

# Does participative leadership enhance work performance by inducing empowerment or trust? The differential effects on managerial and non-managerial subordinates

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## Summary

We examined whether participative leadership behavior is associated with improved work performance through a motivational process or an exchange-based process. Based on data collected from 527 employees from a Fortune 500 company, we found that the link between superiors' participative leadership behaviors and subordinates' task performance and organizational citizenship behavior toward organizations (OCBO) was mediated by psychological empowerment (motivational mediator) for managerial subordinates. Yet, for non-managerial subordinates such as supporting and front-line employees, the impact of participative leadership on task performance and OCBO was mediated by trust-in-supervisor (exchange-based mediator). Implications for theories and practices are discussed. Copyright © 2009 John Wiley & Sons, Ltd.

## Introduction

Two theoretical models are widely used to explain the effect of the participative leadership behavior of superiors on subordinates' work performance. *The motivational model* holds that more opportunities to participate in decision making provide subordinates with greater intrinsic rewards from work (Conger & Kanungo, 1988; Thomas & Velthouse, 1990) and higher levels of psychological empowerment (Spreitzer, 1995), which may result in improved work performance. *The exchange-based model* asserts that since participative leadership behavior sends a message that the superior has confidence in, and concern and respect for the subordinates, such leadership behavior is likely to foster higher levels of trust in the superior (Dirks & Ferrin, 2002, p. 614). As a result, the subordinates are

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likely to reciprocate their superiors as well as their organizations by exhibiting a higher level of work performance (e.g., Cohen, 1992; Zallars & Tepper, 2003).

To date, the majority of studies have used the motivational and exchange-based models interchangeably to explain the association between participative leadership behavior and work behaviors (e.g., Mulki, Jaramillo, & Locander, 2006; Spreitzer, 2007). However, to the best of our knowledge, no studies have compared the relative explanatory power of the two models. We contend that such an investigation is necessary to prevent confusion as to why or how participative leadership transmits its effects on organizational outcomes of interest. For example, in the empowerment literature, participative leadership behavior has been predominantly treated as a source of intrinsic motivation and psychological empowerment (Lee & Koh, 2001; Quinn & Spreitzer, 1997; Spreitzer, 1996). In the organizational justice literature; however, the same leadership behavior has often been seen as a type of procedural justice, which fosters trustful exchanges between supervisors and subordinates (Colquitt, Wesson, Porter, Conlon, & Ng, 2001; Pillai, Schriesheim, & Williams, 1999; Tremblay & Roussel, 2001).

Understanding when to adopt the motivational or exchange-based model or both to explain the effectiveness of participative leadership behavior is important for two reasons. First, research has shown that employee job level may influence perceptions of participative leadership behavior. For example, past studies have suggested that while employees occupying higher level positions such as managerial positions tend to attach more value to sense of control and autonomy, lower level employees such as clerical staff and front-line employees tend to place more emphasis on the quality relationships with colleagues and supervisors (e.g., Cohen, 1992; Kalleberg & Griffin, 1978; Ronen, Lingo, & Aranya, 1979; Ronen & Sadan, 1984) as well as the extent to which their superiors are trustworthy (Kramer, 1995). Moreover, research on attribution theory and social information processing theory suggests that due to their differences in work-related values and needs, managers and employees may interpret the same organizational practice, and react to information related to such practice in qualitatively different ways (Cha & Edmondson, 2006; Kelley, 1967; Kramer, 1995; Lord & Smith, 1983; Shetzer, 1993). Based on such views, it is possible that participative leadership behavior may be linked to work performance through different mechanisms for subordinates at different hierarchical levels. We therefore propose that participative leadership behavior may be more likely to trigger motivational mechanisms for managerial subordinates (i.e., middle managers who have both superiors and subordinates), yet exchange-based mechanisms for non-managerial subordinates (i.e., employees who have supervisors, but no subordinates).

Second, a more thorough understanding of the mechanisms by which participative leadership influences performance will help practitioners better designing training and development programs aimed at enhancing participative management. Participative leadership has often been regarded as a way to empower employees by practicing managers. When participative leadership can effectively improve the work performance of lower-level employees, managers may assume that empowerment works, which may cause misunderstanding of the needs of these non-managerial subordinates. As proposed in this paper, for non-managerial subordinates, participative leadership may influence work performance through generating high levels of trust in their immediate supervisors rather than inducing psychological empowerment. Thus, a lack of understanding of the mechanisms of how participative leadership influences performance may cause misinterpretation of the function as well as the usage of participative leadership in practice, providing no reliable guidance for practitioners to develop appropriate training and intervention practices that help managers to exercise participative management for different levels of employees.

Therefore, the purpose of the current study is twofold: (1) to examine the relative mediating roles of psychological empowerment (motivational mediator) and trust-in-supervisor (exchange-based mediator) in the link between participative leadership behavior and work behaviors; (2) to investigate

whether the mechanisms by which participative leadership has its effects on performance outcomes would be different for managerial versus non-managerial subordinates.

### *Two explanatory models of participative leadership*

The idea that the participative style of management is likely to enhance the performance of subordinates was suggested by Barnard (1938) over half a century ago, and has been expanded and developed subsequently by many researchers. Two theoretical models underlie the effects of participative leadership behavior of superiors on subordinates' work performance: the motivational model and the exchange-based model.

#### **Motivational model**

The motivational model posits that increasing the degree in which subordinates participate in decision making may increase performance through enhanced motivation (Sashkin, 1976). Prior research suggests that the participative behavior of superiors plays a vital role in providing subordinates with experience of intrinsic motivation, feelings of self-worth, and a sense of self-determination (Deci, Connell, & Ryan, 1989). This type of leadership behavior tends to foster the feeling of "psychological ownership" of subordinates (Sashkin, 1976), increase subordinates' feelings of self-efficacy and control, and reduce their sense of powerlessness (Arnold, Arad, Rhoades, & Drasgow, 2000). Similarly, some authors have suggested that participative leadership behavior is likely to induce the feeling of empowerment among subordinates (Ahearne, Mathieu, & Rapp, 2005; Leach, Wall, & Jackson, 2003). The feeling of empowerment or psychological empowerment has been conceptualized as a form of intrinsic motivation to perform tasks, manifested in four cognitive dimensions: meaning, impact, competence, and self-determination (Conger & Kanungo, 1988; Spreitzer, 1995; Thomas & Velthouse, 1990).

Accumulating empirical evidence shows that participative leadership behavior is associated with increased work outcomes through induced intrinsic motivation and psychological empowerment. For instance, the results of a meta-analysis conducted by Eby, Freeman, Rush, and Lance (1999) revealed that intrinsic motivation mediates the link between the participative management behavior of supervisors and the organizational commitment of employees. Moreover, Koberg, Boss, Senjem, and Goodman (1999) found that, among other factors, leader approachability (the participative style of management) was positively related to psychological empowerment, which led to increased self-rated productivity. Some studies also demonstrated that psychological empowerment could mediate the link between participative climates and work attitudes and performance (Careless, 2004; Seibert, Silver, & Randolph, 2004; Sparrowe, 1994). Recently, Ahearne et al. (2005) has shown that participative leadership behavior helped to increase salespersons' self-efficacy, which in turn, was associated with their sales performance and their customers' service satisfaction.

Furthermore, participative leadership may also induce extra-role work behaviors such as organizational citizenship behaviors (OCBs) through its effect on psychological empowerment. OCB is defined as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization" (Organ, Podsakoff, & MacKenzie, 2006, p. 3). One of the major explanatory frameworks employed by researchers to identify the causes of citizenship behaviors is the motivational model (Bateman & Organ, 1983; Organ, 1977; Smith, Organ, & Near, 1983). When employees engage in intrinsically motivating tasks, they may "find the performance of job-related activities to be more rewarding, and as a result, they are motivated to expend greater effort to achieve their task objectives (Organ et al., 2006, p. 110)". Indeed, empirical OCB research has garnered some highly consistent results, showing that intrinsically motivating tasks are more conducive to citizenship behaviors

(Blakely, Andrews, & Fuller, 2003; Cardon, Lawrence, & Bentler, 2004; Farh, Podsakoff, & Organ, 1990; Van Dyne, Graham, & Dienesch, 1994). In a similar vein, Organ et al. (2006) argued that it is plausible that participative leadership behaviors may induce feelings of meaningfulness, as well as sense of ownership and responsibility for work outcomes. As a result, employees will be willing to do whatever it takes to make the organization successful.

Although researchers have proposed various dimensions of OCBs (Farh et al., 1990; Organ, 1988), one of the most widely used conceptualizations of the dimensionality of OCBs is the distinction between OCBs directed toward the organization (OCBO) and OCBs directed toward individuals (OCBI) (Lee & Allen, 2002; Williams & Anderson, 1991). As different OCBs may have unique antecedents, employees can purposefully direct their OCBs with the intent to benefit particular parties (Brief & Motowidlo, 1986; McNeely & Meglino, 1994). For instance, it has been shown that OCBO is more cognitive driven, while OCBI is more affective driven (Lee & Allen, 2002). Moreover, empirical studies have generally supported that OCBO rather than OCBI is more likely to be influenced by organizational environmental factors such as procedural justice and leaders' behaviors such as interactional justice (Skarlicki & Latham, 1996, 1997; Williams & Anderson, 1991). Furthermore, research has suggested that, in China, where we collected our data, leader-relevant commitment tends to direct Chinese employees extra-efforts toward the organization (Chen, Tsui, & Farh, 2002; Cheng, Jiang, & Riley, 2003). This is because, in a relation-based society such as China, leaders tend to have more salient and direct influences on the extent to which employees respond to their organization (Chen et al., 2002).

It has been suggested that research should specify and identify clearly the beneficiaries or targets of OCBs in order to facilitate more precise theory building (Ilies, Nahrgang, & Morgeson, 2007; Kamdar & Van Dyne, 2007; Lavelle, Rupp, & Brockner, 2007; Wong, Law, & Huang, 2008). As the literature seems to show that positive interactions with supervisors are likely to direct subordinates' citizenship behaviors toward the organization rather than their co-workers, in the current study, we focus on how participative leadership behaviors are associated with OCBO. Taken together, the motivational model predicts a mediating role of psychological empowerment in the link between participative leadership behavior and task performance and OCBO of subordinates.

### **Exchange-based model**

The exchange-based model for explaining the positive association between participative leadership behavior and work performance focuses on the reciprocal relationship between superiors and subordinates. Based on social exchange theory (Blau, 1964), the advocates of the exchange-based model maintain that when employees are treated well by their superiors, they are more likely to reciprocate by showing high levels of work performance or even by putting extra effort to contribute to their organizations (Blau, 1964; Moorman, 1991; Organ, 1988).

The degree of employees' trust in their immediate supervisors has often been used to indicate the quality of the reciprocal exchange relationship between supervisors and subordinates (Lavelle et al., 2007; Lewicki, Wiethoff, & Tomlinson, 2005; Moorman & Byrne, 2005; Zallars & Tepper, 2003). Rousseau, Sitkin, Burt, and Camerer (1998, p. 395) defined trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another." The extent to which subordinates are willing to be susceptible to the actions of their superiors is dependent on how their superiors behave. Participative leadership behavior could make employees feel that their superiors treat them with fairness (e.g., Jung & Avolio, 2000; Pillai et al., 1999), consideration (Dirks & Ferrin, 2002), respect and dignity (Bijlsma & van de Bunt, 2003), which are conducive to a high level of trust in supervisor.

With a high level of trust in supervisor, the employee is more likely to make effort to accomplish work tasks and exhibit citizenship behaviors. The exchange-based model has long been used to

explicate the causes of citizenship behaviors, and that trust-in-supervisor has been identified as a major antecedent of OCB (Organ et al., 2006). Organ et al. (2006, p. 73) acknowledged that it is possible that, in a trustful exchange relationship, employees can reciprocate their supervisors' fair treatment in forms of citizenship behaviors as well as task productivity. Indeed, results of the meta-analysis conducted by Dirks and Ferrin (2002) clearly demonstrated that trust in leadership was positively related to both employees' task performance and OCBs. Moreover, past research has documented that trust in management is an important mediator of the link between transformational leadership (Jung & Avolio, 2000; Pillai et al., 1999), quality leader-member relationships (e.g., Brower, Schoorman, & Tan, 2000), and participative decision making (Brashear, Manolis, & Brooks, 2005) on one hand, and task performance and OCBs, on the other. More importantly, research has suggested that the social exchange between subordinates and supervisors is likely to spill over to organizationally directed citizenship (Rupp & Cropanzan, 2002), especially when employees see their organizationally directed behaviors as what a "good" employee should do. Moreover, there is evidence that, for Chinese employees, supervisory exchange predicts OCBO rather than OCBI, perhaps because Chinese employees tend to treat their supervisors as representatives of organization. (Chen et al., 2002; Cheng et al., 2003). Taken together, the above mentioned studies suggest an exchange-based model, which predicts that participative leadership behavior has an impact on subordinates' task performance and OCBO by inducing trust-in-supervisor.

As mentioned earlier, the motivational model and the exchange-based model have been used interchangeably in the literature. No prior research has been made to examine the relative strength of the two models in explicating the mechanisms through which participative leadership influences work behaviors of subordinates. In the following section, we propose that participative leadership behavior is associated with task performance and OCBO through inducing either psychological empowerment or trust-in-supervisor, depending on whether the subordinates are occupants of managerial or non-managerial positions.

### *The differential effects of participative leadership on managerial and non-managerial subordinates*

In his recent work, Johns (2006) stressed that organizational researchers should try to systematically examine the role of context in empirical studies to facilitate theory development and the understanding of underlying processes of organizational behavior. He identified four task contexts that may shape the meanings and influence work behaviors, namely environmental uncertainty, degree of autonomy, accountability, and resource availability.

Uncertainty is an important shaper of meaning. When employees have to deal with uncertain environment, a variety of meanings can be attached to situational stimuli, making interpretations of the situation more discretionary. Autonomy refers to freedom of action that an individual, team, or organization has. And it is a key factor providing either constraints or opportunities for human agents in theories of motivation (Deci & Ryan, 1985). Accountability "is the requirement to defend or justify an action or decision to some interested audience" (Johns, 2006, p. 394); and is the central concern of studies on how the members' role in organization affects the interpretation of the meaning attached to their behaviors. Finally, the availability of resources such as money, time, and information may also influence employees' attitudes and subsequent reactions toward organizational practices. Compared to lower level employees, managers may face more uncertainty at work, need more autonomy to accomplish their tasks, take more responsibilities, and have more resources to use and to manage (e.g., Holden & Roberts, 2004; McConville & Holden, 1999).

Specifically, Wall, Cordery, and Clegg (2002) have proposed that because the work processes of managerial jobs are less routine and that the outcomes are less predictable, the occupants would need more autonomy and discretion. Compared to lower level employees, middle managers have a more pressing need to be empowered in order to function effectively (Kanter, 2004). In a similar vein, Kramer (1995) contended that since individuals in lower-status positions in an organization are relatively powerless and routinely confront vulnerabilities, the trustworthiness of superiors plays a central role for individuals in positions of low power or status when they deal with their hierarchical relations in general and assess their leaders' behaviors in particular. In fact, early empirical studies on intrinsic rewards have revealed that intrinsic rewards, such as task autonomy, task involvement, and task significance, tend to have greater impact on the work satisfaction of managers than on that of lower level employees (Kraut & Ronen, 1975; Locke, 1976). In contrast, lower level employees tend to focus more on social rewards such as social exchange quality with co-workers and supervisors than higher level employees (Kalleberg & Griffin, 1978; Ronen et al., 1979; Ronen & Sadan, 1984). Moreover, Sashkin and Williams (1990) reported that while middle managers expressed stronger needs for autonomy and influence, non-supervisory staff tended to pay more attention to relational aspects of work.

Given that the task contexts of managerial and non-managerial employees may direct their attention to and lead them to focus on different needs, they may interpret the same practice differently based on their needs. The literature of attribution theory has long suggested that different people may interpret and explain the same organizational practice or behavior differently according to their individual needs and work experience (Hong, Chiu, Dweck, Lin, & Wan, 1999; Kelley, 1967). This is because individuals may develop schemas or cognitive maps based on their past experience, and will probably use these schemas to simplify complex stimuli, to channel their perceptions, and to guide their reactions toward these stimuli (De Nisi, Cafferty, & Meglino, 1984; Kiesler & Sproull, 1982; Weick, 1979). People tend to unconsciously develop "causal schemas"—their preconceptions about cause-and-effect relationships—based on their past experience, values, and needs (Ferrin & Dirks, 2003). They may use these schemas to guide the assessment and the processing of information cues of participative management (Shetzer, 1993). Managers and employees with different functional experience may activate different causal-schemas when receiving the same stimuli and thus, are apt to selectively process related information (Beyer, Chattopadhyay, George, Glick, Ogilvie, & Pugliese, 1997). For instance, prior empirical studies have demonstrated that lower-level employees may perceive monetary rewards primarily as extrinsic rewards, whereas high-level employees tend to see them as both intrinsic rewards and extrinsic rewards (Kalleberg & Griffin, 1978; Ronen et al., 1979; Ronen & Sadan, 1984).

Taking the above discussion together, it is plausible to postulate that managerial subordinates and non-managerial subordinates differ considerably in how they process the information cues regarding the participative leadership behavior of their superiors. Managerial subordinates and non-managerial subordinates are likely to see participative leadership behavior in different lights because each group may activate different causal-schemas when assessing and interpreting the information cues pertaining to participative leadership (*cf.* Balogun, 2003; Foster-Fishman, Salem, Chibnall, Legler, & Yapchai, 1998). Managerial subordinates may perceive such behavior as a way to empower subordinates, and thus, are more likely to experience psychological empowerment; yet non-managerial subordinates may perceive such behavior in terms of respect and fair treatment, and thus, are more likely to generate higher levels of trust-in-supervisor. Hence, we expect:

*Hypothesis 1a:* Participative leadership behavior of superiors is more strongly related to psychological empowerment than to trust-in-supervisor for managerial subordinates.

*Hypothesis 1b:* Participative leadership behavior of superiors is more strongly related to trust-in-supervisor than to psychological empowerment for non-managerial subordinates.

Furthermore, the difference in interpretations of organizational practices among employees may well induce different attitudinal outcomes as well as subsequent reactions (Dienesch & Liden, 1986; Green & Mitchell, 1979; Kelley, 1973). Since managerial subordinates may attach more value to empowerment (which puts them “in charge”) while non-managerial subordinates may value the trustworthiness of their superiors more, the responses of managerial subordinates and non-managerial subordinates toward the experience of psychological empowerment and trust-in-supervisor may not be the same. To be precise, managerial subordinates are more likely to exhibit high levels of task performance and to make extra contributions to the organization when they experience psychological empowerment than when they experience trust in their superiors. Meanwhile, non-managerial subordinates may be more likely to reciprocate their superiors by improving task performance and showing citizenship behaviors to their organization when they feel that their superiors are trustworthy than when they experience psychological empowerment. Hence, we hypothesize:

*Hypothesis 2:* Compared to trust-in-supervisor, psychological empowerment is a stronger predictor of the task performance and OCBO of managerial subordinates.

*Hypothesis 3:* Compared to psychological empowerment, trust-in-supervisor is a stronger predictor of the task performance and OCBO of non-managerial subordinates.

The motivational model posits that the participative leadership behavior of superiors tends to improve the task performance and OCBO of subordinates because such behavior enhances subordinates’ intrinsic motivation and psychological empowerment (Sashkin, 1976; Thomas & Velthouse, 1990). The exchange-based model asserts that participative leadership helps to improve task performance and OCBO as this kind of behavior could increase the trustworthiness of superiors and thus, cause subordinates to reciprocate their supervisors (Bijlsma & van de Bunt, 2003; Dirks & Ferrin, 2002). It should be apparent from the proceeding discussion that managerial subordinates and non-managerial subordinates may: (1) see participative leadership behaviour as a way to empower and as a way to develop trustful relationship respectively (H1); and (2) react to psychological empowerment and trust-in-supervisor to different extent (H2 and H3). These two differences suggest that psychological empowerment may play a more important role in mediating the link between participative leadership behavior and work behaviors for managerial subordinates than for non-managerial subordinates; and trust-in-supervisor may play a more important role in mediating the participative leadership-work behaviour link for non-managerial subordinates than for managerial subordinates. Hence, we predict that:

*Hypothesis 4:* The relationships between participative leadership behavior and, task performance and OCBO, are more fully mediated by psychological empowerment than by trust-in-supervisor for managerial subordinates.

*Hypothesis 5:* The relationships between participative leadership behavior and, task performance and OCBO, are more fully mediated by trust-in-supervisor than by psychological empowerment for non-managerial subordinates.

## Methods

### *Samples and data collection*

We collected data from a telecommunication firm in China. This is a Fortune 500 company and is currently listed in the New York Stock Exchange and Stock Exchange of Hong Kong. The researchers

visited the company in person to conduct the surveys. Two sets of questionnaires were developed—one for the subordinates and the other for their supervisors. The subordinates received a questionnaire containing questions regarding participative leadership behavior, psychological empowerment, and trust-in-supervisor, a return envelope, and a letter of introduction. Their immediate supervisors were asked to answer a separate questionnaire, containing questions regarding the task performance and citizenship behaviors (OCBO). To ensure confidentiality, the respondents were instructed to seal the completed questionnaires in the return envelopes and return them directly to the researchers on site.

### **Managerial subordinates sample**

Questionnaires were administered to 640 middle managers by the researchers after two large management meetings. These 640 middle managers were supervised by 34 senior managers, who also participated in the survey during the meetings. Out of the 640 questionnaires distributed, 543 were returned with a response rate of about 85 per cent. As many of the respondents were professionals or project managers, they might not have subordinates to supervise. We could not obtain detailed information about the managerial status of 236 respondents. Therefore, they were excluded from our analyses. Of the remaining 314 respondents, 23 per cent were female. The age of the respondents ranged from 23 to 59 with a mean of 44.7 years. The average tenure was 4.3 years.

### **Non-managerial subordinates sample**

For the non-managerial sample, we collected data from 514 randomly selected office supporting staff and front-line employees (call center agents and shop floor salespersons). These respondents were supervised by 64 supervisors. Out of the 514 questionnaires distributed, 444 were returned with a response rate of about 86 per cent. Based on the information provided by the company, we found that many of these office supporting and front-line employees served as team leaders. Although these team leaders were categorized by the company human resource system as lower-level employees, some of them, especially those working in call centers, might manage a team of more than 20 employees. Again, we excluded 231 respondents from our analyses because there was no clear information about their positions provided by the company. Out of the 213 remaining employees, 57.4 per cent were female. The age of the employees ranged from 22 to 59, with a mean of 32.3 years. The average tenure was 2.5 years.

## *Measures*

### **Task performance**

The criteria for assessing the task performance for managerial and non-managerial employees can be substantially different. While the tasks of managerial jobs tend to be broader and more difficult to define, the tasks for lower level employees tend to be more narrowly specified. Hence, it makes good sense to use different measures to assess the task performance of these two types of subordinates. For managerial subordinates, we used a 3-item 7-point scale developed by Van Scotter and Motowidlo (1996) to measure task performance (1 = *very unsatisfactory*; 7 = *excellent*). One question addressed whether the subordinate exceeded, met, or did not meet the standards of performance for the job. Another question asked whether the subordinate performed at a low, average, or high level in comparison with others of the same rank. The third question asked whether the subordinate contributed less, an average amount, or more to the effectiveness of the unit than others in the work unit. For non-managerial subordinates, Podsakoff and MacKenzie's (1989) five-item scale for in-role performance was used, because these items are more focused on the extent to which employees are able to accomplish specific tasks. The immediate supervisors of the non-managerial subordinates indicated the

extent to which they agreed or disagreed with five statements about the quality and quantity of the respondents' in-role activities. Sample items are "This employee: (1) always completes the duties specified in his/her job description; and (2) meets all the formal performance requirements of the job (1 = *strongly disagree*; 7 = *strongly agree*)".

### **OCBO**

OCBO was measured using 8 items drawn from the organizational citizenship behavior scale developed by Lee and Allen (2002). Supervisors were asked to rate the subordinate on a 7-point scale (1 = *never*, 7 = *always*). A sample item is "(the subordinate) offers ideas to improve the functioning of the organization."

### **Psychological empowerment**

Spreitzer's (1995) 12-item 7-point scale was used to measure psychological empowerment (1 = *stronger disagree*; 7 = *strongly agree*) with four subscales: meaning (e.g., "The work I do is very important to me"), competence (e.g., "I am confident about my ability to do my job"), self-determination (e.g., "I have significant autonomy in determining how I do my job"), and impact (e.g., "My impact on what happens in my department is large"). Each subscale consisted of three items.

### **Trust-in-supervisor**

Robinson and Rousseau's (1994) 7-item 5-point scale was used to measure the extent to which the employees trust their supervisors (1 = *strongly disagree*; 5 = *strongly agree*). A sample item is "I am not sure I fully trust my supervisor (reverse score)."

### **Participative leadership behavior**

A 6-item 5-point scale, adopted from the Empowering Leadership Questionnaire developed by Arnold et al. (2000), was used to measure participative leadership behavior (1 = *strongly disagree*; 5 = *strongly agree*). Sample items are, "my immediate supervisor encourages us to express ideas/suggestions," and "my immediate supervisor uses our suggestions to make decisions that affect us."

### **Translation**

The original questionnaire was in English and was translated from English into Chinese by a bilingual speaker of Chinese and English. The Chinese questionnaire was then given to another bilingual speaker to back-translate into English. In cases where the back-translation was not equivalent to the original version, the process of translation was repeated.

## **Results**

We present descriptive statistics and reliability estimates in Table 1 and the intercorrelation matrices in Table 2. For both managerial and non-managerial subordinates, participative leadership behavior was significantly correlated with task performance and OCBO. And, unlike what we predicted, participative leadership was more strongly correlated with trust-in-supervisor than psychological empowerment for both samples. Consistent with our expectations, psychological empowerment was slightly more strongly correlated with task performance and OCBO than trust-in-supervisor for the sample of managerial subordinates. By contrast, trust-in-supervisor was slightly more strongly correlated with task performance and OCBO than psychological empowerment for non-managerial subordinates.

Table 1. Means, standard deviations, and reliability estimates

Samples	Participative leadership	Psychological empowerment	Trust-in-supervisor	Task performance	OCBO
Managerial subordinates <sup>a</sup>					
<i>M</i>	3.81	6.05	3.81	3.96	6.13
s.d.	0.91	0.58	0.80	0.64	0.58
Reliability estimate <sup>c</sup>	.90	.83	.85	.84	.88
Non-managerial subordinates <sup>b</sup>					
<i>M</i>	3.70	5.05	3.55	5.61	5.39
s.d.	0.86	0.78	0.83	0.85	0.73
Reliability estimate	.90	.85	.87	.86	.88

<sup>a</sup>*N* = 314.<sup>b</sup>*N* = 213.<sup>c</sup>The reliability estimates are Cronbach's  $\alpha$ .

We then examined the hypothesized models using structural equation modeling. To reduce the number of parameters in the structural equation modeling analysis and to keep a reasonable degree of freedom in the model (Bandalos, 2002), the item parceling method recommended by Bagozzi and Edwards (1998) was used on two variables: psychological empowerment and OCBO, because these variables consisted of more than seven items. Psychological empowerment was modeled using four parcels corresponding to its four dimensions. Results of a confirmatory factor analysis supported the four-factor structure of psychological empowerment (managerial sample: GFI = .97, CFI = .99, IFI = .99, TLI = .98, RMSEA = .03; non-managerial sample: GFI = .95, CFI = .98, IFI = .98, TLI = .97, RMSEA = .05). OCBO was modeled using three parcels, with items assigned to each parcel randomly.

Before testing the hypotheses, we conducted confirmatory factor analyses to statistically distinguish the five key variables in our model, namely participative leadership, psychological empowerment, trust-in-supervisor, task performance, and OCBO. We compared the model fit of two hypothetical models. Specifically, the first model allowed all the items of participative leadership, trust-in-supervisor, and task performance, and the parcels of psychological empowerment and OCBO to load on one factor. The second was a five-factor model with the items and parcels assigned to the five corresponding variables. Results showed that, in both samples, the five-factor model yielded better fit

Table 2. Intercorrelations among all key variables<sup>a</sup>

Variables	Managerial subordinates ( <i>N</i> = 314)					Non-managerial subordinates ( <i>N</i> = 213)				
	1	2	3	4	5	1	2	3	4	5
1. Participative leadership	—					—				
2. Psychological empowerment	.39***	—				.44**	—			
3. Trust-in-supervisor	.67***	.30***	—			.67**	.48**	—		
4. Task performance	.27***	.22***	.17**	—		.18**	.22**	.24**	—	
5. OCBO	.19***	.22***	.15**	.53***	—	.23**	.15*	.27**	.63**	—

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

(managerial sample: GFI = .90, CFI = .95, IFI = .95, TLI = .95, RMSEA = .05; non-managerial sample: GFI = .86, CFI = .95, IFI = .95, TLI = .94, RMSEA = .05) than the one-factor model (managerial sample: GFI = .63, CFI = .61, IFI = .61, TLI = .57, RMSEA = .14; non-managerial sample: GFI = .52, CFI = .55, IFI = .56, TLI = .51, RMSEA = .15).

The results of structural equation modeling testing the hypotheses are presented in Figures 1 and 2, and in Table 3. H1a and H1b predict that the participative leadership behavior of superiors is more strongly related to psychological empowerment than to trust-in-supervisor for managerial subordinates, and that it is more strongly related to trust-in-supervisor than to psychological empowerment for non-managerial subordinates. As shown in Figure 1, for both samples, participative leadership behavior was strongly related to psychological empowerment and trust-in-supervisor. Hence, H1a and H1b were not supported.

H2 predicts that psychological empowerment is a stronger predictor of task performance and OCBO than trust-in-supervisor for managerial subordinates. As shown in Figure 1a, for the sample of managerial subordinates, psychological empowerment was positively related to task performance ( $\beta = .25, p < .01$ ) and OCBO ( $\beta = .25, p < .01$ ), while trust-in-supervisor was not significantly related to task performance ( $\beta = .12, n.s.$ ) and OCBO ( $\beta = .06, n.s.$ ). In order to assess whether psychological empowerment is more strongly related to the work behaviors than trust-in-supervisor, we tested the difference between the coefficients for psychological empowerment and trust-in-supervisor following the steps suggested by Cohen, Cohen, West, and Aiken (2003, pp. 636–642). We first estimated the standard error of the difference between the coefficients of the two independent variables (i.e., psychological empowerment and trust-in-supervisor) by calculating the inverse of the correlation matrix between the two variables following the computation procedure provided by

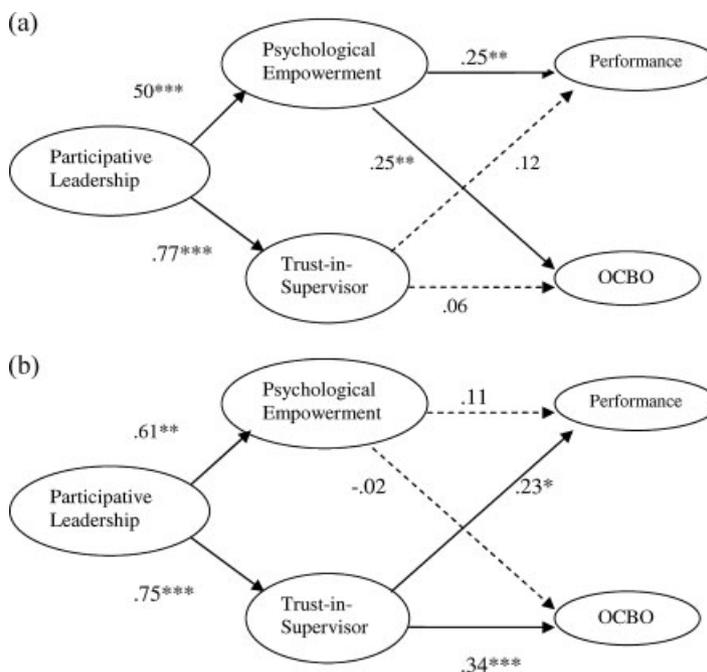


Figure 1. Estimated path coefficients of the structural model of (a) managerial subordinates and (b) non-managerial subordinates

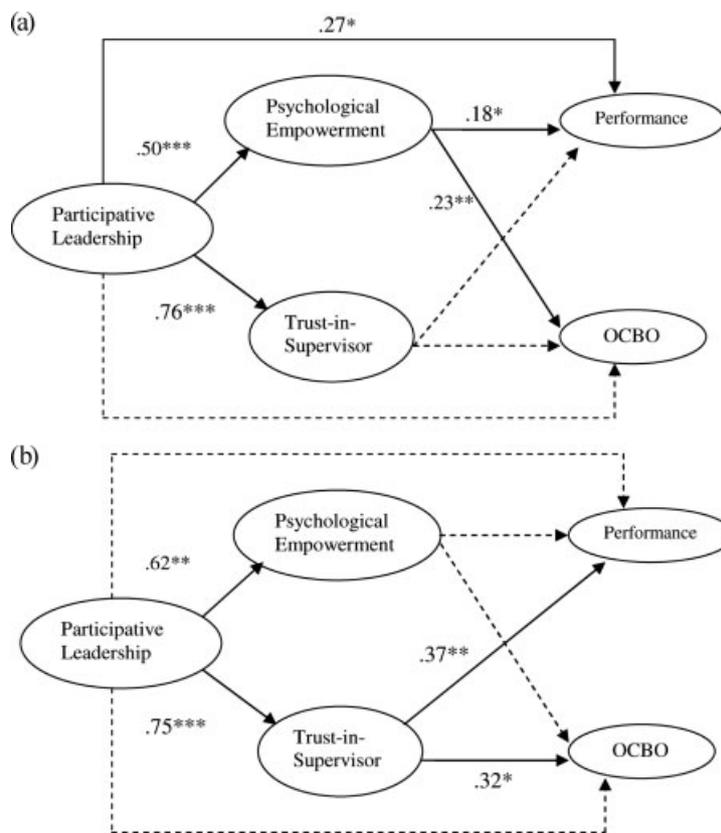


Figure 2. Estimated path coefficients of the structural model of (a) managerial subordinates and (b) non-managerial subordinates with direct paths between participative leadership and task performance and OCBO

Cohen *et al.* (2003). We then performed a *t*-test to examine whether the difference in the magnitude of the two coefficients was significant or not. The test of the difference in the coefficients revealed that, compared to trust-in-supervisor, psychological empowerment was more strongly associated with task performance ( $t = 2.80, p < .01$ ) and OCBO ( $t = 1.97, p < .05$ ). Hence, H2 was supported.

H3 proposes that trust-in-supervisor is a stronger predictor of task performance and OCBO than psychological empowerment for non-managerial subordinates. As shown in Figure 1b, for the sample of non-managerial subordinates, trust-in-supervisor was positively related to task performance ( $\beta = .23, p < .01$ ) and OCBO ( $\beta = .34, p < .001$ ), while psychological empowerment was not significantly related to task performance ( $\beta = .11, n.s.$ ) and OCBO ( $\beta = .02, n.s.$ ). The test of the difference in the coefficients revealed that, compared to psychological empowerment, trust-in-supervisor was more strongly associated with OCBO ( $t = 4.54, p < .001$ ). However, there was no significant difference between the coefficients of trust-in-supervisor and psychological empowerment for task performance ( $t = 1.50, n.s.$ ). Hence, H3 was only partially supported.

H4 predicts that the relationship between participative leadership and work behaviors is more fully mediated by psychological empowerment than by trust-in-supervisor for managerial subordinates. As shown in Table 3 Model 1a, for the sample of managerial subordinates, the observed covariance matrix fitted reasonably into the model of Figure 1a (GFI = .90; CFI = .95; IFI = .95; TLI = .94; RMSEA = .05). That is, participative leadership was significantly related to psychological empowerment and

Table 3. Results of model fits of managerial subordinate and non-managerial subordinate samples

Samples	Models	$\chi^2$	df	GFI <sup>a</sup>	CFI	IFI	TLI	RMSEA	Model comparison		
									Comparison	$+\chi^2$	$+df$
Managerial subordinates ( $N=314$ )	1a <sup>b</sup>	395.8	223	.90	.95	.95	.94	.05			
	1b <sup>c</sup>	390.0	221	.90	.95	.95	.95	.05	1b vs. 1a	5.8	2
	1c <sup>d</sup>	395.0	222	.90	.95	.95	.94	.05	1c vs. 1a	.80	1
	1d <sup>e</sup>	395.0	222	.90	.95	.95	.94	.05	1d vs. 1a	.80	1
Non-Managerial subordinates ( $N=213$ )	2a <sup>b</sup>	442.9	268	.86	.94	.94	.93	.06			
	2b <sup>c</sup>	437.5	266	.86	.94	.94	.93	.06	2b vs. 2a	5.4	2
	2c <sup>d</sup>	429.7	267	.86	.94	.94	.94	.05	2c vs. 2a	13.2***	1
	2d <sup>e</sup>	429.7	267	.86	.94	.94	.93	.06	2d vs. 2a	13.2***	1

<sup>a</sup>GFI = goodness-of-fit index; CFI = comparative fit index; IFI = incremental fit index; TLI = Tucker-Lewis coefficient; RMSEA = root mean square error of approximation.

<sup>b</sup>Models 1a and 2a do not include direct effects from participative leadership to work outcomes. Thus, these represent the hypothesized models.

<sup>c</sup>Models 1b and 2b included the both direct and indirect paths from participative leadership to work outcomes.

<sup>d</sup>Models 1c and 2b included a direct path from psychological empowerment to trust-in-supervisor.

<sup>e</sup>Models 1d and 2d included a direct path from trust-in-supervisor to psychological empowerment.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

trust-in-supervisor. And psychological empowerment rather than trust was associated with task performance and OCBO. The mediation effect would be supported if the fit of the model is not significantly improved by adding direct paths from participative leadership to task performance and OCBO in the model presented in Figure 2a. As shown in Table 3 Model 1b, the addition of these direct paths did not significantly improve the model fit. Specifically, the  $\chi^2$  dropped by 5.8 ( $+df = 2$ ), which was not statistically significant. Despite the  $\chi^2$  and the other standardized fit statistics (i.e., GFI, CFI, IFI, TLI, and RMSEA) remained unchanged, as shown in Figure 2a, participative leadership had a direct impact on task performance, but not on OCBO, for managerial subordinates ( $\beta = .27, p < .001$ ). The paths from participative leadership to psychological empowerment ( $\beta = .50, p < .001$ ) and from psychological empowerment to task performance ( $\beta = .18, p < .05$ ) and OCBO ( $\beta = .23, p < .01$ ) remained significant, indicating that psychological empowerment partially mediated the link between participative leadership and task performance, but fully mediated the link between participative leadership and OCBO. As psychological empowerment and trust-in-supervisor are correlated with each other, we examined two alternative models by adding a path from psychological empowerment to trust-in-supervisor and a path from trust-in-supervisor to psychological empowerment (Table 3 Models 1c and 1d). The addition of the two paths did not significantly improve the model fit and did not affect the paths of the hypothesized model.

We then conducted the Sobel test (Sobel, 1982) to assess whether psychological empowerment can more fully mediate the links between participative leadership and task performance and OCBO than trust-in-supervisor. Results indicated that psychological empowerment ( $p < .05$ ) significantly mediated the link between participative leadership and task performance, while trust-in-supervisor did not significantly mediate the relationship for managerial subordinates. Moreover, psychological empowerment ( $p < .05$ ) rather than trust-in-supervisor significantly mediated the link between participative leadership and OCBO. Therefore, H4 was supported.

H5 predicts that the relationship between participative leadership and work behaviors is more fully mediated by trust-in-supervisor than by psychological empowerment for non-managerial subordinates. As shown in Table 3 Model 2a, for the sample of non-managerial subordinates, the observed covariance matrix fitted reasonably into the model of Figure 1b (GFI = .86; CFI = .94; IFI = .94; TLI = .93; RMSEA = .06). As shown in Table 3 Model 2b, the addition of the direct paths from participative leadership to task performance and OCBO did not significantly improve the model fit. Results shown in Figure 2b suggest that trust-in-supervisor rather than psychological empowerment fully mediated the links between participative leadership and task performance and OCBO. We also tested whether adding paths from psychological empowerment to trust-in-supervisor and from trust-in-supervisor to psychological empowerment can affect the hypothesized model. As shown in Table 3 (Models 2c and 2d), although there was a significant improvement of model fit, most of the fit indices remained more or less the same. And the addition of the paths did not affect the hypothesized paths. Results of the Sobel test indicated that trust-in-supervisor ( $p < .01$ ) significantly mediated the link between participative leadership and task performance, while psychological empowerment did not significantly mediate the relationship for non-managerial subordinates. Moreover, trust-in-supervisor ( $p < .05$ ) rather than psychological empowerment significantly mediated the link between participative leadership and OCBO. Therefore, H5 was supported.

### *Supplementary analysis*

Results of structural equation modeling presented in Figure 1 appears to suggest that although participative leadership behavior induces psychological empowerment and trust-in-supervisor in both samples, managerial subordinates tend to translate psychological empowerment into task performance and OCBO, while non-managerial subordinates tend to translate trust-in-supervisor into task performance and OCBO. An alternative, perhaps, more conservative way to examine the difference in the effects of psychological empowerment and trust-in-supervisor on work behaviors across the two samples is to test whether manager/non-manager distinction would moderate these effects using ordinary regression analyses. Regression analyses can also allow us to control for the effects of gender, age, organizational tenure, and education level of subordinates, as these demographic characteristics may covary with task performance and OCBO.

Therefore, we combined the two samples into one and conducted an additional analysis by controlling for the effects of gender, age, organizational tenure, and education level. Age and organizational tenure were measured in number of years. We used dummy variables to represent differences in gender (0 = *male*; 1 = *female*) and educational level (0 = *non-university graduates*; 1 = *university graduates*). After controlling for the above variables, we examined whether manager/non-manager distinction (dummy coded with 1 representing manager and 0 representing non-manager) would moderate the links between psychological empowerment and trust-in-supervisor, on one hand, and task performance and OCBO, on the other. Consistent with the results of structural equation modeling, we found manager/non-manager distinction significantly moderated the impact of psychological empowerment and trust-in-supervisor on OCBO (manager/non-manager  $\times$  psychological empowerment:  $\beta = .10$ ,  $p < .05$ ; manager/non-manager  $\times$  trust-in-supervisor:  $\beta = -.11$ ,  $p < .05$ ;  $\Delta R^2 = .01$ ). However, manager/non-manager distinction did not significantly moderate the effects of psychological empowerment ( $\beta = .05$ , n.s.) and trust-in-supervisor ( $\beta = -.01$ , n.s.) on task performance. In other words, the positive link between psychological empowerment and OCBO was stronger for managerial subordinates than that for non-managerial subordinates. The positive link between trust-in-supervisor and OCBO was stronger for non-managerial subordinates than that for managerial subordinates. There was no significant difference in the impact of psychological

empowerment and trust-in-supervisor on task performance between managerial subordinates and non-managerial subordinates.

## Discussion

Two theoretical models, the motivational model and the exchange-based model, have been widely used to depict the psychological mechanisms of the impact of participative leadership behavior of superiors on the work behaviors of subordinates. Findings of the current study have lent support to the proposition that the motivational model of participative leadership has stronger explanatory power than the exchange-based model for managerial subordinates; yet the exchange-based model has stronger explanatory power than the motivational model for non-managerial subordinates. More specifically, we found that the effect of the participative leadership behavior of senior managers on the task performance and citizenship behaviors toward organizations (OCBO) of middle managers was mediated by psychological empowerment rather than trust-in-supervisor. In contrast, for lower level supporting and front-line employees, trust-in-supervisor instead of psychological empowerment mediated the impact of participative leadership behavior on task performance and OCBO. In general, our findings provide implications for the influence of work context on participative leadership, various psychological mechanisms of participative leadership, and the potential extension of other leadership theories.

### *The influence of work context on participative leadership*

In the early part of this paper, we postulated that the differences in work contexts and needs between managers and employees may cause them to apply different information processing mechanisms in interpreting the participative behavior of their superiors (Beyer et al., 1997; Cha & Edmondson, 2006; Shetzer, 1993). Likewise, the attribution theory (Kelley, 1967) predicts that since managerial subordinates are likely to see participative leadership in terms of intrinsic motivation, they will experience psychological empowerment rather than trust-in-supervisor. Because non-managerial subordinates tend to perceive participative leadership in terms of respect and fair treatment, they will experience trust-in-supervisor rather than psychological empowerment.

However, our findings suggest that managerial and non-managerial subordinates do not differ considerably in how they interpret participative leadership. Participative leadership tends to generate feelings of empowerment as well as trust-in-supervisor for both managerial and non-managerial subordinates. What really differentiates them is how they respond to the experience of psychological empowerment and trust-in-supervisor. Specifically, our results showed that, for managerial subordinates, psychological empowerment was more strongly associated with task performance and OCBO than trust-in-supervisor. For non-managerial subordinates, trust-in-supervisor was more strongly related to OCBO than psychological empowerment, yet there was no significant difference in the effects of psychological empowerment and trust-in-supervisor on task performance. The general pattern of these findings is consistent with the idea that managers have stronger needs for autonomy and influence while employees have stronger needs for affiliation (Riggio, Murphy, & Pirozzolo, 1999).

### *Psychological mechanisms of participative leadership*

Our results may help integrate the two explanatory models of participative leadership, the motivational model and the exchange-based model, widely used in the empowerment literature and the

organizational justice literature. As touched upon earlier, participative leadership behavior has been predominantly treated as a source of intrinsic motivation in the empowerment literature (e.g., Lee & Koh, 2001; Quinn & Spreitzer, 1997; Spreitzer, 1996), but as a type of procedural justice, which fosters trustful exchanges between supervisors and subordinates in the organizational justice literature (e.g., Pillai et al., 1999; Tremblay & Roussel, 2001). Our results suggest that both models are useful for explaining the association between participative leadership and work performance. However, their relative strengths vary for different types of subordinates.

Furthermore, we found a strong and direct link between participative leadership behavior and the task performance of managerial subordinates. This finding suggests that participative leadership behaviors of superiors may influence the task performance of managerial subordinates through psychological mechanisms other than the motivational processes and the exchange-based processes. One of such mechanisms could be the learning processes induced by participative leadership. Empirical evidence has suggested that, for members of top management teams, participative leadership behaviors of their superiors tend to help enhance the quality of knowledge sharing among team members (Srivastava, Bartol, & Locke, 2006). When a leader gives team members a chance to voice their opinions and express their suggestions, they are likely to learn important job-related skills and experiences from each other, facilitating them to perform their duties. Such learning mechanisms induced by participative leadership may be particularly relevant for managerial subordinates, and thus warrants more scrutiny in future research.

### *Implications for other leadership theories*

Our findings suggest that it may be worthwhile to revisit and re-examine the psychological mechanisms through which various leadership behaviors influence the work behavior of subordinates. For example, transformational leadership has been found to be associated with the work behavior of subordinates by inducing intrinsic motivation (motivational mechanism) (Shin & Zhou, 2003) and by enhancing leader-member exchange quality (exchange-based mechanism) (Wang, Law, Hackett, Wang, & Chen, 2005). However, the field knows little about the relative strength of these two mechanisms. Recently, Kane and Tremble (2000) investigated how transformational leadership influenced the job motivation and extra efforts of officers and soldiers in the military. The authors found that transformational leadership generated high levels of intrinsic motivation and extra efforts for military officers. Surprisingly, the author reported that although transformational leadership failed to induce high levels of intrinsic motivation for soldiers, these soldiers still exhibited high levels of extra efforts. If our theory is correct, it might well be the case that transformational leadership may enact the exchange-based mechanism rather than the motivational mechanism for these soldiers.

### *Limitations*

There are two major limitations in the current study. First, although we propose a process model in which participative leadership behavior leads to psychological empowerment and trust-in-supervisor, which then result in improved task performance and OCBO, the relationships found in this study are correlational and provide no evidence of the direction of the relationships. One possible solution to identifying the causality of the model for future research is to perform a cross-lagged panel analysis in a longitudinal study (*cf.* Bateman & Strasser, 1984).

Second, the fact that the data were collected from a company located in China may make it difficult to generalize the results in other nations. First of all, China is a relationship-oriented society (Hwang,

1987; Yang, 1993), which has a collectivistic culture (Hofstede, 2001). One may expect that, in such a culture, both managerial and non-managerial subordinates tend to place more emphasis on the relational aspects than on the motivational aspects of participative leadership. Nevertheless, our findings clearly show that, for managerial subordinates, participative leadership enhanced task performance and OCBO through inducing feelings of psychological empowerment rather than trust-in-supervisor.

Furthermore, results of a 49-nation study show that intrinsic job characteristics (e.g., autonomy and recognition) were more strongly related to job satisfaction in individualistic cultures than in collectivistic cultures (Huang & Van de Vliert, 2003). It should be noted that more than 80 per cent of the 107 292 respondents in this cross-national study were non-managerial employees and the results were obtained after controlling for the effect of job level. This suggests that lower-level employees in individualistic cultures may attach more value to intrinsic motivation and empowerment than their counterparts in China. Yet, Hang and Van de Vliert (2003, p. 168) also reported that extrinsic factors (e.g., pay and promotion) and relational factors (e.g., co-worker relationship) appeared to be even more strongly related to job satisfaction than intrinsic factors for these lower-level employees in both individualistic and collectivistic nations. Similarly, early empirical studies conducted mainly in the US have consistently shown that lower level employees tend to attach more value to relational rewards than to intrinsic rewards (Kraut & Ronen, 1975; Locke, 1976; Ronen et al., 1979; Ronen & Sadan, 1984). Therefore, there is no strong reason why our findings should only be confined to the Chinese context.

Finally, we derived the hypotheses based on theories mainly developed in the Western context and our findings have confirmed the expectations. In other words, the findings of our study may provide evidence supporting the generalization of the motivational and exchange-based theories regarding participative leadership developed in the West. Certainly, we cannot rule out the potential cross-cultural variation of our model. Future research should therefore attempt to replicate our results by using samples from other cultures.

### *Implications for practice*

One of the implications for practice is that participative leadership behavior is desirable for both managerial and non-managerial subordinates, though for different reasons. It appears that, in order to encourage managerial subordinates to devote extra effort to their work, superiors of middle managers should focus more on how to help their subordinates generate feelings of meaningfulness, competence, self-determination, and impact when exercising participative leadership. For example, they may try to provide these managerial subordinates with more autonomy and responsibility on making decisions and with more challenging tasks to accomplish (Kanter, 2004). In contrast, superiors of lower level employees should pay more attention to the relational aspects of participative management. This can be achieved by not only involving the lower level employees in decision making but also by being open to their opinions and suggestions, by giving them more guidance and social support, and by showing respect and concern when interacting with them (e.g., Bijlsma & van de Bunt, 2003; Dirks & Ferrin, 2002).

Our research may also provide practical implications for management and leadership training. In their meta-analytical study on the effectiveness of behavioral modeling training, which has been widely adopted in leadership training, Taylor, Russ-Eft, and Chan (2005) revealed that the outcome of training would be significantly improved when trainers provided clear behavioral models for the trainees to help them understand the consequences of using the particular skills and behaviors taught in the training sessions. Our results appear to suggest that, during participative leadership training, the training might be more effective if trainers provide managerial subordinates with behavioral models based more on

the motivational perspective and provide non-managerial subordinates with behavioral models based more on the exchange-based perspective.

In conclusion, our research has clearly demonstrated that participative leadership may influence performances through two different mechanisms for managerial and non-managerial subordinates respectively. Participative leadership is more likely to enact motivational mechanisms for managerial subordinates, but exchange-based mechanisms for non-managerial subordinates. Certainly, there may be mechanisms other than the two proposed in the current study. Our findings suggest that, in order to identify the specific ways of how leadership behaviors or organizational practices influence employees, it would be beneficial for future researchers to consider multiple mechanisms in explaining the effects of such behaviors and practices.

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