

## *Relationship building in empowering leadership processes: A test of mediation and moderation<sup>a</sup>*

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### **Abstract**

The direct positive relationship between empowering leadership and subordinate empowerment is well established. However, leader–member exchange (LMX) research, which concerns a leader's relationship-building with subordinates in a work unit, suggests that the direct leader empowering–subordinate empowerment association may be more complex than understood in the current literature. Accordingly, this study examined LMX theory-based mediation and moderation processes occurring between empowering leadership and subordinate empowerment. In a field study employing 132 administrative workers in 26 work groups, as expected, an individual subordinate's perceived LMX mediated the positive effects of empowering leadership on the subordinate's psychological empowerment. In addition, LMX differentiation cross-level moderated the linkage between empowering leadership and perceived LMX. Together, study findings suggest that subordinates' perceived LMX in a dyadic relationship with a leader and in a work group needs to be carefully considered in empowering leadership processes.

**Keywords:** empowering leadership, leader–member exchange (LMX), psychological empowerment, LMX differentiation

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### **INTRODUCTION**

*Empowerment* is a construct that reflects a paradigm change in the managerial focus from control to autonomy in organizational research (Conger & Kanungo, 1988; Spreitzer, 1995). As lower-level employees' initiatives and autonomous performance were recognized as significant assets for organizational success, the concept of organizational empowerment – which refers to granting power to employees or enhancing employee efficacy level (Conger & Kanungo, 1988) – has been readily implemented as shown in various management practices such as quality circles, total quality management, and self-directed teams. In accordance with this relatively new paradigm in management, the necessity for pertinent leadership styles has also emerged given that leaders are presumed to be those who dominantly take charge in empowering processes in organizations.

For the last decade, leadership scholars have attempted to capture a spectrum of leader empowering behaviors in both an inductive and a deductive manner (Ahearne, 2000; Arnold, Arad, Rhoades, &

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Dragow, 2000; Konczak, Stelly, & Trusty, 2000) and to examine the outcomes of such behaviors (Srivastava, Bartol, & Locke, 2006; Wu, Tsui, & Kinicki, 2010). These studies suggest that empowering leaders demonstrate particular empowering behaviors and that a subordinate's psychological empowerment is perhaps the most proximal outcome of these behaviors. Little attention, however, has been paid to the possibility that there may be important intervening mechanisms, which could further explain the relationship between ethical leadership and psychological empowerment. Drawing from the literature on leader-member exchange (LMX), we propose that empowering leaders influence employees' psychological empowerment through the high-quality work relationship that a subordinate perceives to be formed between his or her self and a leader.

Research on empowering leadership has shown that a leader's relationship-building with a subordinate might be crucial for empowering the subordinate. Specifically, Arnold et al. (2000) found that when employees working in self-managing teams (i.e., empowered teams) were asked to describe effective leader behaviors, they indicated and listed several relationship-developing or relationship-oriented leader behaviors (e.g., showing concern for subordinates' personal well-being; patiently discussing subordinates' individual concerns) that were perceived to be empowering. These behaviors aggregately were proposed to be a dimension of empowering leadership (Arnold et al., 2000). Although this inductive proposition (Arnold et al., 2000) was not clear regarding why and how those relational leader behaviors were empowering, it might be that a subordinate's perceived quality of a leader-subordinate work relationship, which should be strengthened due to relational leader behaviors, played a crucial role. Thus, the first purpose of this study is to investigate the potential yet ignored role of relationship-building in leader empowering processes. In this regard, we examine a subordinate's perceived LMX as an indicator of a subordinate's perceived quality of the dyadic work relationship with his or her own leader.

Researchers have acknowledged that leader empowering processes should vary significantly depending on higher-level work unit contexts (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007) and that 'the nature of effective [empowering] leadership is different in an empowered setting' (Ahearne, Mathieu, & Rapp, 2005: 946). Accordingly, to better understand empowering leadership effectiveness, it is essential to examine how leader empowering processes would be moderated by higher-level work unit contexts. We argue that LMX differentiation, which represents the way LMXs are differentially formed between a leader and several subordinates in the same work unit (Boies & Howell, 2006; Liden, Erdogan, Wayne, & Sparrowe, 2006), is a particularly relevant work context for understanding under what conditions leader empowering processes would impact subordinates' perceptions of LMX.

LMX differentiation commonly occurs in work groups and has been argued to develop because leaders with restricted personal and organizational resources are not able to develop a high-quality relationship with all subordinates in the same work group (Graen & Scandura, 1987; Liden et al., 2006; Henderson, Wayne, Shore, Bommer, & Tetrick, 2008). However, it is important to note that even if a leader had unlimited resources for building high LMX and was able to treat all subordinates equal, LMX differentiation may be still formed. Indeed, a subordinate's perceived LMX is determined not only by a leader, but also by the subordinate him- or herself. For example, consider a case in which the empowering leader provides all subordinates with the same opportunity to perform autonomously. From the viewpoint of a skilled subordinate, the autonomy granted to the subordinates may be perceived as a sign of high leader expectations or trust (i.e., a high LMX), while an unskilled subordinate may perceive the opportunity for autonomy as a lack of guidance or concern on the leader's part (i.e., low LMX). These differences in perception regarding the leader empowering behaviors results in differing perceptions of LMX even in cases in which the leader presumably treats all subordinates similarly. Hence, the second purpose of this research is to explore how the work unit context might influence the leader empowering process.

By conducting this research, we attempt to make several contributions, which also reflect the necessity and importance of our investigation. First, despite the empirical evidence that employees feel

empowered by their leader's relational behaviors (Arnold et al., 2000), researchers have not examined how and why those behaviors are empowering. By proposing and empirically examining a subordinate's perceived LMX as a mediation mechanism between empowering leadership and the subordinate's psychological empowerment, this study may shed light on the possibility that an empowering leader's high-quality work relationship with a subordinate may be a neglected yet crucial path to enhance the subordinate's empowerment level. Our investigation of the mediating role of LMX in empowering leadership processes would also help develop empowering leadership research theoretically and practically in that theorizing and testing probable mediation processes would 'have the potential of enriching both theory and practice' in psychological research (Shrout & Bolger, 2002: 434).

Second, the present study may also clarify and demonstrate how LMX differentiation would influence the proposed empowering leadership processes in which LMX serves as an intervening mechanism for the empowering leadership–psychological empowerment relationship. In the empowering leadership literature, a leader is assumed to have an average leadership style, i.e., to treat his or her subordinates similarly or even identically (Srivastava, Bartol, & Locke, 2006). Accordingly, the possibility that an empowering leader could differentially develop a work relationship with subordinates has not been considered in prior research. However, research suggests that even when an empowering leader treats all subordinates in a work unit similarly, subordinates may differentially perceive the quality of their work relationship with the leader. Exploring the contextual effect of LMX differentiation would thus improve our understanding of the proposed empowering leadership processes, given that individual-level relationships in work organizations are nested in and, therefore, affected by higher unit contexts (Klein, Dansereau, & Hall, 1994), and that individual-level leadership processes vary contingent on group-level leadership processes (Liden et al., 2006; Chen et al., 2007).

Finally, increased knowledge of the empowering leadership–LMX association may provide new questions and possibilities for future studies. Although LMX theory posits that leader behaviors building a high-quality leader–subordinate work relationship are similar to empowering ones, this has not been explicitly recognized, discussed, or tested. If a subordinate's perceived LMX is found as a proximal outcome of empowering leadership in our study, this would significantly extend the domain of empowering leadership research, especially given the extensive literature and the large nomological network of LMX.

## EMPOWERING LEADERSHIP AND PSYCHOLOGICAL EMPOWERMENT

Empowering leadership indicates 'the process of implementing conditions that enable sharing power with an employee by delineating greater decision-making autonomy, expressing confidence in the employee's capabilities, and removing hindrances to performance' (Zhang & Bartol, 2010: 109). It is a multi-dimensional construct that consists of four behavioral aspects of a leader (Ahearne, Mathieu, & Rapp, 2005; Zhang & Bartol, 2010). The first dimension of empowering leadership is *expressing confidence in high performance*, which refers to the extent to which a leader demonstrates assurance in subordinates' high performance in the future. The second dimension is *fostering opportunities for participation in decision making*, which summarizes the extent to which a leader facilitates subordinates' participation in decision-making processes and fosters their initiatives and perceived responsibilities. The third dimension is *providing autonomy from bureaucratic constraints*, which indicates the extent to which a leader assists subordinates to exert autonomy without concern about organizational restrictions. The last dimension is *enhancing the meaningfulness of work*, which reflects the extent to which a leader improves a subordinate's feeling of meaningfulness via setting inspirational goals and explaining how their work influences organizational effectiveness.

Empowering leadership, which is represented by the four groups of empowering leader behaviors, has been argued and found to be closely related to a number of positive organizational outcomes (Ahearne, Mathieu, & Rapp, 2005; Srivastava, Bartol, & Locke, 2006; Zhang & Bartol, 2010; Chen, Sharma,

Edinger, Shapiro, & Jiing-Lin, 2011). Among those outcomes, a subordinate's *psychological empowerment* (Spreitzer, 1995) – 'a set of psychological states that are necessary for individuals to feel a sense of control in relation to their work' (Spreitzer, 2008: 56) – has been reported to be one of the more proximal ones (Zhang & Bartol, 2010). According to Spreitzer (1995), there are four psychological states or job cognitions that represent psychological empowerment: *Meaning, competence, self-determination, and impact*. Meaning indicates the extent to which one feels a fit between self-beliefs and role requirements in a job. Competence is one's belief in his or her own capability to successfully conduct work activities. Self-determination is a sense of choice in initiating and regulating one's actions on the job. Impact indicates the extent to which one perceives his or her actions to make a significant difference in work outcomes. Given the close facial and conceptual connection between empowering leadership and psychological empowerment, empowering leadership is considered to be closely related to a subordinate's psychological empowerment (Konczak, Stelly, & Trusty, 2000; Ahearne, Mathieu, & Rapp, 2005; Zhang & Bartol, 2010).

More specifically, first, an empowering leader may enhance a subordinate's sense of meaning by informing the subordinate how well his or her work is aligned with organizational objectives and goals (Ahearne, 2000; Konczak, Stelly, & Trusty, 2000). In addition, when an empowering leader allows a subordinate to participate in important decision-making processes (Ahearne, 2000; Arnold et al., 2000; Konczak, Stelly, & Trusty, 2000), the subordinate, who has opportunities to incorporate his or her own values into work, would be more likely to feel a sense of meaningfulness in a job. Second, as similarly argued in research on self-efficacy (Bandura, 1997), a leader's empowering behaviors, such as coaching, skill developing, encouraging, and expressing confidence in a subordinate's performance (Conger & Kanungo, 1988; Thomas & Velthouse, 1990; Spreitzer, 1996), may directly and indirectly improve the subordinate's competence perceptions on the job. Third, having opportunities to make important decisions and being encouraged to be self-reliant, which represent behaviors exhibited by an empowering leader (Ahearne, 2000; Arnold et al., 2000; Konczak, Stelly, & Trusty, 2000), should strengthen a subordinate's self-determination. Finally, when a subordinate is allowed to make important work decisions by him- or herself and is informed of the connection between his or her own work and organizational effectiveness (Arnold et al., 2000; Ahearne, Mathieu, & Rapp, 2005; Zhang & Bartol, 2010), he or she may perceive high impact, that is, he or she may believe a close link between his or her own performance and organizational outcomes. Therefore, as consistently found in the past studies (Konczak, Stelly, & Trusty, 2000; Rapp, Ahearne, Mathieu, & Schillewaert, 2006; Zhang & Bartol, 2010), empowering leadership is expected to be positively associated with subordinates' psychological empowerment levels.

## MEDIATION BY PERCEIVED LMX

Although the direct positive relationship between empowering leadership and subordinate psychological empowerment has been established, we think that there may be an additional, indirect relationship in which a subordinate's perceived LMX mediates the effect of empowering leadership on the extent to which the subordinate is psychologically empowered on the job. According to LMX theory (Dansereau, Graen, & Haga, 1975; Graen & Scandura, 1987), a leader develops a high-quality dyadic relationship with a subordinate by demonstrating particular behaviors to the subordinate. Some examples of those leader behaviors include providing valuable information, offering opportunities for interesting tasks, delegating authority, increasing job latitude, and paying considerable attention and support (Graen & Scandura, 1987). Although these leader behaviors were originally proposed to improve 'actual' LMX, they are likely to also promote 'perceived' LMX. That is, a subordinate experiencing the LMX-developing leader behaviors may feel high LMX, even before LMX actually develops to a high level. For example, if a leader, who intends to improve LMX with a subordinate, purposefully delegates authority to the subordinate, the subordinate may subsequently perceive high rather than low LMX, even before

subsequent reciprocal exchange processes described in LMX theory are unfolded and finally result in high LMX. This process of perceived LMX development suggests that an empowering leader may increase a subordinate's perceived LMX, which later influences the subordinate's psychological empowerment.

Drawing on social exchange theory (Blau, 1964), which LMX theory is grounded on (Cropanzano & Mitchell, 2005), we believe that empowering leadership would enhance LMX. Researchers argued that social exchange relationships, such as a high LMX relationship (Graen & Uhl-Bien, 1995), would develop among exchange partners when they reciprocally transact resources (Cropanzano & Mitchell, 2005). Importantly, this mutual resource exchange occurs with a time gap based on an assumed, rather than specified, reciprocity rule (Blau, 1964). That is, even when one party does not immediately return the benefits obtained from the other party, this beneficiary could perceive a high-quality relationship as he or she feels appreciation and plans to reciprocate to the other in the future. In leader empowering processes, a leader displays such behaviors as informing, coaching, and training (Ahearne, 2000; Arnold et al., 2000; Konczak, Stelly, & Trusty, 2000), which are similar to the LMX-developing leader behaviors described in LMX theory. According to LMX researchers, these leader behaviors would be shown to a subordinate even before the full development of a high-quality exchange relationship with the subordinate (Graen & Scandura, 1987). Hence, when a leader demonstrates empowering behaviors to a subordinate in a currently not-so-good work relationship, the subordinate may still appreciate those leader behaviors and perceive his or her work relationship with the leader to be good. In sum, empowering leadership is expected to positively influence subordinate LMX perception.

The second link in the proposed mediated relationship, that is, the LMX–psychological empowerment association, has been argued and found to be positive in several previous LMX studies (Sparrowe, 1994; Keller & Dansereau, 1995; Liden, Wayne, & Sparrowe, 2000; Gomez & Rosen, 2001; Chen & Klimoski, 2003; Kim & George, 2005; Aryee & Chen, 2006). With one known exception (Liden, Wayne, & Sparrowe, 2000), however, this positive relationship has not been explained sufficiently. Acknowledging this, we elaborated this relationship by taking a more fine-grained approach in which we link LMX to the identified dimensions of psychological empowerment. First, a positive association between perceived LMX and self-determination is expected based on self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2000). Self-determination theory proposes that one's fulfillment of relatedness needs is essential for him or her to be self-determined (Deci & Ryan, 2000; Ryan & Deci, 2000). When a subordinate considers his or her work relationship with a leader to be of high quality, the subordinate senses a close bond and attachment to the leader, which may satisfy his or her relatedness needs and enhance self-determination level.

Second, a subordinate's LMX perceptions may also lead to higher meaning. In organization identification research, employees with higher LMX are more likely to identify with an organization due to a feeling of support by the organization (Sluss, Klimchak, & Holmes, 2008) and thus are more likely to readily adopt and accept the expectations from an organization such as job roles. Similarly, when a subordinate perceives high LMX, he or she may identify with an organization, perceive a good job match, and experience meaningfulness on the job. Moreover, researchers found that LMX increased a subordinate's satisfaction with the work itself (Seers, 1989; Liden & Maslyn, 1998). It is well known that one's job satisfaction was significantly correlated with job characteristics such as one's self-job fit (Kristof-Brown, Zimmerman, & Johnson, 2005). Thus, a subordinate's perceived LMX may positively affect the subordinate's sense of meaning.

Third, perceived LMX may also influence competence. When a subordinate believes that he or she is in a high-quality work relationship with a leader, the subordinate may approach and frequently attempt to communicate with the leader (Dienesch & Liden, 1986; Deluga & Perry, 1994; Botero & Van Dyne, 2009). As a result, this subordinate would have many opportunities to observe and model the leader, which may enhance a subordinate's competence level on the job through vicarious experience and thus, more readily be able to learn how to cope with various job situations skillfully and successfully.



Finally, perceived LMX may be also positively related to a subordinate's impact level. As mentioned earlier, a subordinate who perceives higher LMX would have more chances to interact and communicate with a leader (Dienesch & Liden, 1986; Deluga & Perry, 1991; Botero & Van Dyne, 2009), who better knows how the subordinate's work is related to organizational goal achievement. The subordinate, therefore, is likely to more clearly understand how his or her work contributes to organizational functioning and performance, supporting a close LMX perception-impact connectedness. To summarize, considering the close link between a subordinate's perceived LMX and each dimension of psychological empowerment, we expect a positive association between subordinate LMX perception and psychological empowerment level.

Arguing a positive relationship between empowering leadership and perceived LMX and a positive relationship between perceived LMX and psychological empowerment, we also propose that a subordinate's perceived LMX may mediate the relationship between empowering leadership and the subordinate's psychological empowerment. As extensively elaborated above, when a leader is engaged in empowering behaviors within a dyadic relationship with a subordinate, the subordinate may increasingly perceive high LMX. This perceived high-quality leader-subordinate work relationship may further positively affect the subordinate's four job cognitions, which reflect his or her feeling of being empowered on the job. Together, a subordinate's perceived LMX is expected to function as a potentially significant mediating mechanism that transmits the indirect effect of empowering leadership on the subordinate's psychological empowerment, above and beyond the direct effects of empowering leadership:

Hypothesis 1 LMX perceived by a subordinate will mediate the relationship between empowering leadership and the subordinate's psychological empowerment.

## MODERATION BY LMX DIFFERENTIATION

LMX theory posits that a leader differentially develops high-quality work relationships with several subordinates within a work unit (Graen & Scandura, 1987; Graen & Uhl-Bien, 1995). This is due to a leader's limited time and other resources that the leader needs to spend for developing and maintaining LMX. As a result, a certain configuration of high and low LMXs tends to emerge within a given work unit. This LMX configuration has been proposed as a group-level construct of LMX differentiation that indicates the extent to which a leader develops differentiated LMXs with subordinates (Boies & Howell, 2006; Liden et al., 2006). Considering our proposition of the positive empowering leadership-LMX relationship, one may argue that, under empowering leadership, there would be consistently low LMX differentiation in a work group. That is, if a leader's active empowering behaviors indeed increase subordinate LMX perception, such empowering leadership – an average leadership style, which is assumed to treat all subordinates equally – may evenly influence all subordinates' LMXs and produce low LMX differentiation. Nevertheless, we believe that a varied level of LMX differentiation would develop in a work unit led by an empowering leader, because a leader's behaviors or influence styles are not the only determinant of a subordinate's perceived LMX. Rather, a subordinate's perceived LMX is also influenced by the subordinate's individual differences, perceptions, and attributions about a leader's behaviors (Dienesch & Liden, 1986; Liden, Wayne, & Stillwell, 1993; Engle & Lord, 1997; Masterson, Lewis, Goldman, & Taylor, 2000; Maslyn & Uhl-Bien, 2001; Martin, Thomas, Charles, Epitropaki, & McNamara, 2005; Bernerth, Armenakis, Field, Giles, & Walker, 2007). Thus, it is not surprising that a different form of LMX differentiation is shaped under empowering leadership which, theoretically, does not discriminate among subordinates.

Considering this occurrence and fluctuation of LMX differentiation under empowering leadership, we propose that LMX differentiation may cross-level moderate how empowering leadership influences each subordinate's perceived LMX within a dyadic relationship. According to *social comparison theory*

(Festinger, 1954), an individual is intrinsically motivated to compare him- or herself with similar others. Accordingly, when LMX differentiation occurs in a work group, this would be easily detected by subordinates, because they continuously compare their own perceived LMX with perceived LMXs of similar other subordinates (Duchon, Green, & Taber, 1986). Once high LMX differentiation is detected, a subordinate may hastily and somewhat falsely suppose that a leader's empowering behaviors toward him- or herself are exceptional and extraordinary even if those behaviors are, in fact, similarly shown to other subordinates in the same work group. This is because human cognitive information processing toward a target subject is significantly affected by preconceptions of the target subject. Several cognitive information processing models and pertinent research (Feldman, 1981; De Nisi, Caffertry, & Meglino, 1984; Cardy & Dobbins, 1986), which explain how an individual appraises others' work behaviors, suggest that an appraiser's observing, encoding, storing, and retrieving of an appraisee's behavioral information are significantly influenced by the appraiser's preconceptions of the appraisee (e.g., halo effect). These models provide a solid theoretical basis to estimate how LMX differentiation cross-level moderates the effects of empowering leadership on perceived LMX.

Specifically, within the high LMX differentiation context (i.e., when a subordinate considers a leader to highly differentiate the quality of his or her work relationships with subordinates in a work group), the subordinate is presumed to use this information to observe, encode, store, and retrieve leader empowering behaviors toward him- or herself. Accordingly, this subordinate may incorrectly judge empowering leadership as differentially displayed to subordinates in the same work group. Then, this subordinate may feel being specially supported by the leader, greatly appreciate the leader, feel obligated to reciprocate to the leader, and perceive his or her work relationship with the leader as a high-quality one. Hence, when LMX differentiation is high, the effect of empowering leadership on perceived LMX may be intensified. Conversely, within the low LMX differentiation context, this empowering leadership–LMX relationship may be weakened. A subordinate under low LMX differentiation would have a preconception that a leader does not differentially treat subordinates in the same work group. This preconception may substantially color this subordinate's information processing in evaluating leader empowering behaviors. Even when a leader actively demonstrates empowering behaviors toward a subordinate, this subordinate may regard those behaviors to be typical and universal rather than particularly advantageous or unique to him- or herself and, as a result, may not so appreciate the leader and feel not much obligated to reciprocate to the leader, and may not consider his or her own LMX to be high. Thus, when LMX differentiation is low, the effect of empowering leadership on perceived LMX may be attenuated.

This moderation prediction is also consistent with *commodity theory* (Brock, 1968), which has received strong empirical support especially in the marketing literature (Lynn, 1991), as well as in the psychology literature (Fromkin & Brock, 1971; Zellinger, Fromkin, Speller, & Kohn, 1975; Myrseth, Fishbach, & Trope, 2009). According to this psychological theory, when commodities – messages, experiences, or objects that can be utilized by, transferred between, and possessed by people (Brock, 1968) – are rare and scarce, they are estimated by an individual to be more valuable than comparable available ones (Brock, 1968). If the higher LMX differentiation context leads a subordinate to mistakenly regard leader empowering as a limited commodity, the subordinate may consider it to be more valuable, will appreciate it more, and feel more obligation to reciprocate it, and thus perceive higher LMX, suggesting a stronger empowering leadership–LMX perception association. In sum, we expect that, when LMXs are more differentiated in a work group, the individual-level relationship between empowering leadership and a subordinate's perceived LMX would become stronger:

Hypothesis 2 LMX differentiation will moderate the relationship between empowering leadership and LMX perceived by a subordinate such that the relationship will be stronger within high LMX differentiation than within low LMX differentiation.

## METHOD

### Sample

This study was conducted in a multinational chemical company headquartered in South Korea. One of this company's three core management philosophies is 'field-oriented management,' which highlights the company's emphasis on lower-level employees' autonomous and self-directed performance on the job. Study participants were 313 administrative employees in 36 work groups of the company. Only those who were not available physically and/or explicitly denied to our participation requests were excluded from the sample; the 36 work groups were the total number of the administrative work groups in the company.

Two paper-based surveys with a 20-day gap were distributed to collect the data. This time gap between the two surveys was determined after we interviewed an HR manager who closely communicated with us for this research. After explaining the reasons to conduct two separated surveys, we asked the HR manager about the appropriate time points for distributing the surveys. This interview method to decide a time interval between surveys has been adopted in prior studies (Chen & Klimoski, 2003; Chen, 2005).

When we handed out the surveys directly to the participating employees, two staffs in the HR department helped us. At Time 1, the participating employees received a survey packet that contained a survey form and a stamped and addressed envelope. After completing their survey, employees were asked to independently send it to a researcher in a US state university via international airmail. At Time 2, another survey packet was distributed to all employees. The participating employees were asked to mail their completed survey in the same manner as the first survey. Two reminder emails for each survey were sent to all participants by the HR department.

The response rates for the first and the second survey were 54% (169/313) and 49% (153/313), respectively. The final response rate from the matched surveys was 45% (141/313). Following a previous study (Henderson et al., 2008), which removed groups with fewer than three individuals for appropriately testing multilevel hypotheses, nine respondents were additionally removed from the above matched responses. Thus, the final sample included 132 matched responses (the matched response rate was 42%; 132/313) from 26 work groups. The size of those 26 groups ranged from 5 to 11 (the group size mean was 7.08); in all the 26 work groups, at least half of individuals of each work group responded to both surveys.

## MEASURES

All the measures were translated and back-translated between English and Korean (Brislin, Lonner, & Thorndike, 1973). The first survey contained the measures of empowering leadership, social desirability, and participants' demographic information; the second survey contained the measures of LMX and psychological empowerment.

### Empowering leadership

We measured empowering leadership with a 12-item Likert-type scale (Ahearne, Mathieu, & Rapp, 2005; Zhang & Bartol, 2010; 5 points; 1 = 'strongly disagree,' 5 = 'strongly agree,'  $\alpha = 0.95$ ). Sample items were 'My supervisor helps me understand how my job fits into the bigger picture' and 'My supervisor expresses confidence in my ability to perform at a high level.'

### Perceived LMX and LMX differentiation

A subordinate's LMX was measured by a 7-item Likert-type scale (Furst & Cable, 2008; 5 points; 1 = 'strongly agree,' 5 = 'strongly disagree,'  $\alpha = 0.96$ ), which is a revision of the LMX-7 scale (Graen & Uhl-Bien, 1995). Sample items were 'I always know how satisfied my supervisor is with



what I do' and 'I always know where I stand with my supervisor.' A group-level construct of LMX differentiation was operationalized by calculating within-group variance following the past research on LMX differentiation (Henderson et al., 2008; Liao, Liu, & Loi, 2010).

### Psychological empowerment

We adopted a 12-item Likert-type scale of psychological empowerment (Spreitzer, 1995; 7 points; 1 = 'strongly agree,' 7 = 'strongly disagree,'  $\alpha = 0.96$ ) for this study. Sample items were 'The work I do is very important' and 'I can decide on my own how to go about doing my work.'

### Control variables

Several individual-level and group-level variables were controlled for in order to reduce the concern that those variables systematically influenced the study results. Specifically, employees' basic demographical information (gender and age) was included to the study model given their potential confounding effects on LMX and psychological empowerment (Green, Anderson, & Shivers, 1996; Zhang & Bartol, 2010). In addition, employees' social desirability was also controlled for. Social desirability is the tendency to respond to others in a manner that is expected to be viewed favorably by them. It has been indicated as a potential source of biased responses in psychological research; its inclusion would decrease some respondent bias-related concerns (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A 10-item Likert-type scale of social desirability (Strahan & Gerbasi, 1972; 5 points; 1 = 'strongly agree,' 5 = 'strongly disagree,'  $\alpha = 0.72$ ) was used. Sample items were 'I am always courteous, even to people who are disagreeable' and 'When I don't know something I don't at all mind admitting it.' Finally, at the group level, we controlled for the group size as typically done in group- and multi-level research (Chen et al., 2007; Liao, Liu, & Loi, 2010); the group-level LMX mean was also controlled for, given the potential confounding effects of LMX mean on a subordinate's perceived LMX or psychological empowerment (Liao, Liu, & Loi, 2010). For example, as LMX mean is very high or low, the range for the variation of LMX differentiation is restricted, suggesting that it is necessary to hold constant LMX mean in order to accurately assess the role of LMX differentiation in the study model.

## RESULT

### Confirmatory Factor Analysis (CFA) and Descriptive Statistics

Before testing study hypotheses, we conducted a CFA with the Mplus 6.0 software on the four latent constructs included in the study model (empowering leadership, perceived LMX, subordinate social desirability, psychological empowerment) in order to assess discriminant validity. Selected CFA results are reported in Table 1. Because there were a relatively large number of items ( $n = 42$ ) compared with the sample size ( $n = 132$ ), we created two to four composite indicators for each measured variable. For multi-dimensional variables such as empowering leadership and psychological empowerment, we aggregated items based on their originally proposed dimensions rather than randomly. The newly created 12 indicators, instead of the original 42 indicators, were used for conducting the CFA. This procedure used to create parcels has been adopted in the past research in order to improve the size-to-estimator ratio in CFA (Landis, Beal, & Tesluk, 2000; Kamdar & Van Dyne, 2007). The hypothesized four-factor model demonstrated the best fit to the data ( $\chi^2(53, N = 48) = 77.17, p < .01$  ( $\chi^2/df = 1.61$ ); Tucker–Lewis index = 0.98; incremental fit index = 0.94; comparative fit index = 0.98; root-mean-square error of approximation = 0.068; standardized root-mean-square residual = 0.045). There was significant fit difference between the hypothesized model and each of the alternative models, validating that the study variables were significantly distinct from one another.

**TABLE 1. CONFIRMATORY FACTOR ANALYSIS OF VARIABLES IN THE STUDY**

Factor structure model	$\chi^2(df)$	$\chi^2/df$	TLI	CFI	SRMR	RMSEA	$\Delta\chi^2 (\Delta df)$
Four factor (hypothesized) model: four variables as distinct factors	77.17 (48)	1.61	0.98	0.98	0.05	0.07	
Three-factor Model 1: empowering leadership and perceived LMX as one factor	125.73 (51)	2.47	0.83	0.80	0.05	0.11	48.56 (3)
Three-factor Model 2: perceived LMX and psychological empowerment as one factor	313.97 (51)	6.16	0.79	0.83	0.17	0.20	236.80 (5)
Two-factor model: empowering leadership and social desirability as one factor; perceived LMX and psychological empowerment as one factor	396.79 (53)	7.49	0.73	0.78	0.19	0.22	319.62 (5)
One-factor model: four variables as one factor	737.06 (54)	13.65	0.41	0.57	0.19	0.31	659.89 (6)

Note: *N* = 132.

CFI = comparative fit index; LMX = leader-member exchange; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual; TLI = Tucker-Lewis index.

All  $\chi^2$  and  $\Delta\chi^2$  values are significant at *p* < .05.

**TABLE 2. MEANS, STANDARD DEVIATIONS, RELIABILITIES, AND CORRELATIONS FOR STUDY VARIABLES**

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Age	1.84	0.58							
2. SD	7.72	2.17	0.15	(0.72)					
3. EL	3.25	0.77	0.01	0.24**	(0.95)				
4. Perceived LMX	3.56	0.81	0.14	0.20	0.63**	(0.96)			
5. PE	5.33	0.80	0.21*	0.20	0.40**	0.57**	(0.96)		
6. Team size	7.08	1.55							
7. LMXM	3.58	0.45						-0.30**	
8. LMXD	0.52	0.43						0.11**	-0.36**

Note: *n* = 132; group *n* = 26.

Reliabilities appear in parentheses along the diagonal.

EL = empowering leadership; LMX = leader-member exchange; LMXD = leader-member exchange differentiation; LMXM = leader-member exchange mean; PE = psychological empowerment; SD = social desirability.

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

Means, standard deviations, and correlations among individual- and group-level study variables are presented in Table 2. Note that the correlation between empowering leadership and perceived LMX was somewhat high. However, it should be noted that this level of correlation was lower than those typically found between other leadership styles (e.g., transformational leadership) and LMX (Basu & Green, 1997; Howell & Hall-Merenda, 1999; Wang, Law, Hackett, Wang, & Chen, 2005; Hassan, Mahsud, Yukl, & Prussia, 2013).

**Preliminary Analysis**

Given that the data used for this research were group-nested, we first examined whether group membership influenced study results and how much variance in the outcome variables exists between

work groups to serve as a foundation for later multi-level analyses (Raudenbush & Bryk, 2002). The two null models, which had LMX and psychological empowerment as respective dependent variables, were tested. The results showed that 18% of LMX ( $\chi^2 = 54.95, df = 25, p < .01, ICC_1 = 0.18$ ) and 16% of psychological empowerment ( $\chi^2 = 44.86, df = 25, p < .01, ICC_1 = 0.16$ ) was explained, respectively, by group membership. Thus, the obtained variance of each variable resided between work groups in this study, justifying HLM as the appropriate analytic approach.

**Mediation by LMX**

For testing Hypothesis 1 in which a subordinate’s perceived LMX was expected to mediate between empowering leadership and subordinate psychological empowerment, we first followed a traditional mediation analytic procedure (Sobel, 1982; Baron & Kenny, 1986; Zhang, Zyphur, & Preacher, 2009), and then we conducted a more recent procedure called PRODCLIN (MacKinnon, Fritz, Williams, & Lockwood, 2007). All analyses were conducted with the HLM 7.0 program and the results are summarized in Table 3. As shown in Models 1 and 2, all control variables were first entered into the study model. Then, adopting a traditional approach to the mediation analysis (Baron & Kenny, 1986; Zhang, Zyphur, & Preacher, 2009), Models 3, 4, 5, and 6 were examined and compared. We found that empowering leadership was significantly related to perceived LMX in Model 4 ( $\gamma = 0.66, p < .001$ ) and psychological empowerment in Model 3 ( $\gamma = 0.31, p < .01$ ). Perceived LMX was also found to be significantly associated with subordinate psychological empowerment in Model 5 ( $\gamma = 0.56, p < .001$ ). Finally, in Model 6 in which perceived LMX was included into Model 4, the direct effect of

**TABLE 3. RESULTS OF HIERARCHICAL LINEAR MODELING**

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8<sup>a</sup></i>
<i>Variable</i>	<i>PE</i>	<i>LMX</i>	<i>PE</i>	<i>LMX</i>	<i>PE</i>	<i>PE</i>	<i>LMX</i>	<i>LMX</i>
Level 1: control								
Gender	0.49***	-0.06***	0.34***	-0.19***	0.51***	0.44***	-0.06***	-0.14***
Age	0.01***	0.17***	0.01***	0.18***	0.24***	0.26***	0.14***	0.13***
Social desirability	0.07***	0.07***	0.05***	0.02***	0.02***	0.03***	0.01***	0.01***
Level 1: main effect								
EL			0.31***	0.66***		0.04***	0.48***	0.53***
Perceived LMX					0.56***	0.52***		
Level 2: main effect								
Team size	-0.10***	-0.14***	-0.08***	-0.12***	-0.01***	-0.01***	-0.02***	-0.03***
LMXD							0.57***	0.88***
LMXM							0.10***	2.76***
LMXD × LMXM								-0.85***
Cross-level:								
Interaction effect								
EL × LMXD							0.54***	0.75***
R <sup>2b</sup>	0.13***	0.18***	0.29***	0.54***	0.48***	0.52***	0.58***	0.62***

Note: *n* = 132; group *n* = 26.

<sup>a</sup>Model 8 is a supplementary analysis to demonstrate the robustness of the cross-level interaction effects.

<sup>b</sup>R<sup>2</sup> is calculated using level 1 and 2 error variance resulting from predictors (Snijders & Bosker, 1999).

EL = empowering leadership; LMX = leader-member exchange; LMXD = leader-member exchange differentiation; LMXM = leader-member exchange mean; PE = psychological empowerment; SD = social desirability.

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

empowering leadership on psychological empowerment that was found in Model 4 became insignificant ( $\gamma = 0.04$ , ns) while the effects of perceived LMX on psychological empowerment remained significant ( $\gamma = 0.52$ ,  $p < .001$ ). These findings suggest that perceived LMX mediates the direct effects of empowering leadership onto subordinate psychological empowerment, supporting Hypothesis 1.

In testing Hypothesis 1, we additionally tested and found the mediation again by using the PRODCLIN program, which is known to be superior to more traditional methods such as the Sobel test (MacKinnon et al., 2007). It should be noted that the Sobel test (Sobel, 1982), perhaps less accurate than the PRODCLIN test (MacKinnon et al., 2007), also supported Hypothesis 1 in the present study. The indirect effect of empowering leadership on psychological empowerment through LMX was significant (Sobel test = 5.34,  $p < .001$ ) and the proportion of the total effect mediated by LMX was 94%. In the PRODCLIN test, using the distributions of the regression coefficients for the empowering leadership–LMX relationship ( $\gamma = 0.66$ ,  $p < .001$ ; Model 4), and for the LMX–psychological empowerment relationship ( $\gamma = 0.56$ ,  $p < .001$ ; Model 5), we were able to calculate asymmetric confidence intervals for the indirect effects of empowering leadership on psychological empowerment via perceived LMX. The 95% confidence level was [0.46, 0.58], which did not include 0, supporting Hypothesis 1 in that perceived LMX was found to significantly mediate the direct effects of empowering leadership on subordinate psychological empowerment.

### Moderation by LMX Differentiation

In Hypothesis 2, we proposed that LMX differentiation would serve a moderating role in the relationship between empowering leadership and subordinate LMX perception. For hypothesis testing, we followed the procedures to examine moderation in multiple regression analysis (Cohen, Cohen, West, & Aiken, 2003). After all individual-level control variables, group size, LMX differentiation, and LMX mean in a work group were entered, the interaction term of empowering leadership  $\times$  LMX differentiation was additionally included in Model 7. The effects of empowering leadership  $\times$  LMX differentiation on subordinate psychological empowerment were significant ( $\gamma = 0.54$ ,  $p < .001$ ; Model 7). Figure 1 was plotted to illustrate the significant interaction effects (low and high empowering leadership =  $-1$  and  $+1$  SD from the mean of empowering leadership; low and high LMX differentiation =  $-1$  and  $+1$  SD from the mean of LMX differentiation). As demonstrated in Figure 1, empowering leadership was strongly related to perceived LMX under high LMX differentiation ( $\gamma = 0.62$ ,  $p < .001$ ). The empowering leadership–LMX relationship was less strong under low LMX differentiation ( $\gamma = 0.15$ , ns). Thus, Hypothesis 2 was supported.

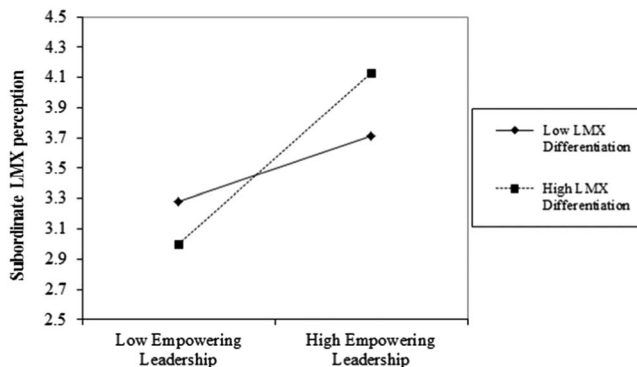


FIGURE 1. ILLUSTRATION OF INTERACTION BETWEEN EMPOWERING LEADERSHIP AND LEADER–MEMBER EXCHANGE (LMX) DIFFERENTIATION TO PREDICT SUBORDINATE LMX PERCEPTION

## DISCUSSION

The present study explored how an empowering leader improves a subordinate's psychological empowerment by leading the subordinate to perceive high LMX, and how this empowering leadership process was shaped within a work group context of LMX differentiation. Our first finding – a subordinate's perceived LMX was a mediation path through which an empowering leader affected the subordinate's empowerment level – highlighted an intervening role of subordinate LMX perception in empowering leadership processes. Consistent with our findings, researchers have found relational leader behaviors to be empowering such that employees in empowered teams considered relationship-oriented leader behaviors (e.g., showing concerns to and getting along with subordinates) to be very effective (Arnold et al., 2000). Although this past finding implied the potentially positive impact of relationship-focused leadership on subordinate empowerment, little has been explained on why and how such leadership helped to empower subordinates. Accordingly, it might not be that relational behaviors reflected a genuine dimension of empowering leadership. Rather, it might be that those behaviors were shown to a subordinate, only after an empowering leader developed an 'actually' high-quality work relationship with the subordinate. That is, once achieving 'actual' high LMX, an empowering leader might demonstrate relationship-focused behaviors toward subordinates in addition to theory-based, deductively found empowering behaviors. This may be one explanation why subordinates suggested relational behaviors as empowering when they were asked to report effective leader behaviors in an empowered team setting. Further research is necessary to examine this issue.

Note that we investigated a subordinate's 'perceived' LMX rather than 'actual' LMX as an outcome of empowering leadership. In most previous LMX research, LMX has been assessed from a subordinate's perspective, but has also been conceptualized as the 'actual' quality of the leader–subordinate work relationship rather than one party's perception of the relationship. This typical approach to studying LMX may produce a reverse causality problem when examining LMX as a proximal outcome of empowering leadership. In a high LMX with a subordinate, a leader may be actively engaged in empowering behaviors in order to maintain and/or further enhance LMX suggesting that LMX may predict empowering leadership. This reverse causality possibility, however, was not a major concern in this study given that we are interested in subordinate's perceptions of LMX, which may or may not be consistent with reality. Specifically, we argue that it is unlikely that a subordinate's own perceptions of LMX would significantly impact a leader's leadership style, in this case, empowering leadership given that leadership styles are relatively stable. Rather, it is more plausible that empowering leadership, which is demonstrated in the empowering behaviors that these leaders engage in, is more likely to drive subordinate's perceptions of their relationship with their leader in terms of LMX, particularly given that subordinates use the behaviors as signs of trust and support on the part of the leader. Further, according to social exchange theory (Blau, 1964), reciprocal resource exchanges between two parties, which facilitate the development of a high-quality relationship, does not have to occur simultaneously or immediately. Even in the cases in which a subordinate does not have a chance to reciprocate leader empowering behaviors, or a leader does not yet consider LMX to be high, the subordinate empowered by the leader may still perceive high LMX due to the relationship-building behaviors demonstrated by the leader. In order to address the reverse causality problem, therefore, researchers may consider examining perceived, rather than actual, LMX in future empowering leadership research.

Our second finding was that, as LMX differentiation increased in a work group, a leader's empowering behaviors became more effective in advancing each individual subordinate's perceived LMX. We argue that this occurs because of a perception bias that subordinates have in regards to empowering behaviors. Specifically, as LMX differentiation increased, a subordinate is more likely to perceive a leader's empowering behaviors directed at him or her as a sign of exclusive trust and support, characteristic of a high LMX. This perception occurs regardless of the level of LMX in the work unit.



Indeed, a subordinate often overestimated (or underestimated) LMX because of his or her own misperceptions (Cogliser, Schriesheim, Scandura, & Gardner, 2009). In general, high LMX differentiation has been known to enhance leadership effectiveness. Henderson et al. (2008) found a stronger relationship between LMX and psychological contract when LMX differentiation was high rather than low. In addition, Ma and Qu (2010) reported a stronger LMX–subordinate performance relationship under higher LMX differentiation. Although these studies did not explicitly discuss the role of subordinate preconception, they still suggested that, under high LMX differentiation, a subordinate might become perceptually biased and falsely evaluate his or her own LMX to be at a higher than actual level. In the present study, we similarly argued and found that LMX differentiation increased empowering leadership effectiveness by strengthening the positive empowering leadership–perceived LMX association. More investigation is necessary to examine how the preconceptions generated by LMX differentiation would influence a subordinate in leader empowering processes.

It is also noteworthy that a subordinate's preconceptions generated within the LMX differentiation context may not always positively influence leader empowering processes. In fact, LMX differentiation has been acknowledged to be a discriminating work group context in which a subordinate may feel a sense of unfairness (Scandura, 1999; Erdogan, 2002; Liao, Liu, & Loi, 2010). It is possible that in the case of high LMX differentiation, a subordinate may judge leader empowering behaviors toward him- or herself to be unjust, even when those behaviors are directly equally to all subordinates. In this situation, the subordinate may hesitate to accept and actively respond to empowering leadership, in which case, the positive effect of empowering leadership on the subordinate may be attenuated. Given the potential role that subordinate's fairness perceptions may have in leader empowering processes, future research needs to replicate and further explain how fairness perceptions may influence leader empowering processes.

## LIMITATIONS AND FUTURE RESEARCH

There were several limitations that should be indicated to qualify the study findings. First, the sample size was not large. Future research would need to include additional individuals and work groups in order to increase power in the data analyses. This might help researchers discover the LMX-based mediated moderation relationship that was tentatively tested but not found in this study. Second, the sample of this study consists of all South Korean administrative employees working in a South Korean company. Hence, it is not certain whether our findings are generalizable across other organizations and cultures. Future research needs to carefully examine boundary conditions and replicate the findings with different samples in dissimilar work contexts (e.g., engineers and scientists within western work organizations and western national cultures).

Third, the data used for this study was largely cross-sectional and the survey participants were the only data source, thus, there may be a method bias concern. Acknowledging these issues, we tried to partial out artificial covariance among study variables in various ways recommended in the past research (Podsakoff et al., 2003). For example, study variables were collected over two time periods and in order to create a psychological separation between LMX and psychological empowerment, which were measured in the same survey, we placed the scales representing the two constructs far apart in the survey form. We also provided clear instructions for each scale, so that respondents did not complete the survey based on their own implicit theory. Additionally, as described earlier, we also attempted to statistically control for potential method effects by partialing out respondents' social desirability tendency. Although some researchers argued that the common method variance issue might not be as serious as usually understood and even somewhat overestimated (Doty & Glick, 1998; Spector, 2006), we admit that our research design was not perfect for testing the proposed study hypotheses. Future studies should provide additional data sources, such as archival HR data, and consider creating a genuinely longitudinal study design.

Related to and beyond the points indicated above, there remains an additional future research question. Researchers may examine, after controlling for the effects of 'conventional' leader empowering behaviors (Ahearne, Mathieu, & Rapp, 2005; Zhang & Bartol, 2010), how a leader's 'pure relational' behaviors would influence the extent to which LMX increases, and a subordinate is empowered on the job. As noted above, although a leader's relationship-focused behaviors were empirically discovered as empowering behaviors (Arnold et al., 2000), empowering leadership researchers (Ahearne, Mathieu, & Rapp, 2005; Zhang & Bartol, 2010) have not paid much attention to this inductively proposed dimension of empowering leadership. Based on the finding that a subordinate's perceived LMX is a path through which a leader empowers the subordinate, it is necessary to further examine how and when the leader's relational behaviors, similar to consideration leader behaviors (Halpin 1957; Stogdill, 1963), would exclusively and/or additionally influence subordinate LMX perception and subsequent subordinate empowerment.

## CONCLUSION AND IMPLICATION

The findings of this study suggest that the effects of empowering leadership on subordinate empowerment might be less straightforward than what researchers have recognized. Certainly, a leader's empowering behaviors would directly empower a subordinate. However, the present study provides initial evidence that there may be an indirect and additional way – having a subordinate believe that he or she is in a high-quality dyadic work relationship with a leader – for improving subordinate empowerment. Knowing and using this new path of empowerment, a leader may be able to empower his or her subordinate to a higher degree.

We also learned that, whether overall LMX level in a work group was high or low, the higher LMX differentiation was in a work unit, the more effective a leader's empowering behaviors were in enhancing a subordinate's perceived LMX, which was also found to determine the subordinate's psychological empowerment. Accordingly, a leader who wants to maximally increase a particular subordinate's empowerment level may intentionally develop differentiated work relationships with subordinates in a work group. In contrast, a leader, who equally develops LMXs with subordinates, may need to expect that his or her empowering behaviors toward an individual subordinate would influence the subordinate's perceived LMX to a lesser extent.

Finally, as a practical implication for leadership development, the present study suggests that an organization that pursues an employee's empowered performance may need to provide the employee's manager and supervisor with empowering leadership training. In the training, the manager and supervisor may not only learn how to effectively demonstrate empowering behaviors to a lower-level employee, but also learn how to form and maintain a high-quality work relationship with the employee. This training may also inform the manager and supervisor of the importance of a work unit's social contexts, such as LMX differentiation, and may also explain the role of subordinate preconceptions generated within social contexts.

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