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THE RELATIONSHIPS AMONG LMX, PSYCHOLOGICAL EMPOWERMENT, MOTIVATIONAL ORIENTATIONS AND INNOVATIVE BEHAVIOR

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ABSTRACT

In the past study, many researchers believed that leader-member exchange (LMX) had a significant influence on employee innovative behavior. This study extends previous research by examining the mediating role played by employee perceived psychological empowerment. This study also explores whether employees' motivational orientations have significant moderating effects on the relationship between employees' psychological empowerment and their innovative behaviors. Finally, this study examines whether the mediating effect of employees' psychological empowerment on the relation between LMX and innovative behaviors is, in turn, moderated by motivational orientations. Data were collected from 359 employees and their immediate supervisors in 46 companies in Taiwan. We tested the proposed relationships with robust data analytic techniques. Results were consistent with the hypothesized conceptual scheme, in that psychological empowerment mediated the relationship between LMX and innovative behavior when intrinsic or extrinsic motivation was high, but not when intrinsic or extrinsic motivation was low. On the basis of these findings, we conclude that the connection between LMX and innovative behavior in situations is more complex than was previously believed — there-by yielding a pattern of moderated mediation.

JEL Classifications: M12, C12, L20
Keywords: Leader – Member Exchange; Psychological Empowerment; Innovative Behavior
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INTRODUCTION

In today's rapidly changing business environments, economic trends demanding the more effective delivery of new products and services have encouraged organizations to depend more and more on creative ideas from employees (George 2007). Creativity and innovation play important roles in this change process. Considerable research shows that the creativity and innovative behavior of employees can contribute to organizational innovation, effectiveness, and survival (Amabile & Mueller 1996; Oldham & Cummings 1996; Scott & Bruce 1994; Shalley 1995; Shalley Zhou & Oldham 2004; West Hirst Richter, & Shipton 2004; Woodman Sawyer & Griffin 1993). Therefore, for an organization to have a sustained competitive advantage, they have to focus on how to more effectively use potential employees, and for creativity and innovative behaviors to occur in an organization, managers need to support and promote them, as they can have a greater affect on the context in which creativity and innovative behaviors occur (Shalley & Gilson 2004).Researchers often use the two terms of "innovation" and "creativity" interchangeably (West & Farr 1990). But there are several distinctions between workplace innovation and the more secular term of creativity. The crucially important factor which distinguishes innovation from creativity is that creativity refers to idea generation alone, on the other hand, workplace innovation includes both idea generation and implementation. In other words, creativity can be seen as the development of new ideas, while innovation implementation is the application of those new ideas into practice (West & Altink 1996; West & Farr 1990). Thus, the first aim of this study is to examine the effect on innovative behavior. Although the majority of existing studies have investigated the impact of leaders on creativity, these investigations have largely focused on issues of positive leadership theories like the Leader – Member Exchange (LMX) theory and the transformational leadership theory (e.g. Tsi 2006; Bono & Judge 2003; Janssen & Yperen 2004; Jung, Chow & Wu 2003). More recently, researchers have begun investigating the dark side of leadership, such as abusive supervision (Einarsen Aasland & Skogstad 2007; Tepper 2007). Noticeably, in Taiwanese society, a considerable amount of attention is paid to "relationships". Therefore, our study will also explore the leadership effect of LMX to build and test those theories that address the connection between LMX and innovative behavior.

Regarding the relationship between intrinsic motivation and extrinsic motivation, motivational theorists have discussed the issues of this heated debate, and some scholars have viewed the relationship between three

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types of motivation as: confrontation, promotion and coexistence. Also proposed has been the concept of synergistic motivational combinations (Amabile 1996), which refers to motivations which often not only exist at the same time, but also complement each other. Hence, this study further examines the interactive relationships between the effects of different motivations for innovative behavior, including psychological empowerment and several important intervening variables, such as intrinsic motivation and extrinsic motivation.

With the contention in mind, in the present study we have also focused on investigating the mediating mechanism linking LMX and innovative behavior. Prior research on innovative behavior has largely focused on intrinsic motivation theory, and intrinsic motivation is often considered a mediating variable to innovative behavior (Amabile 1996; Oldham & Cummings 1996; Shalley 1995). However, the research evidences have pointed out that this claim has a mixed result (Amabile Goldfarb & Brackfield 1990; Shalley & Perry-Smith 2001). According to this gap, we draw upon psychological empowerment as a mediator to explain the relationship between LMX and innovative behavior. Because psychological empowerment involves the shared power with a view toward enhancing employees' motivation and investment in their work (Kirkman & Rosen 1997, 1999; Thomas & Velthouse 1990), as the researchers have argued, we believe that there are major reasons to expect psychological empowerment to have a positive impact on innovative behavior (Amabile 1988; Amabile, Conti, Coon, Lazenby, & Herron, 1996; Amabile Schatzel Moneta & Kramer 2004; Thomas & Velthouse 1990; Zhou 1998). We thus drew on the psychological empowerment literature and the innovative behavior literature to posit a mediating mechanism with high potential to help explain linkages between LMX and innovative behavior.

Finally, in building a model linking the mediating mechanism of psychological empowerment and the interactive relationships among the other motivations (intrinsic motivation and extrinsic motivation), we have further examined an integrated conceptual scheme that proposes that there is a relationship between LMX and innovative behavior, which is depicted in Figure 1. Overall, the purpose of this article has been to build a theory by conceptually and empirically linking LMX theory, psychological empowerment theory, motivation theory and relevant creativity theories, in answer to calls for a more comprehensive understanding of the motivation theory phenomenon as it relates to employee creativity (Tsi & Kao 2004; Amabile 1985; Amabile et al. 2004; Elsbach & Hargadon 2006). The rest of this paper is organized as follows. Section II discusses the literature review and hypotheses, Section III outlines our research design, Section IV covers our empirical results, and finally, Section V concludes.

LITERATURE REVIEW AND HYPOTHESES

The bright side of leadership: A mediation mechanism of psychological empowerment between LMX and innovative behavior

LMX refers to a construct indicating the quality of the social exchange between supervisors and subordinates (Graen 1976; Graen & Scandura 1987). According to the LMX theory, supervisors have a unique relationship to each of their employees with high-quality relationships characterised by respect, trust, and mutual obligation (Graen & Uhl-Bien 1995), and they determine and develop their relationship exchange through a role-making process (Graen 1976; Graen & Cashman 1975). When they find that their expectations are met by their partner, they are likely to form high-quality exchanges or high-quality LMX (Liden Wayne & Stilwell 1993). In organizations, because of limited resources, supervisors will develop a different exchange relationship with their subordinates. In what is called high LMX relationships, subordinates not only receive support and encouragement from their leader, but also are given more responsibility, and receive more challenges. On the contrary, in low LMX relationships, work is performed according to a formal set of rules and the employment contract; information is communicated downward, and relationships are characterized by distance between the leader and subordinates. More precisely, while interacting with high-quality LMX, subordinates and their leader tend to trust each other more, to mutually respect each other more, and to exhibit a greater possibility for engaging in a return relationship.

LMX and innovative behavior

In the past, a lot of research evidence has shown that the most influential of contextual factors to innovation behavior is leadership. According to the self-fulfilling prophecy effect, Scott and Bruce (1994) had pointed out that leaders may have expectations about their subordinates and further affect their innovative behavior. In addition, leaders may also use their own powers and abilities to influence their subordinates, such as by giving support to their subordinates, empowering them, giving them intellectual stimulation and supervision, sharing expert knowledge and information, giving them chances to have an influence on the decision-making processes, and by practicing the subordinates' new ideas (Jeroen & Deanne 2007; Krause 2004), with the most important factor being the leader's support for subordinates. With greater uncertainty in the

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innovation process, such as with unpredictable results and the consumption of time, money or resources (Kanter 1988), the leaders' support has become a crucial factor. Based on past studies which have shown these correlations, for instance, Oldman and Cummings (1996) found that the higher the perception of supervisors' support, the more innovative the behavior of subordinates will be. Past studies have also shown that employees who perceived a higher relationship quality of LMX will exhibit a higher innovative performance (Janssen & Yperen 2004). Accordingly, we predict that LMX can positively affect the innovative behavior of employees.

LMX and psychological empowerment

The mediating mechanism, referred to as *psychological empowerment*, is defined as a psychological state that is represented by four cognitions: meaning, competence, self-determination, and impact (Spreitzer 1995). It is a psychological state residing within individuals, reflecting an active orientation towards a work role (Thomas & Velthouse 1990). According to the social exchange theory (Blau 1964), on the basis of trust, managers exchange the legitimate power, control and supervision that they have over their employees with management practices that emphasize support and cooperation by empowering their subordinates. The expectations of payback for this social exchange relationship rests with the norms of reciprocity (Gouldner 1960). In high-quality relationships, Keller & Dansereau (1995) argued that the leader will view his or her subordinates as members of the group, and will give them more power and support, which enhances their conviction that they are able to produce a favorable outcome (Bandura 1989; Spreitzer 1995). Therefore, the response from employees is expected to be to fulfill their obligation to their supervisors by extending their trust in reciprocation (Rhoades & Eisenberger 2002). By contrast, in a low-quality relationship, the leader will view their subordinates as members of an out-group, they will not be willing to trust their subordinates, and they will not make them feel empowered. In short, LMX can make employees willing to be innovative, but they also need to *feel* innovative (via psychological empowerment) in order to be moved into action and behave innovatively. Thus, we posit that LMX inspires followers high in psychological empowerment to actually make use of the possibility to take innovative behavior.

Psychological empowerment and innovative behavior

Psychologically empowered individuals view themselves as competent and able to influence their jobs and work environments in meaningful ways, facilitating proactive behavior, showing initiative, and acting independently (Spreitzer 1995; Thomas & Velthouse 1990). The subordinates' innovative behavior is likely to be formed through their psychological empowerment. Therefore, we argue that subordinates need to feel psychologically empowered to believe they have the ability to do their job. High psychological empowerment of employees can inspire both practical implementation possibilities and initiative-taking. This will lead to more innovative behavior. In contrast, low psychological empowerment encourages employees to be less effective because they do not believe themselves able to take action. More specifically, those who are or feel empowered believe they have more powers than other employees, and feel they can do their job with less restriction, so they can be more comfortable to do something new (Amabile 1988). Pointed out that when employees are given the power to feel greater (Bowen & Lawler 1992), relative to improving their capacity in the service, they will usually feel more confident of their ability to promote creative thinking and problem solving. Employees feel empowered to develop strong self-efficacy, as well as increase their motivation to perform tasks (McClelland 1975), so even if they have some bottlenecks on their job, they still can drive them to keep trying (Amabile et al. 1996). These reasons encourage employees to more likely continue in keeping passions for their work, and to further explore new ways to solve problems (Amabile et al. 1996). Furthermore, we argue that psychological empowerment can predict the employees' innovative behavior. As mentioned above, positive relationships between LMX and innovative behavior and between psychological empowerment and innovative behavior exist. Together, these hypotheses specify a model in which LMX indirectly increases innovative behavior by contributing to psychological empowerment. Formally, we believe that an individual's psychological empowerment might affect innovative behavior, and we propose:

> *Hypothesis 1. Psychological Empowerment will mediate the relationship between LMX and innovative behavior.*

The moderating roles of intrinsic motivation and extrinsic motivation

The moderating role of intrinsic motivation

In considering the role of psychological empowerment in facilitating innovative behavior, we note available evidence demonstrating an interactive relationship between psychological empowerment and intrinsic motivation. Intrinsic motivation refers to the extent to which an individual is inner-directed, is interested in or

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fascinated with a task, and engages in it for the sake of the task itself (Utman 1997). According to Amabile's (1983) componential conceptualization of creativity, intrinsic motivation is one of the most important and powerful factors leading to employee innovative behavior (Amabile 1988, 1996; Amabile et al. 1996; Shalley 1991, 1995). Prior research also posited that psychological empowerment is a proximal cause of intrinsic task motivation (Thomas & Velthouse 1990). Drawing on the self-determination theory, (SDT, Gagne & Deci 2005) suggest that autonomy-supportive leaders promote autonomous motivation, which refers to the process of being motivated by one's interest in an activity (i.e., intrinsic motivation) within the self. Psychological empowerment is interpreted as the subordinates' perception of meaning, competence, self-determination and impact, which is parallel to the definition of autonomous motivation. Therefore, we can view psychological empowerment as a type of autonomous motivation, and it would be motivated by intrinsic motivation. As previously stated, we argue that the strength of this relationship will depend on the level of intrinsic motivation. In other words, the highly intrinsic motivation of followers in particular might view this as controlling and demotivating, causing less innovative behavior (Deci & Ryan 1987).

In short, we propose that psychological empowerment is more effective in engendering innovative behavior under conditions of high intrinsic motivation than under conditions of low intrinsic motivation, whereas psychological empowerment is more likely to be detrimental to innovative behavior under conditions of low intrinsic motivation.

> *Hypothesis 2a. The relationship between psychological empowerment and innovative behavior will be weaker for employees low in intrinsic motivation than for employees high in intrinsic motivation.*

The moderating role of extrinsic

Despite past research, which has revealed inconsistent results on the effects of extrinsic motivation on creativity (Cameron & Pierce 1994; Cameron 2001; Deci, Koestner & Ryan 1999), many scholars have pointed out that extrinsic motivation is not entirely detrimental to innovative behavior, and even in some situations, it will have a positive impact on creativity. Who based their research on the empirical findings, proposed a model of motivation synergy (Amabile et. al. 1996), and argued that given the right combination of personality traits and work environment contexts, extrinsic motivation will help reward innovative behavior. The degree to which people are motivated to do their jobs would be predicted from the support in their work contexts. According to the model of motivation synergy, this study suggests that many of the factors that enhance intrinsic motivation would also facilitate an internalization of extrinsic motivation. For example, in a supportive environment employees would meet their needs for autonomy and competence by a combination of intrinsic motivation and extrinsic motivation. Specifically, promoting extrinsic motivation in the workplace involves enabling employees to experience meaningfulness, competence, self-determination, and impact at work (Spreitzer 1995; Thomas & Velthouse 1990). Because of involving shared power with a view toward enhancing employees' motivation and investment in their work (Kirkman & Rosen 1997, 1999; Thomas & Velthouse 1990), therefore, we propose that psychological empowerment is more effective in engendering innovative behavior under conditions of high extrinsic motivation than under conditions of low extrinsic motivation, whereas psychological empowerment is more likely to be detrimental to innovative behavior under conditions of high extrinsic motivation. Accordingly, we propose:

> *Hypothesis 2b. The relationship between psychological empowerment and innovative behavior will be weaker for employees low in extrinsic motivation than for employees high in extrinsic motivation.*

Assuming that employees' intrinsic and extrinsic motivations moderate the association between psychological empowerment and innovative behavior respectively, we suggest that it is also likely that extrinsic and intrinsic motivations will conditionally influence the strength of the indirect relationship between LMX and innovative behavior—thereby demonstrating a pattern of moderated mediation between the study variables, as depicted in Figure 1. Because we predict a strong relationship between psychological empowerment and innovative behavior when extrinsic and intrinsic motivations are high, we expect the following:

> *Hypothesis 3a. Intrinsic motivation will moderate the positive and indirect effect of LMX on innovative behavior (through psychological empowerment). Specifically, psychological empowerment will mediate the indirect effect when intrinsic motivation is high but not when it is low.*

> *Hypothesis 3b. Extrinsic motivation will moderate the positive and indirect effect of LMX on innovative behavior through psychological empowerment. Specifically, psychological empowerment will mediate the indirect effect when extrinsic motivation is high but not when it is low.*

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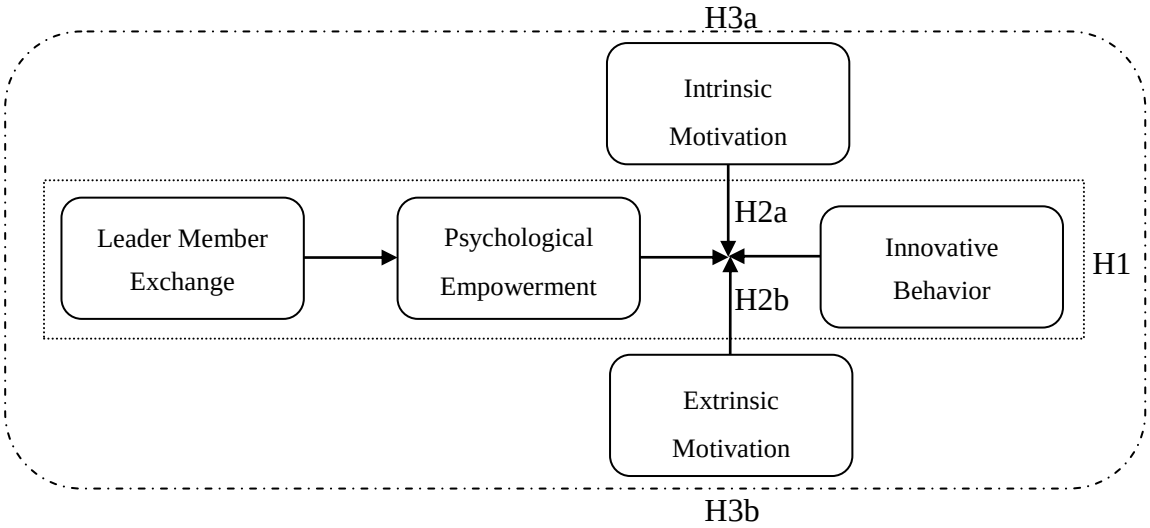
FIGURE 1
Hypothesized Model



DATA AND METHODOLOGY

Methodology

Data

The sample framework for this study includes the private and public companies of the service industry in Taiwan. Innovative behavior among service staff is a good topic of study because those in the service industry often have to contact customers and they also need to help customers solve problems instantly. Hence, we selected 46 firms in the service industry, 18.2% from technology companies, 39.2% from transportation companies, 22.2% from financial companies, and 20.4 % from other companies such as retail stores. Survey packets including a cover letter, an informed consent form, and a questionnaire were distributed to the selected companies by mail. The envelopes were addressed by code numbers rather than to specific individuals. Human resource representatives from the firm selected employees from each department to participate in the present study. Participants were asked to return the forms to the HR representatives within 2 weeks in an enclosed preaddressed, stamped envelope. The set of questionnaires included scores from one manager and one subordinate. We totally delivered 450 sets, and finally got 359 valid sets. The return rate was 80%. We conducted translation and back-translation procedures to formulate the Chinese version of the each scale. All items used a 6-point Likert-type response scale anchored at 1 = disagree strongly and 6 = agree strongly. Following prior research (e.g. Tsi 2006; Tsi & Kao 2004; Jnanssen & Yperen 2004), we controlled several demographic variables that have been found to be related to creativity, such as age, gender, marital status, tenure (number of years working with the current company), education (years of education), and the industry of the company. Gender was coded as 0 = Male and 1 = Female. Marital status was coded as 0 = Married and 1 = Unmarried.

Employee measures. We measured LMX with 7 items developed by Grean and Uhl-Bien (1995). Each item was measured on a 6-point Likert scale in which 6 indicated ‘‘strongly agree’’ and 1 indicated ‘‘strongly disagree’’. The Cronbach’s α reliability estimate for LMX was 0.90. The Psychological Empowerment Scale, developed by Spreitzer (1995), is a 9-item scale. Each item was measured on a 6-point Likert scale in which 6 indicated ‘‘strongly agree’’ and 1 indicated ‘‘strongly disagree’’. The Cronbach’s α reliability estimate for psychological empowerment was 0.86. The intrinsic motivation and extrinsic motivation scale, developed by Amabile, Hill, Hennessey, and Tighe (1994) Work Preference Inventory (WPI), included both intrinsic and extrinsic aspects. Subjects rated using a 6-point Likert scale, in which 6 indicated ‘‘strongly agree’’ and 1 indicated ‘‘strongly disagree’’. The Cronbach’s α for the above two sub-scales were 0.86 and 0.79.

Supervisor measures. We measured individual innovational behavior by using supervisors’ ratings based on Janssen’s (2000) scale. It is a 9-item scale composed of three subscales: idea generation, idea promotion, and idea realization. Each component was measured by three items on a 6-point Likert scale, in which 6 indicated ‘‘strongly agree’’ and 1 indicated ‘‘strongly disagree’’. The Cronbach’s α reliability estimate for innovative behavior was 0.93.

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EMPIRICAL ANALYSIS

Descriptive Statistics

We tested our study hypotheses in two steps. First, we examined a mediation model (Hypotheses 1). Next, we integrated the moderator variable into the model (Hypotheses 2a, 2b) and we tested the overall moderated-mediation model (Hypotheses 3a, 3b). We tested the mediation hypotheses using a four-step procedure argued by Baron and Kenny (1986). First, we tested whether the independent variable (LMX) was correlated with the dependent variable (innovative behavior); second, whether the independent variable (LMX) was significantly related to the mediator (psychological empowerment); third, whether the mediator (psychological empowerment) affects the dependent variable (innovative behavior); whether the mediator (psychological empowerment) completely mediates the relationship between independent variable (LMX) and dependent variable (innovative behavior), and finally whether the effect of the independent variable (LMX) on the dependent variable (innovative behavior) controlling for the mediator (psychological empowerment) should be zero or smaller, which provides evidence for a full or partial mediation.

Concerning Hypothesis 2a and 2b, we predicted that intrinsic motivation and extrinsic motivation would moderate the relationship between psychological empowerment and innovative behavior. Further, assuming this moderation hypothesis receives support, it is plausible that the strength of the hypothesized indirect (mediation) effect is conditional on the value of the moderator, or what has been termed as the conditional indirect effects (Preacher, Rucker & Hayes 2007; alternatively known as moderated mediation). Accordingly, the procedures used to test Hypotheses 2a, 2b, 3a and 3b were integrated such that we fully considered the possibility of a statistically significant indirect effect being contingent on the value of the proposed moderator. To test Hypotheses 2a, 2b, 3a and 3b, we again utilized an SPSS macro, designed by Preacher and his colleagues (2007). This macro facilitates the implementation of the recommended bootstrapping methods and provides a method for probing the significance of conditional indirect effects at different values of the moderator variable. Table 1 presents the means, standard deviations, and intercorrelations for all variables. An inspection of the correlations reveals that LMX was positively related to psychological empowerment (r = .55, p < .001), whereas psychological empowerment was related to innovative behavior (r = .27, p < .001).

Tests of Mediation

Table 1 presents the results for Hypotheses 1. Supporting Hypothesis 1, LMX was positively associated with innovation, as indicated by a significant regression coefficient (β = .19, p < .001). Also, LMX was positively related to psychological empowerment (r =.55, p < .001), and psychological empowerment was related to innovative behavior (r =.27, p < .001). Finally, LMX was found to have an indirect effect on innovative behavior; this indirect effect was a full mediation, as we hypothesized (Hypothesis 1). After controlling for psychological empowerment, the effect of LMX on innovative behavior was significantly and completely reduced (β = .08, *ns*), suggesting full mediation. Thus, Hypotheses 1 received support.

TABLE 1. MEANS, STANDARD DEVIVATIONS, AND INTERCORRELATIONAS AMONG STUDY VARIABLES

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Industry	2.45	1.01	—										
2. Gender	.51	.50	-.15 **	—									
3. Age	34.57	8.02	.22**	.04	—								
4. Marriage	.51	.50	-.16 **	.05	-.60 **	—							
5. Tenure	7.34	6.65	.25 **	-.06	.67 **	-.47 **	—						
6. Education	15.32	2.05	-.21 **	.12*	.25 **	.18 **	-.20 **	—					
7. LMX	4.49	.82	-.03	.06	-.01	.00	.09	.12	(.90)				
8. Intrinsic Motivation	4.80	.60	.05	.04	.03	-.01	.11 **	.05	.48**	(.86)			
9. Extrinsic Motivation	4.49	.70	.10	-.01	-.07	-.01	.04	.01	.49**	.58**	(.79)		
10.Psychologica Empowerment	4.69	.66	.10	.03	1.43 **	-.17 **	.21 **	.01	.55**	.66**	.50**	(.86)	
11.Innovative Behavior	4.62	.73	-.03	-.04	.06	-.12 *	.13 *	.20 **	.22**	.16**	.19**	.27**	(.93)

*Note: N=359. * p<.05, ** p<.01, *** p<.01*

The number in the parenthesis represent Cronbach's α.

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Tests of Moderated Mediation

Table 2 and Table 3 present the results for Hypotheses 2. With regard to Hypothesis 2a, we predicted that the positive relationship between psychological empowerment and innovative behavior would be weaker for employees low on intrinsic motivation than for employees high on intrinsic motivation. Results indicated that the cross-product term between psychological empowerment and intrinsic motivation on innovative behavior was significant (β = .30, p < .01). For Hypotheses 2b (see Table 4), we predicted that the relationship between psychological empowerment and innovative behavior would be weaker for employees low on extrinsic motivation than for employees high on extrinsic motivation. Results indicated that the cross-product term between psychological empowerment and extrinsic motivation on innovative behavior was significant (β = .26 , p < .01). Although the results show that intrinsic motivation and extrinsic motivation interacted with psychological empowerment to influence innovative behavior, they do not directly assess the conditional indirect effects model depicted in Figure 1 (i.e., Hypothesis 3a and 3b).

Therefore, we examined the conditional indirect effect of LMX on innovative behavior (through intrinsic motivation and extrinsic motivation) at each of the three values of psychological empowerment. First, for intrinsic motivation (see Table 3): the mean of intrinsic motivation was 4.80, one standard deviation above the mean of intrinsic motivation was 5.40, and one standard deviation below the mean of intrinsic motivation was 4.20. Normal-theory tests indicated two of the three conditional indirect effects (based on moderator values at the mean and at 1 standard deviation) were significantly different from zero. Bootstrap CIs corroborated these results. Thus, Hypothesis 3a was supported. Results demonstrated the indirect effect of LMX on innovative behavior through psychological empowerment was observed when levels of intrinsic motivation were moderate to high, but not when intrinsic motivation was low. For extrinsic motivation (see Table 4): the mean of extrinsic motivation was 4.49, one standard deviation above the mean of extrinsic motivation was 5.19, and one standard deviation below the mean of extrinsic motivation was 3.78. Normal-theory tests indicated two of the three conditional indirect effects (based on moderator values at the mean and at 1 standard deviation) were significantly different from zero. Bootstrap CIs corroborated these results. Thus, Hypothesis 3b was supported. Results demonstrated the indirect effect of LMX on innovative behavior through psychological empowerment was observed when levels of extrinsic motivation were moderate to high, but not when extrinsic motivation was low.

TABLE 2. THE MEDIATION OF PSYCHOLOGICAL EMPOWERMENT

Variables	Regression: Psychology Empowerment		Innovative Behavior		
	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables					
Industry	.08	.08	-.03	-.05	-.05
Gender	.07	.02	-.01	-.01	-.01
Marriage	-.11	-.11*	-.12	-.09	-.10
Age	-.05	.02	-.03	-.04	-.03
Education	.08	.00	.21***	.21***	.21
Tenure	.18*	.07	.12	.11	.11
Main Variables					
LMX		.55***	.19***		.08
Psychological Empowerment				.24***	.20**
R^2	.04	.33	.09	.06	.12
ΔR^2	.06**	.29***	.03***	.11***	.03**
F value	3.72**	26.49***	6.19***	7.55***	6.83***

Note: $^{*}p<.05$, $^{**}p<.01$, $^{***}p<.01$

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TABLE 3. THE MODERATOR OF INTRINSIC MOTIVATION FOR CONDITIONAL INDIRECT EFFECT

Predictor	*β*	*SE*	*t*	*p*
Psychological Empowerment				
Constant	2.69	.16	16.59	.000
LMX	.44	.04	12.48	.000
Innovative Behavior				
Constant	9.82	2.08	4.72	.011
Psychological Empowerment	-1.18	.46	-2.57	.066
Intrinsic Motivation(IM)	-1.45	.44	-3.30	.001
PE * IM	.30	.09	3.21	.002
Nonverbal negative expressivity	*Boot indirect effect*	*Boot SE*	*BootLL*	*Boot UL*
Conditional indirect effect at IM =M±1SD				
IM				
-1SD(-1.00)	.04	.04	-.05	.11
M (0.00)	.12	.04	.05	.19
+1SD (1.00)	.20	.05	.11	.29

Note. N = 359. Unstandardized regression coefficients are reported.
Bootstrap sample size =1,000. LL = lower limit;
CI = 95%; SD = standard deviation; M = mean; Indirect effect = ± 1SD;

TABLE 4. THE MODERATOR OF EXTRINSIC MOTIVATION FOR CONDITIONAL INDIRECT EFFECT

Predictor	*β*	*SE*	*t*	*p*
Psychological Empowerment				
Constant	2.69	.16	16.59	.000
LMX	.44	.04	12.47	.000
Innovative Behavior				
Constant	8.50	1.67	5.09	.000
Psychological Empowerment	-.93	.35	-2.64	.009
Intrinsic Motivation(IM)	-1.21	.38	-3.15	.002
PE * EM	.26	.08	3.32	.001
Nonverbal negative expressivity	*Boot indirect effect*	*Boot SE*	*Boot LL*	*Boot UL*
Conditional indirect effect at EM=M±1SD				
EM				
-1SD(3.78)	.03	.04	-.06	.10
M(4.49)	.11	.04	.04	.18
+1SD(5.19)	.19	.05	.10	.29

Note. N = 359. Unstandardized regression coefficients are reported.
Bootstrap sample size =1,000. LL = lower limit;
CI = 95%; SD = standard deviation; M = mean; Indirect effect = ± 1SD ;

CONCLUSIONS

The aim of the present research was to analyze the mediating effect of psychological empowerment between LMX and innovative behavior. We further examined an integrated conceptual scheme that proposed that the relationship between LMX and innovative behavior is more complex than prior research has indicated (e.g. Scott & Bruce 1994; Jeroen & Deanne 2007; Krause 2004). First, we hypothesized that psychological empowerment was a mediation between LMX and innovative behavior. We then determined whether intrinsic motivation and extrinsic motivation can regulate the indirect relationship between LMX and innovative behavior. According to the research results, the hypothesized moderated mediation model is supported. The indirect relationship between LMX and innovative behavior was mediated by psychological empowerment. Otherwise, as expected, intrinsic motivation and extrinsic motivation can amplify or attenuate this indirect relationship. In other words, the indirect effect of psychological empowerment on the relationship between LMX and innovative behavior was contingent upon intrinsic motivation or extrinsic motivation. These results have several

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implications for both theory and practice. First, we believe our results contribute to the literature by corroborating and extending prior findings in several ways. Past research has devoted attention to the relationship between LMX and innovative behavior, but to our knowledge, no previous study has investigated the mechanisms connecting these constructs. The present study is the first to broaden the focus of motivation research and present a more complex scenario of how LMX influences innovative behavior in situations of synergistic motivational combinations. We investigated a moderated mediation model of the relationship between LMX and innovative behavior.

The finding shows the unidentified boundary condition influencing the impact of LMX on innovative behavior. On the basis of the current results, subordinates who have stronger intrinsic motivation or extrinsic motivation seem to be better able to enhance the innovative behavior implications of LMX and of the resulting psychological empowerment. This finding is important because it suggests that, in spite of a strong relationship between LMX and subordinates' innovative behavior, the all-important second linkage between psychological empowerment and innovative behavior is diminished when intrinsic motivation or extrinsic motivation is low. Nowadays, the innovative behavior of the employee is a critical component of organizational success, so our results have several implications for practice. First, our findings highlight the importance of psychological empowerment between LMX and innovative behavior. If leaders view their subordinates as members of a group and give them sufficient support, employees will have more power and resources to do their individual jobs. Therefore, leaders must keep a good relationship with employees, and then encourage employees to struggle to increase their motivation for engaging in innovative behavior. Regarding motivation, our results show that intrinsic or extrinsic motivation can regulate the mediation mechanism of psychological empowerment between LMX and innovative behavior when intrinsic or extrinsic motivation is high, but can't when intrinsic or extrinsic motivation is low. On the one hand, the organizations can choose employees with high intrinsic motivation while recruiting.

We focus on not only their ability but also on their intrinsic motivation. Hence, besides experiences and education, we should use scales to measure the candidate's intrinsic motivation. On the other hand, leaders can use several rewards as extrinsic motivations such as bonuses or promotions to encourage employees. As with any study, in spite of our having collected data from two sources and by avoiding issues of same-source bias (Podsakoff, MacKenzie, Lee & Podsakoff 2003), there are limitations to consider. First, LMX is a perception of the relationship between the leaders and employees. In this part, we need subordinates to indicate whether individual leaders have a good relationship with them in order to avoid leaders controlling so many powers such that subordinates give incorrect answers or have an inclination to answer dishonestly according to the scale. Therefore, we took an anonymous way to increase the rate of answering the scale correctly to show truthful results. Second, although we took many control variables which influence the relationship, it was still not enough. Because there are many control variables, we haven't controlled every variable, such as the skills of employees. Due to individual skills, employees have dissimilar abilities for innovative behavior. Consequently, future research will take more control variables. Finally, there are many leader styles, but we only take LMX in our study. By understanding different leadership styles, for instance, we will know whether we will have the same result via a negative leadership such as by abusive supervision (Tepper 2000), using this research model as a base for developing a similar research model which focuses on the relationship between abusive supervision and innovative behavior.

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