 3 (.5) | -.01 (.85) | -.05 (.522) | .01 (.900) | .02 (.821) |
| Working Years | .001 (.955) | -.01 (.350) | -.001 (.828) | .01 (.496) | .01 (.60) | .02 (.2) | .00 1 (.8) | -0 1 (.4) | -.00 1 (.86) | .001 (.911) | .01 (.570) | -.004 (.715) |
| Morgeson & Humphrey (2006) | | .20* ** (.000) | .14* ** (.000) | | .18 (.11) | .09 (.4) | | .11 * (.0) | .05 (.31) | | -.12 (.115) | -.12 (.122) |
| Breaugh (1985) | | -.001 (.973) | -.01 (.719) | | .27* ** (.00) | .28 ** (.0) | | .00 3 (.9) | -.01 (.87) | | .16* * (.005) | .12* (.038) |

| | | | | | | | | |
|---------------------------|---------------|----------------|----------------|---------------|--------------|----------------|-----------------|-----------------|
| DeCotils & Koys (1980) | .03 (.439) | .01 (.831) | -.07 (.559) | -.0 (.443) | .12 (.04) | .10 (.06) | -.004 (.960) | -.03 (.733) |
| Idaszak & Drasgow (1987) | .05 (.105) | .04 (.274) | .17 (.081) | .12 (.22) | .11 (.06) | .09* (.03) | -.119 (.078) | -.07 (.271) |
| Execution autonomy | * | .10* (.001) | ** | .24 (.008) | | .10* (.02) | * | -.20* (.001) |
| Goal autonomy | * | .10* (.006) | | .04 (.719) | | .10* (.053) | * | .19* (.009) |
| ΔF | | 13.3 | | 4.4 | | 6.79 | | 6.70 |
| ΔR^2 | ** | .07* (.000) | * | .03 (.013) | * | .04* (.001) | * | .06* (.002) |

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Numbers in the parentheses are p-values.

TABLE 6
CFA results of GREAT in UK sample (N = 208)

| el | Mod | $\chi^2/$ <i>df</i> | IF I | IF I | CF R | SRM A | RMSE | $\Delta\chi^2$ |
|-------------------------|-----|------------------------|---------|---------|---------|----------|------|----------------|
| One- factor model | | 2.8 3 | .8 5 | | .85 | .071 | .09 | |
| Two- factor model | | 1.7 8 | .9 4 | | .94 | .056 | .06 | ** 191.01(1)* |

Note: *** $p < 0.001$