

# 領導與部屬交換關係、內外控人格對於員工工作態度之影響－心理賦能之中介效果

## Effects of Leader-Member Exchange and Locus of Control on Job Attitudes: The Mediation of Psychological Empowerment

陳春希<sup>1</sup> Chun-Hsi Vivian Chen

國立中央大學 企業管理學系

Department of Business Administration, National Central University

張緯杰 Wei-Chieh Chang

國立中央大學 企業管理學系

Department of Business Administration, National Central University

李旭梅 Hsu-Mei Lee

大葉大學 人力資源暨公共關係學系

Department of Human Resource and Public Relations, Da-Yeh University

袁梅玲 Mei-Ling Yuan

國立中央大學 企業管理學系

Department of Business Administration, National Central University

**摘要：**以台灣高科技公司之研發工程師為對象，本研究探討領導與部屬交換關係與內外控人格對於員工工作滿意度、情感承諾和離職傾向的影響，以及員工心理賦能的中介影響效果。研究結果顯示領導與部屬交換關係與內外控人格會正向影響員工的心理賦能；心理賦能會正向影響員工的工作滿意度與情感承諾，以及負向影響其離職傾向。此外，員工心理賦能對於領導與部屬交換關係與員工的工作滿意度和情感承諾之間具有完全中介效果；員工的內

---

<sup>1</sup> Corresponding author: Department of Business Administration, National Central University, Jhongli City, Taiwan E-mail: cvchen@mgt.ncu.edu.tw

外控人格亦會經由心理賦能之完全中介進而影響其情感承諾。本研究建議組織可致力於培養主管與部屬之間良好的交換關係，以及選用具有內控人格的成員，如此將有助於提升內部員工的心理賦能，進而增進其工作滿意度與情感承諾。

**關鍵詞：**領導與部屬交換關係；內外控人格；心理賦能；工作滿意度；情感承諾；離職傾向

**Abstract:** This study examines the influence of leader-member exchange (LMX) and locus of control on psychological empowerment, and the subsequent effect of psychological empowerment on employees' job satisfaction, affective commitment, and intention to leave. Data were collected from 316 R&D engineers in Taiwan. The results confirmed that LMX and locus of control have significant effects on employees' psychological empowerment. Psychological empowerment has a positive effect on employees' job satisfaction and affective commitment, and a negative effect on their intention to leave. It is also found that psychological empowerment fully mediates the relationships between LMX, employees' job satisfaction, and affective commitment. In addition, psychological empowerment fully mediates the relationship between employees' locus of control and affective commitment. The findings suggest that the cultivation of a good LMX and selection of employees with internal locus of control are conducive to elevating employees' perceived psychological empowerment, and thus yielding a higher level of job satisfaction and affective commitment on employees.

**Keywords:** Leader-Member Exchange; Locus of Control; Psychological Empowerment; Job Satisfaction; Affective Commitment; Intention to Leave

## 1. Introduction

Leadership, a crucial factor of energizing and motivating employees, promotes achievement of organizational goals and success (Avey *et al.*, 2008). It relates significantly to organizational performance (Janssen and Van Yperen, 2004;

Liden *et al.*, 2006; Chen *et al.*, 2007; Erdogan and Enders, 2007). Leaders are able to build up a trustful and supportive climate that encourages employees' participation and dedication. Aubé *et al.* (2007) argue that subordinates regard organizational support as respect and consideration of their supervisors. This organizational support, in return, reinforces subordinate trust in their leaders as well as the relationship between subordinates and supervisors.

Based on the social exchange theory, scholars (Dansereau *et al.*, 1975) propose that the leader-member exchange (LMX) characterizes dyadic and reciprocal relationship between supervisors and subordinates. Subordinates tend to adjust their behaviors in accordance with their supervisors' expectations. Likewise, supervisors may adopt the similar strategy to obtain full devotion from their subordinates. With characteristics of reciprocity, support, loyalty, and trust, the social exchange between supervisors and subordinates does not only encourage subordinates to go beyond their normal duties, but also fosters their positive job attitudes (Liden *et al.*, 2000). When perceiving the well established exchange relationship, subordinates tend to consider their supervisors trustworthy and thoughtful of employees' well-being, which will subsequently enhance greater efforts towards the tasks and devotion to the organizations. Despite the fact that the effect of LMX on work-related outcomes has been confirmed by the prior studies, research of investigating the psychological process is still scanty (Aryee and Chen, 2006).

Employees' perception of empowerment originates from the support of their supervisors (Corsun and Enz, 1999). Employees will experience meaningfulness and self-worth from work equipped with that support. Various leading tactics adopted by supervisors may result in diverse leader-member exchange quality that can subsequently affect the perceived empowerment and behaviors of employees. In addition, employees' locus of control plays a critical role at work since the notion of control beliefs relates with a variety of individual cognitive, affective, behavioral, and physiological outcomes (Bandura, 1986; De Brabander *et al.*, 1992; Jude and Bono, 2001; Ng *et al.*, 2006). Believing in dominating their own work roles, internals are prone to attempting taking great control in work settings (Spector, 1982). The emphasis of primary control will serve as one of the

antecedents of psychological empowerment, and leads to more positive affective reactions towards their work (Spreitzer, 1995; Koberg *et al.*, 1999; Ng *et al.*, 2006).

Employees nowadays are confronted with ongoing challenges and ever-changing uncertainties, especially those in the R&D department. Leading the R&D engineers to come up with breakthroughs, keep up their spirits, and devote themselves to the organizations has become a crucial task for contemporary leaders in dynamic circumstance. According to Elkins and Keller (2003), the R&D personnel import scientific and technological information (STI), transform it into technological innovations in the form of ideas, products, or processes, and then export these innovations to other units of the organization. Compared to employees at other units, the R&D personnel are endowed with a greater control of work setting in terms of initiative and independence. In spite of the fact that the effect of LMX quality on work-related outcomes through the mediation of empowerment is suggested by scholars (Liden *et al.*, 2000; Aryee and Chen, 2006), an in-depth investigation will further verify the conditions that trigger the effect of leadership required for successes in the R&D setting (Berson and Linton, 2005; Keller, 2006; Shin and Zhou, 2007), and prevent the negative consequences such as psychological withdrawal behavior (Aryee and Chen, 2006) and intention to leave. Besides, researchers (Thomas and Velthouse, 1990; Spreitzer, 1995) propose the effect of locus of control on employees' psychological empowerment. In order to bridge the gaps in leadership and locus of control literature, this study investigates the effects of LMX and locus of control on employees' psychological empowerment, and the consequent effects on their job satisfaction, affective commitment, and intention to leave for R&D engineers in Taiwan.

## **2. Literature Review and Hypotheses**

### **2.1. LMX- Psychological Empowerment**

Originally proposed by Graen and his colleagues (Dansereau, Cashman, and Graen, 1973; Dansereau, Graen, and Haga, 1975; Graen, 1976; Graen and

Cashman, 1975), the leader-member exchange (LMX) refers to the quality of the social exchange between leaders and subordinates, which is characterized by mutual trust, respect, and obligation (Gerstner and Day, 1997). The LMX theory proposes that time pressures and limited organizational resources cause supervisors to develop different kinds of relationships with subordinates who may be categorized as in-group or out-group (Dienesch and Liden, 1986). Those who have attitudes and personalities similar to the supervisor's, or who exhibit a higher level of competence, are classified as the in-group. Members of the in-group are highly trusted and obtain more attention, support, and organizational resources from their supervisor (Gomez and Rosen, 2001; Chen *et al.*, 2007). For subordinates in the out-group, relationship with the supervisor is primarily based on formal official interactions. Employees who trust their supervisor become more enterprising at work, and are more assertive and motivated to accomplish duties (Costigan *et al.*, 2006; Harris *et al.*, 2007). Supervisors tend to delegate authority based on subordinates' competence and accountability. Meanwhile, supervisors will trust and delegate more responsibility to in-group members (Bauer and Green, 1996).

Psychological empowerment as a motivational construct comprises individual cognitions and perceptions that include personal behavioral and psychological investment in work (Koberg *et al.*, 1999). In other words, psychological empowerment is employees' psychological interpretation or reaction to empowering conditions from organization (Spence Laschinger *et al.*, 2004). Based on the research of Conger and Kanungo (1988), Thomas and Velthouse (1990) define psychological empowerment as intrinsic motivation manifested in four concepts, i.e., meaning, competence, self-determination, and impact, which can reflect employees' orientation to their work role. Spreitzer (1995) combines these four concepts into an overall construct of psychological empowerment.

Meaning represents the compatibilities between the requirements of work roles and employees' beliefs, values, and behaviors. Competence refers to employees' beliefs in their capacity for skillfully performing work-related activities. Self-determination reflects employee autonomy over the initiation and

continuation of work plans and processes, for example, making decisions about work methods and pace. Impact represents the degree of which a person can influence strategic, administrative, or operating outcomes at work. With the approval and support of their supervisors, employees will thus feel psychologically empowered for obtaining greater negotiating latitudes and self-worth from work (Keller and Dansereau, 1995; Gomez and Rosen, 2001). As Koberg *et al.* (1999) argue, employees receive greater responsibility delegation when experiencing better exchange relationship with supervisors. The increased level of authorization strengthens their self-worth and improves performance in return. According to Locke and Schweiger (1979), a greater extent of manager's empowering employees with decision-making responsibilities (Cotton, 1993; Mohrman and Lawler, 1989; Spreitzer, 1996) will foster trust within the organization and strengthen employees' sense of control and identification with the organization. Previous research also verifies that empowerment enables employees to be better informed and to extend their participation in decision-making and other organizational activities (Spreitzer, 1996).

The quality of LMX between supervisors and subordinates correlate with the different levels of affective support, empowerment, and available organizational resources that subordinates receive from supervisors (Liden *et al.*, 2000). Daft (1995) maintains that supervisors share power through empowerment with subordinates to complete their duties autonomously. Their positive emotional ties will strengthen subordinates' belief of their own influence on certain strategic and administrative outcomes in their work unit (Ergeneli *et al.*, 2007). Based on the above arguments, the first hypothesis of this study proposes:

***H1: The quality of LMX relates positively to subordinates' psychological empowerment.***

## **2.2. Locus of Control - Psychological Empowerment**

Locus of control refers to the degree of which people believe that they, rather than external forces, determine what happens in their lives (Rotter, 1966). Ascribing control of events to themselves, internals believe they are in control of

the work settings through their behaviors, while externals would attribute control to outside forces. Hence, internals tend to depend on themselves without supervision and are more satisfied with participative leadership style (Spector, 1982).

Deci and Ryan (1980) regard the psychological demand for self-determination and competence as the elements of individual intrinsic motivation. Being motivated by work goals and obtaining an ideal job, internals are more likely to trigger greater intrinsic motivation out of their desire for self-determination and competence in performing their tasks. Therefore, internals have a better sense of task competence out of their confidence in their ability to control the task and to achieve valuable outcomes (Ng *et al.*, 2006). Empowerment *per se* is a motivational process of individuals experiencing being enabled. With the belief of being able to exert influence in organizational decisions and outcomes via their self-determined behaviors and competence, employees may obtain a better sense of empowerment as well as meaningfulness in their work (Corsun and Enz, 1999). For this reason, internals may have a better sense of empowerment than externals, because they believe in being able to take control and make choices in their work, which often indicates potential power (Liden and Arad, 1996). Moreover, internals tend to believe in their ability of making significant impact on strategic, administrative, or operating outcomes at work. Based on these findings, the second hypothesis of this study proposes:

***H2: Internal locus of control relates positively to employees' psychological empowerment.***

### **2.3. Psychological Empowerment - Job Attitude**

Thomas and Velthouse (1990) argue that empowerment is multifaceted and cannot be summarized by a single concept in terms of its essence. Spreitzer (1995) concludes that the measures used by organizations to empower employees for obtaining meaning, competence, self-determination, and impact from work ultimately increase their motivation levels. Empowering employees implies creating conditions for strengthening the motivation to accomplish tasks through

the development of their sense of personal efficacy, which in turn translates into a positive job attitude and behavior (Conger and Kanungo, 1988). As Hackman and Oldham (1975) indicate that employees experience meaningfulness, responsibilities, and knowledge of the entity of the work, better performance and satisfaction as well as the lower rate of absenteeism and turnover of employees will be achieved. The dimensions of meaning, competence, and self-determination are found to be related to employees' job satisfaction (Liden *et al.*, 2000; Spreitzer *et al.*, 1997; Aryee and Chen, 2006; Spector, 1986). Prior research indicates that psychologically empowered employees tend to make commitment and display extra-role behaviors (Avolio *et al.* 2004; Eisenberger *et al.*, 1990; Kraimer *et al.*, 1999). They have greater identification with and attachment to the organization, i.e., affective commitment (Liden *et al.*, 2000), and thus are more motivated to achieve organizational goals (Mowday *et al.*, 1982; Meyer and Allen, 1984). Ito and Brotheridge (2005) also indicate that employees' intention to leave is lower when they can participate in organizational decision-making, experience autonomy at work, and have managerial support for their career promotion. In addition, the meta-analysis performed by Spector (1986) shows a negative correlation between perceived control and employees' intention to leave the organization. Based on these findings, this study presents a third set of hypotheses:

***H3a: Psychological empowerment relates positively to employees' job satisfaction.***

***H3b: Psychological empowerment relates positively to employees' affective commitment.***

***H3c: Psychological empowerment relates negatively to employees' intention to leave.***

## **2.4. Mediating Role of Psychological Empowerment**

It is argued that employees who maintain better relationships with their leaders tend to feel more empowered and are more motivated to perform



effectively (Chen and Klimoski, 2003; Liden *et al.*, 2000; Chen *et al.*, 2007). Individuals with internal locus of control are prone to have a higher level of confidence in their ability to undertake tasks (Ng *et al.*, 2006) and that will enhance their sense of agency in terms of task accomplishment, i.e., the self-determination dimension of empowerment. As a result, their job satisfaction will be promoted (Spector, 1986). According to the social exchange theory (Blau, 1964), employees will be affectively connected with their supervisors and display extra-role behaviors with reciprocation when perceiving empowered. As employees perceive that their work is laden with meaning, responsibility, and knowledge of the actual results, a lower rate of absenteeism on the part of employees will come as a result (Hackman and Oldham, 1975). In addition to the meaningfulness and self-determination experienced at work, employees' possession of work-related competence and influence on strategic, administrative, or operational outcomes will result in greater intrinsic motivation and less negative behaviors at work. Given its motivational underpinnings, empowerment serves as a mechanism through which LMX quality and locus of control affect the work-related outcomes. Based on the aforementioned, this study proposes the fourth and fifth sets of hypotheses:

***H4a: Psychological empowerment mediates the relationship between LMX and employees' job satisfaction.***

***H4b: Psychological empowerment mediates the relationship between LMX and employees' affective commitment.***

***H4c: Psychological empowerment mediates the relationship between LMX and employees' intention to leave.***

***H5a: Psychological empowerment mediates the relationship between employees' locus of control and job satisfaction.***

***H5b: Psychological empowerment mediates the relationship between employees' locus of control and affective commitment.***

***H5c: Psychological empowerment mediates the relationship between employees' locus of control and intention to leave.***

### **3. Method**

#### **3.1. Sample**

Participants in this study included 316 R&D engineers from high-tech companies in Taiwan. Among them, 38 were from the integrated circuits industry, 128 from the PC/Peripherals industry, 72 from the telecommunication industry, 35 from the optoelectronics industry, 27 from the precision machinery industry, and 16 the biotechnology industry. The R&D environment comprises a number of different departments to develop hardware and software products.

Questionnaires and stamped self-addressed envelopes were mailed directly to 500 R&D engineers. A cover letter attached to each questionnaire described the objectives of the survey in general terms and assured respondents of confidentiality as well as the voluntary nature of participation in the survey. Of these, 316 valid copies were obtained, yielding the response rate of 63%. Participants were primarily male (76%) and single (63%), with the college degree (90%), and in age between 30 and 40 years (51%). Nearly three quarters of the participants (74%) had less than 5 years of work experience, and over half of them were employed in the PC/Peripherals (41%) and telecommunication (23%) industries.

#### **3.2. Measures**

To follow Brislin's (1986) recommendation of ensuring accuracy and conceptual equivalence in both Chinese and English versions, all questionnaire items are translated and back-translated by bilingual native speakers of both languages.

##### **3.2.1. Leader-Member Exchange**

This study adopts eleven items of LMX ( $\alpha = 0.92$ ) developed by Liden and Maslyn (1998). A sample item: "I like my supervisor very much as a person." A 5-point rating scale is used to evaluate employees' perception of the LMX quality.

A higher score indicates a better relationship between the participant and the supervisor.

### **3.2.2. Locus of control**

This study adopts sixteen items ( $\alpha = 0.83$ ) from the questionnaire developed by Spector (1988) to measure the construct of work locus of control (locus of control). A sample item for internals is “A job is what you make of it”, while a sample item for externals is “Getting the job you want is mostly a matter of luck”. A 5-point rating scale is used to evaluate employees’ locus of control. A higher score indicates that the participant was an internal, while a lower score indicates an external.

### **3.2.3. Psychological Empowerment**

This study adopts twelve items of psychological empowerment from the questionnaire developed by Spreitzer (1995) ( $\alpha = 0.90$ ). Sample items for each of the four dimensions of empowerment are “My job activities are personally meaningful to me” (meaning), “I have considerable opportunity for independence and freedom in how I do my job” (self-determination), “I am self-assured about my capability to perform my work” (competence), and “I have a great deal of control over what happens in my department” (impact). A higher score indicates a greater level of psychological empowerment perceived by the participant.

### **3.2.4. Job Satisfaction**

This study adopts three items of job satisfaction ( $\alpha = 0.92$ ) developed by Cammann *et al.* (1983). A sample item is “The extent to which they are satisfied with their job.” A 5-point rating scale is used to evaluate employees’ job satisfaction. A higher score indicates greater participant’s job satisfaction.

### **3.2.5. Affective Commitment**

This study adopts six items of affective commitment ( $\alpha = 0.88$ ) developed by Eisenberger *et al.* (2001). A sample item is “Working at the organization has a great deal of personal meaning to me.” A 5-point rating scale is used to evaluate

employees' affective commitment. A higher score indicates a greater level of participant's affective commitment.

### **3.2.6. Intention to Leave**

This study adopts three items ( $\alpha = 0.82$ ) developed by Landau and Hammer (1986) to measure employees' intention to leave for this study. A sample item is "I am seriously thinking about quitting my job." A 5-point rating scale is used to evaluate employees' intention to leave the organization. A higher score indicates more likelihood of the participant intending to leave the organization.

### **3.3. Data Analysis**

This study conducts the two-step procedure involving confirmatory factor analysis (CFA) and structural equation modeling (Anderson and Gerbing, 1988). To test the hypothesized mediating role of psychological empowerment, this study first assesses the following conditions for mediation: (a) the independent variable relates to the mediator variable, (b) the independent variable relates to the dependent variable, (c) the mediator relates to the dependent variable, and (d) the independent variable must have no effect on the dependent variable when the mediator is held constant (full mediation) or become significantly smaller (partial mediation) (Baron and Kenny, 1986).

Data with listwise deletion of missing values used for the LISREL analysis results in a final sample size of 316. Overall measurement of model fit is assessed with four indices: the  $\chi^2$  statistics, the comparative fit index (CFI, Bentler, 1990), the goodness-of-fit index (GFI, Jöreskog and Sörbom, 1988), and root mean square error of approximation (RMSEA, Brown and Cudeck, 1993).

## **4. Results**

### **4.1. Correlations and Confirmatory Factor Analysis of Latent Variables**

Table 1 presents the reliabilities and the correlations of the latent variables.

Pertaining to the measurement model, we examined the distinctiveness of LMX, locus of control, psychological empowerment, job satisfaction, affective commitment, and intention to leave, drawing on the methods suggested by researchers (Farh *et al.*, 2007; Wang *et al.*, 2005). We compared the fit of eight nested models ranging from a single-factor model to the hypothesized six-factor model (see table 2). The six-factor model adequately fit the data, ( $\chi^2 = 895.58$ ,  $df = 346$ ,  $p < 0.01$ ; CFI = 0.89, GFI = 0.82, RMSEA = 0.07), meeting the criteria suggested by scholars (cf. Bentler, 1990; Brown and Cudeck, 1993; Jöreskog and Sörbom, 1988), and the results indicated that the six-factor model yielded a more adequate overall fit than did the other models. Hence, the results demonstrated that the six variables were independent constructs.

**Table 1**  
**Descriptive Statistics and Correlations Analysis**

Variables	M	SD	1	2	3	4	5	6
1. LMX	3.8	0.6	[0.92]					
2. Locus of control	2.7	0.4	0.20**	[0.83]				
3. Empowerment	3.1	0.8	0.14*	0.14**	[0.90]			
4. Job satisfaction	3.6	0.7	0.40**	0.28**	0.27**	[0.92]		
5. Commitment	3.4	0.6	0.38**	0.22**	0.31**	0.69**	[0.88]	
6. Intention to leave	2.7	0.9	-0.29**	-0.29**	-0.22**	-0.54**	-0.49**	[0.82]

Note: N = 316. Figures in parentheses are  $\alpha$  reliabilities.

\* $p < 0.05$ ,  
\*\* $p < 0.01$ .

## 4.2. Structural Equation Modeling

Figure 1 presents the path coefficient estimates for the hypothesized model. The results show that LMX significantly positively affects employees' psychological empowerment ( $\beta = 0.15$ ,  $p < 0.05$ ), supporting *H1*. The result also indicate that the internal locus of control relates positively to employees' psychological empowerment ( $\beta = 0.38$ ,  $p < 0.01$ ). Specifically, employees with an internal locus of control have greater psychological empowerment, supporting *H2*.

The results also show that employees' psychological empowerment positively affects both job satisfaction ( $\beta = 0.54, p < 0.01$ ) and affective commitment ( $\beta = 0.71, p < 0.01$ ), supporting **H3a** and **3b**. Further, psychological empowerment has a significantly negative effect on employees' intention to leave ( $\beta = -0.27, p < 0.01$ ), supporting **H3c**.

**Table 2**  
**Comparison of Measurement Models**

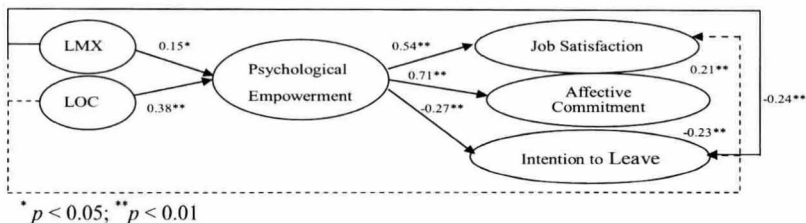
Model	Factor	$\chi^2$	<i>df</i>	$\Delta\chi^2$	CFI	GFI	RMSEA
Baseline model	6 factors	895.58	346	—	0.89	0.82	0.07
Model 1	5 factors: LMX and empowerment were combined into 1 factor	986.46	351	90.88***	0.86	0.81	0.09
Model 2	5 factors: LOC and empowerment were combined into 1 factor	1,038.13	351	142.55***	0.81	0.77	0.10
Model 3	5 factors: JS and AC were combined into 1 factor	992.74	351	97.16***	0.86	0.82	0.09
Model 4	5 factors: JS and intention to leave were combined into 1 factor	1,106.90	351	211.32***	0.79	0.73	0.11
Model 5	5 factors: AC and intention to leave were combined into 1 factor	1,086.99	351	191.41***	0.80	0.75	0.10
Model 6	4 factors: LOC, empowerment, and LMX were combined into 1 factor	1,294.21	355	398.63***	0.69	0.59	0.14
Model 7	4 factors: JS, AC, and intention to leave were combined into 1 factor	1,237.75	355	342.17***	0.71	0.61	0.14
Model 8	1 factors: All variables were combined into 1 factor	1,787.43	361	891.85***	0.57	0.45	0.17

Note: LMX = Leader-member exchange; LOC = locus of control; empowerment = psychological empowerment; JS = job satisfaction; AC = affective commitment.  
N = 316; \*\*\* $p < 0.01$ .

The conditions of mediation are assessed by the hypothesized model (cf. Aryee and Chen, 2006, p.797; Prussia and Kinicki, 1996, p.192). First, both LMX quality and locus of control correlate significantly with the mediator of empowerment (Table1). Second, correlation coefficients indicate that LMX quality and locus of control relate significantly to all three outcome variables (Table1). The third condition is also satisfied with the result that empowerment correlates significantly with the work outcomes (Table1). To evaluate the fourth condition of mediation, the fit of the fully mediated model is compared to that of two partially mediated models that depict three direct paths from both LMX and locus of control to the three outcome variables. Both partially mediated models of LMX ( $\Delta\chi^2 = 944.70$ ,  $df = 351$ ,  $p < 0.01$ ; CFI = 0.87, GFI = 0.85, RMSEA = 0.06) and locus of control ( $\Delta\chi^2 = 927.08$ ,  $df = 351$ ,  $p < 0.01$ ; CFI = 0.85, GFI = 0.83, RMSEA = 0.06) fit better than the fully mediated model ( $\Delta\chi^2 = 975.39$ ,  $df = 354$ ,  $p < 0.01$ ; CFI = 0.85, GFI = 0.83, RMSEA = 0.07), based on the changes in the chi-square value,  $\Delta\chi^2 = 30.69$  ( $p < 0.01$ ) and  $\Delta\chi^2 = 48.31$  ( $p < 0.01$ ), respectively.

Figure 1 presents the LISREL estimates for the hypothesized paths. As shown in that figure, psychological empowerment fully mediates the relationships between LMX quality and job satisfaction as well as affective commitment, and partially mediates the relationship between LMX quality and intention to leave, thus yielding support for **H4a**, **4b**, and **4c**. Likewise, psychological empowerment fully mediates the relationship between locus of control and affective commitment, and partially mediates the relationships between locus of control and job satisfaction as well as intention to leave, supporting **H5a**, **5b**, and **5c**.

**Figure 1**  
**Estimated Path Coefficients of the Hypothesized Model**



## **5. Discussion**

The study confirms that LMX affects employees' psychological empowerment. As Gomez and Rosen (2001) argue, supervisors tend to categorize their subordinates into the in-group or out-group based on their mutual relationship. The in-group members often possess more organizational resources and support from their supervisors than those in the out-group. Employees tend to change their job attitudes and behaviors to reciprocate managerial support when they feel that their needs and demands are met by supervisors (Shore *et al.*, 2006). Such an open and supportive environment will increase employees' psychological empowerment. Empowerment is a critical premise for the enhancement of organizational effectiveness in the highly interdependent context (Chen *et al.*, 2007). Chen *et al.*, (2007) also argue that when the quality of LMX is high, subordinates attain an alignment of personal goals and organizational goals (meaning), perform their task autonomously (self-determination), experience success inherent in task challenges (competence), and finally have perception of personal influence and responsibility (impact).

Prior research confirms a positive association between LMX and subordinates' involvement in decision-making, task variety, and self-worth (Liden *et al.*, 2000). Elkins and Keller (2003) contend that leader-member interrelationship affects employees' job attitudes and outcomes in the highly autonomous and independent R&D context. This study, in line with these arguments, verifies the significant effect of LMX on R&D employees' psychological empowerment. Leaders as resource allocators will grant more resources and power to those whom have better interrelationship with. Subordinates will thus develop greater identification with and commitment to the leader and organization. As a result, the social bonding shared by supervisors and subordinates is crucial to maintain high quality LMX in organizations.

Locus of control relates to a variety of cognitive, affective, behavioral, and physiological outcomes (Aubé *et al.*, 2007; Ng *et al.*, 2006; Chiu *et al.*, 2005; Spector *et al.*, 2002). This study confirms that an internal locus of control positively affects employees' psychological empowerment. Previous studies show



that people with an internal locus of control are more likely to feel capable of taking charge in their work and having an influence on their work environment (Spreitzer, 1995; Spector *et al.*, 2002; Boone *et al.*, 2005). The intrinsic motivation theory proposes that individuals' intrinsic motivation is contingent on their psychological need for self-determination and competence (Deci and Ryan, 1980). As firm believers with their competence in maintaining control over their jobs, internals demonstrate stronger need for self-determination and competence than externals (Ng *et al.*, 2006). In terms of delegating authority, supervisors can empower internal-oriented subordinates to promote their competence by leaving the decisions of work strategies and schedules to the subordinates. This approach satisfies employees' need for self-determination and provides them with a sense of empowerment.

Regarding the outcome variables on the part of employees at work, the underlying psychological process is hardly understood. This study confirms that psychological empowerment affects R&D employees' job satisfaction, affective commitment, and intention to leave. Previous studies show that autonomy is a major factor of job satisfaction and positive adjustment to work (Hackman and Oldham, 1975; Spector *et al.*, 2002). Further, perceived autonomy and participation at work relate positively to employee job satisfaction and other criteria of well-being (Spector, 1986). Avolio *et al.* (2004) report that employees, when feeling empowered, are more likely to demonstrate extra-role behaviors, and have more affective commitment toward organizations. The findings in this study agree with these conclusions from the prior research.

As for the mediating effect of psychological empowerment, Aryee and Chen (2006) also suggest that psychological empowerment plays a mediating role between LMX and work outcomes. A better exchange relationship between supervisors and subordinates increases the perceived level of meaningfulness and responsibility that subordinates experience from work. This helps subordinates acquire a greater degree of job satisfaction and affective commitment, and reduce their intention to leave. The R&D department is quite unique and greatly empowered compared to their counterpart departments in organizations. According to Elkins and Keller (2003), the R&D personnel are provided with

challenging tasks (Liden and Graen, 1980), task-related resources (Graen and Scandura, 1987), recognition (Graen and Cashman, 1975), supports from leaders for risk-taking (Graen and Cashman, 1975), and supervisor advocacy (Duchon, Green, and Taber, 1986) to facilitate their creativity and innovation (Amabile, 1988; Mumford and Gustafson, 1988). Due to the fact that the R&D personnel are inherently equipped with great autonomy to conduct tasks, the LMX quality is found to have a direct effect on their inclination to stay in organizations, apart from through the mediation of psychological empowerment.

In addition, psychological empowerment partially mediates the relationships between locus of control and job satisfaction as well as intention to leave. The job characteristics model proposes that core job characteristics affect individuals' intrinsic motivation and work outcomes (Hackman and Oldham, 1975). Perceiving greater likelihood of obtaining desirable work outcomes than externals, internals tend to have more intrinsic motivation at work, higher involvement in the task, and greater engagement in developmental activities as an investment in their work future (Ng *et al.*, 2006). Accordingly, dissatisfied internals are more likely to quit a dissatisfying job when rewards are not granted and personal goals are not reached (Spector, 1982). This study confirms that locus of control relates positively to job-related affective reactions. In line with previous findings (Chiu *et al.*, 2005; Ng *et al.*, 2006), the R&D engineers with an internal locus of control have greater job satisfaction and lower inclination to quit their job in the present study. The study also confirms that psychological empowerment fully mediates the relationship between employees' locus of control and affective commitment. Liden *et al.* (2000) argue that empowerment contributes to employees' attachment, loyalty, and identification with the organization through reciprocation. Employees with internal locus of control will return the favor to organizations with greater dedication and efforts when they perceive themselves being provided with opportunities of participation, reifying the dimensions of meaning, self-determination, competence, and impact connoted by empowerment. In addition, the R&D job in the high-tech industry is well known for its eye-catching salary and attractive benefits. For those R&D engineers with internal locus of control, they will take it upon themselves to ensure the reward derived

from the job is worthwhile. Moreover, employees' perception of psychological empowerment might be less embedded owing to the fact that nearly three quarters of the participants in this study are junior R&D engineers with experience less than 5 years. Therefore, the locus of control has a direct effect on their job satisfaction and intention to leave, apart from through the mediation of psychological empowerment.

### **5.1. Practical Implications**

Several managerial implications from the findings are helpful for leaders to adopt different strategies for empowering employees. The present study confirms the direct effect of LMX on employees' intention to leave. Leaders must endeavor to establish mutual trust and respect in organizations. They should be cautious with the issue of fairness and avoiding categorizing employees into in-group or out-group members because different treatment among them will result in resentment of employees and force them to leave the organization.

In addition, this study verifies that internals demonstrate greater job satisfaction and lower intention to leave than externals. The R&D jobs are characterized by a tremendous amount of inspiration and perspiration. Hence, a well-designed reward system to attain employees' job satisfaction is critical to attract brilliant talents to stay in organizations. Organizations can also set up mentoring, training, and development programs to enhance the competence and self-efficacy for those with external locus of control. With this action, they will try their best to get greater control at work with the support from leaders and colleagues. Furthermore, the issue of employee recruitment and selection deserves more attention for organizations. Selecting people with the appropriate personality traits will ensure organizations the greatest fit among employees, tasks, and organizations.

### **5.2. Limitations**

The findings of this study are subject to several limitations. In the first instance, this study adopts a cross-sectional design, making the causal interpretation impossible. These findings therefore should be further confirmed by

longitudinal studies. The main effects of LMX and locus of control on empowerment, which are confirmed by earlier research, however show partial support of the causal direction of the relationships found in the current study. Secondly, the constructs of LMX, locus of control, psychological empowerment, and work outcomes are measured with data collected from a single source of self-report questionnaires. Even though the factor analysis confirms that constructs are distinctive from each other, the problem of common method variance still needs to be considered when interpreting the results. Finally, the generalization of the findings might be limited due to the uniqueness of the sample and work context in this study. Further research on employees in other industries may be necessary in order to confirm these findings.

### **5.3. Research Directions**

This study provides several suggestions for future research. Leadership accounts for a lot of variance in employees' work-related behaviors and organizational effectiveness. Future research may explore different leadership styles to broaden and enrich our knowledge of leadership. In addition, investigations can also be conducted with subjects from different fields for extensive applications of the result. This study is conducted in a cross-sectional fashion, but the relationship between employees and supervisors is a dynamic process. Other contingency or contextual factors may also formulate the relationship development. Therefore, future longitudinal studies may enrich our understanding of leadership dynamics in organizations. Finally, future research on cross-national comparison is needed to provide a more comprehensive perspective in the relevant investigation.

## **6. Reference**

- Amabile, T. M. (1988), "A Model of Creativity and Innovation in Organizations," in B. M., Staw and L. L. Cummings (Eds.), *Research in Organizational Behavior*, (Vol. 10, 123-167), Greenwich, CT: JAI Press.

- Anderson, J. C. and Gerbing, D. W. (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, 103(3), 411-423.
- Aryee, S. and Chen, Z. X. (2006), "Leader-Member Exchange in A Chinese Context: Antecedents, the Mediating Role of Psychological Empowerment and Outcomes," *Journal of Business Research*, 59(7), 793-801.
- Aubé, C., Rousseau, V. and Morin, E. M. (2007), "Perceived Organizational Support and Organizational Commitment: The Moderating Effect of Locus of Control and Work Autonomy," *Journal of Managerial Psychology*, 22(5), 479-495.
- Avey, J. B., Hughes, L. W., Norman, S. M. and Luthans, K. W. (2008), "Using Positivity, Transformational Leadership and Empowerment to Combat Employee Negativity," *Leadership and Organization Development Journal*, 29(2), 110-126.
- Avolio, B. J., Zhu, W., Koh, W. and Bhatia, P. (2004), "Transformational Leadership and Organizational Commitment: Mediating Role of Psychological Empowerment and Moderating Role of Structural Distance," *Journal of Organizational Behavior*, 25(8), 951-968.
- Bandura, A. (1986), *Social Foundations of Thought and Action*, Englewood Cliffs, NJ: Prentice Hall.
- Baron, R. and Kenny, D. (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research," *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bauer, T. N. and Green, S. G. (1996), "Development of Leader-Member Exchange: A Longitudinal Test," *Academy of Management Journal*, 39(6), 1538-1567.
- Bentler, P. M. (1990), "Comparative Fit Indices in Structural Models," *Psychological Bulletin*, 107(2), 238-246.
- Berson, Y. and Linton, J. D. (2005), "An Examination of the Relationships between Leadership Style, Quality, and Employee Satisfaction in R&D versus Administrative Environments," *R&D Management*, 35(1), 51-60.
- Blau, P. M. (1964), *Exchange and Power in Social Life*, New York, NY: John Wiley and Sons.

- Boone, C., Van Olffen, W. and Van Whitteloostuijn, A. (2005), "Team Locus-of-Control Composition, Leadership Structure, Information Acquisition, and Financial Performance: A Business Simulation Study," *Academy of Management Journal*, 48(5), 889-909.
- Brislin, R. W. (1986), "The Wording and Translation of Research Instruments," in W. J., Lonner and J. W. Berry, (Eds.), *Field Methods in Cross-Cultural Research* (Vol. 8, 137-164), Beverly Hills, CA: Sage Publications.
- Brown, M. W. and Cudeck, R. (1993), "Alternative Ways of Assessing Model Fit," in K. A., Bollen and J. S. Long, (Eds.), *Testing Structural Equation Models* (136-162), Newbury Park, CA: Sage Publications.
- Cammann, C., Fichman, M., Jenkins, G. D. and Klesh, J. R. (1983), "Assessing the Attitudes and Perceptions of Organizational Members," in S. E., Seashore, E. E., Lawler, P. H., Mirvis and C. Cammann, (Eds.), *Assessing Organizational Change: A Guide to Methods, Measures, and Practices* (71-138), New York, NY: John Wiley and Sons.
- Chen, G. and Klimoski, R. J. (2003), "The Impact of Expectations on Newcomer Performance in Teams as Mediated by Work Characteristics, Social Exchanges, and Empowerment," *Academy of Management Journal*, 46(5), 591-607.
- Chen, Z., Lam, W. and Zhong, J. A. (2007), "Leader-Member Exchange and Member Performance: A New Look at Individual-Level Negative Feedback-Seeking Behavior and Team-Level Empowerment Climate," *Journal of Applied Psychology*, 92(1), 202-212.
- Chiu, C. K., Chien, C. S., Lin, C. P. and Hsiao, C. Y. (2005), "Understanding Hospital Employee Job Stress and Turnover Intentions in a Practical Setting: The Moderating Role of Locus of Control," *Journal of Management Development*, 24(10), 837- 855.
- Conger, J. and Kanungo, R. (1988), "The Empowerment Process: Integrating Theory and Practice," *Academy of Management Review*, 13(3), 471-482.
- Corsun, D. L. and Enz, C. A. (1999), "Predicting Psychological Empowerment among Service Workers: The Effect of Support-Based Relationships," *Human Relations*, 52(2), 205-224.

- Costigan, R. D., Insinga, R. C., Berman, J. J., Ilter, S. S., Kranas, G. and Kureshov, V. A. (2006), "The Effect of Employee Trust of the Supervisor on Enterprising Behavior: A Cross-Cultural Comparison," *Journal of Business and Psychology*, 21(2), 273-291.
- Cotton, J. L. (1993), *Employee Involvement: Methods for Improving Performance and Work Attitudes*, Thousand Oaks, CA: Sage Publications.
- Daft, R. L. (1995), *Organization Theory and Design*, 5<sup>th</sup> ed., Minneapolis/St Paul, MN: West Publishing Company.
- Dansereau, F., Cashman, J. and Graen, G. (1973), "Instrumentality Theory and Equity Theory as Complementary Approaches in Predicting the Relationship of Leadership and Turnover among Managers," *Organizational Behavior and Human Performance*, 10(2), 184-200.
- Dansereau, F., Graen, G. and Haga, W. J. (1975), "A Vertical Dyad Linkage Approach to Leadership Within Formal Organizations," *Organizational Behavior and Human Performance*, 13(1), 46-78.
- De Brabander, B., Boone, B. and Gerits, P. (1992), "Locus of Control and Cerebral Asymmetry," *Perceptual and Motor Skills*, 75(1), 131-143.
- Deci, E. L. and Ryan, R. M. (1980), "The Empirical Exploration of Intrinsic Motivational Processes," in L. Berkowitz, (Ed.), *Advances in Experimental Social Psychology* (Vol. 13, 39-80), New York, NY: Academic Press.
- Dienesch, R. M. and Liden, R. C. (1986), "Leader-Member Exchange Model of Leadership: A Critique and Further Development," *Academy of Management Review*, 11(3), 618-634.
- Duchon, D., Green, S. G. and Taber, T. D. (1986), "Vertical Dyad Linkage Exchange: A Longitudinal Assessment of Antecedents, Measures, and Consequences," *Journal of Applied Psychology*, 71(1), 56-60.
- Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. and Rhoades, L. (2001), "Reciprocation of Perceived Organizational Support," *Journal of Applied Psychology*, 86(1), 42-51.
- Eisenberger, R., Fasolo, P. and Davis-LaMastro, V. (1990), "Perceived Organizational Support and Employee Diligence, Commitment, and Innovation," *Journal of Applied Psychology*, 75(1), 51-59.

- Elkins, T. and Keller, R. T. (2003), "Leadership in Research and Development Organizations: A Literature Review and Conceptual Framework," *Leadership Quarterly*, 14(4), 587-606.
- Erdogan, B. and Enders, J. (2007), "Support from the Top: Supervisors' Perceived Organizational Support as a Moderator of Leader-Member Exchange to Satisfaction and Performance Relationships," *Journal of Applied Psychology*, 92(2), 321-330.
- Ergeneli, A., Ari, G. S. and Metin, S. (2007), "Psychological Empowerment and its Relationship to Trust in Immediate Managers," *Journal of Business Research*, 60(1), 41-49.
- Farh, J. L., Hackett, R. D. and Liang, J. (2007), "Individual-Level Cultural Values as Moderators of Perceived Organizational Support-Employee Outcome Relationships in China: Comparing the Effects of Power Distance and Traditionality," *Academy of Management Journal*, 50(3), 715-729.
- Gerstner, C. R. and Day, D. V. (1997), "Meta-Analytic Review of Leader-Member Exchange Theory: Correlates and Construct Issues," *Journal of Applied Psychology*, 82(6), 827-844.
- Gomez, C. and Rosen, B. (2001), "The Leader-Member Exchange as a Link between Managerial Trust and Employee Empowerment," *Group and Organization Management*, 26(1), 53-69.
- Graen, G. (1976), "Role-making Processes within Complex Organizations," in M. D. Dunnette, (Ed.), *Handbook of Industrial and Organizational Psychology* (1201-1244), Chicago, IL: Rand McNally.
- Graen, G. and Cashman, J. (1975), "A Role-Making Model of Leadership in Formal Organizations: A Development Approach," in J. G. Hunt and L. L. Larson, (Eds.), *Leadership Frontiers* (143-165), Kent, OH: Kent State University Press.
- Graen, G. and Scandura, T. (1987), "Toward a Psychology of Dyadic Organizing," in B. W. Staw and L. L. Cummings, (Eds.), *Research in Organizational Behavior* (Vol. 9, 175-208), Greenwich, CT: JAI Press.
- Hackman, J. R. and Oldham, G. R. (1975), "Development of the Job Diagnostic Survey," *Journal of Applied Psychology*, 60(2), 159-170.



- Harris, K. J., Andrews, M. C. and Kacmar, K. M. (2007), "The Moderating Effects of Justice on the Relationship between Organizational Politics and Workplace Attitudes," *Journal of Business and Psychology*, 22(2), 135-144.
- Ito, J. K. and Brotheridge, C. M. (2005), "Does Supporting Employees' Career Adaptability Lead to Commitment, Turnover, or Both?" *Human Resource Management*, 44(1), 5-19.
- Janssen, O. and Van Yperen, N. W. (2004), "Employees' Goal Orientations, the Quality of Leader-Member Exchange, and the Outcomes of Job Performance and Job Satisfaction," *Academy of Management Journal*, 47(3), 368-384.
- Jöreskog, K. G. and Sörbom, D. (1988), *LISREL 7: A Guide to the Program and Application*, Chicago, IL: SPSS.
- Judge, T. A. and Bono, J. E. (2001), "Relationship of Core Self-Evaluations Traits-Self-esteem, Generalized Self-Efficacy, Locus of Control, and Emotional Stability-with Job Satisfaction and Job Performance: A Meta-Analysis," *Journal of Applied Psychology*, 86(1), 80-92.
- Keller, R. T. (2006), "Transformational Leadership, Initiating Structure, and Substitutes for Leadership: A Longitudinal Study of Research and Development Project Team Performance," *Journal of Applied Psychology*, 91(1), 202-210.
- Keller, T. and Dansereau, F. (1995), "Leadership and Empowerment: A Social Exchange Perspective," *Human Relations*, 48(2), 127-145.
- Koebler, C. S., Boss, R. W., Senjem, J. C. and Goodman, E. A. (1999), "Antecedents and Outcomes of Empowerment," *Group and Organization Management*, 24(1), 71-91.
- Kraimer, M. L., Seibert, S. E. and Liden, R. C. (1999), "Psychological Empowerment as a Multi-Dimensional Construct: A Construct Validity Test," *Educational and Psychological Measurement*, 59(1), 127-142.
- Landau, J. and Hammer, T. H. (1986), "Clerical Employees' Perceptions of Intraorganizational Career Opportunities," *Academy of Management Journal*, 29(2), 385-404.
- Liden, R. C. and Arad, S. (1996), "A Power Perspective of Empowerment and

- Work Groups: Implications for Human Resources Management Research,” in G. R. Ferris, (Ed.), *Research in Personnel and Human Resources Management* (Vol. 14, 205-51), Greenwich, CT: JAI Press.
- Liden, R. C. and Graen, G. (1980), “Generalizability of the Vertical Dyad Linkage Model of Leadership,” *Academy of Management Journal*, 23(1), 451-465.
- Liden, R. C. and Maslyn, J. M. (1998), “Multidimensionality of Leader-Member Exchange: An Empirical Assessment through Scale Development,” *Journal of Management*, 24(1), 43-72.
- Liden, R. C., Erdogan, B., Wayne, S. J. and Sparrowe, R. T. (2006), “Leader-Member Exchange, Differentiation, and Task Interdependence: Implications for Individual and Group Performance,” *Journal of Organizational Behavior*, 27(6), 723-746.
- Liden, R. C., Wayne, S. J. and Sparrowe, R. T. (2000), “An Examination of the Mediating Role of Psychological Empowerment on the Relations between the Jobs, Interpersonal Relationships, and Work Outcomes,” *Journal of Applied Psychology*, 85(3), 407-416.
- Locke, E. A. and Schweiger, D. M. (1979), “Participation in Decision-Making: One More Look,” in B. M., Staw and L. L. Cummings, (Eds.), *Research in Organizational Behavior* (Vol. 1, 265-339), Greenwich, CT: JAI Press.
- Meyer, J. P. and Allen, N. J. (1984), “Testing the “Side-Bet Theory” of Organizational Commitment: Some Methodological Considerations,” *Journal of Applied Psychology*, 69(3), 372-378.
- Mohrman, S. A. and Lawler, E. E. (1989), “Parallel Participation Structure,” *Public Administration Quarterly*, 13(2), 255-272.
- Mowday, R. T., Porter, L. W. and Steers, R. M. (1982), *Employee Organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover*, New York, NY: Academic Press.
- Mumford, M. D. and Gustafson, S. B. (1988), “Creativity Syndrome: Integration, Application, and Innovation,” *Psychological Bulletin*, 103(1), 27-43.
- Ng, T. W. H., Sorensen, K. L. and Eby, L. T. (2006), “Locus of Control at Work: A Meta-Analysis,” *Journal of Organizational Behavior*, 27(8), 1057-1087.
- Prussia, G. and Kinicki, A. (1996), “A Motivational Investigation of Group

- Effectiveness Using Social-Cognitive Theory,” *Journal of Applied Psychology*, 81(2), 187-198.
- Rotter, J. B. (1966), “Generalized Expectancies for Internal versus External Control of Reinforcement,” *Psychological Monographs: General and Applied*, 80(1), 1-27.
- Shin, S. J. and Zhou, J. (2007), “When Is Educational Specialization Heterogeneity Related to Creativity in Research and Development Teams? Transformational Leadership as a Moderator,” *Journal of Applied Psychology*, 92(6), 1709-1721.
- Shore, T., Sy, T. and Strauss, J. (2006), “Leader Responsiveness, Equity Sensitivity, and Employee Attitudes and Behavior,” *Journal of Business and Psychology*, 21(2), 227-241.
- Spector, P. E. (1982), “Behavior in Organizations as a Function of Employees’ Locus of Control,” *Psychological Bulletin*, 91(3), 482-497.
- Spector, P. E. (1986), “Perceived Control by Employees: A Meta-Analysis of Studies Concerning Autonomy and Participation at Work,” *Human Relations*, 39(2), 1005-1016.
- Spector, P. E. (1988), “Development of the Work Locus of Control Scale,” *Journal of Occupational Psychology*, 61(4), 335-340.
- Spector, P. E., Cooper, C. L., Sanchez, J. I., O’Driscoll, M. and Sparks, K. (2002), “Locus of Control and Well-Being at Work: How Generalizable Are Western Findings,” *Academy of Management Journal*, 45(2), 453-466.
- Spence Laschinger, H. K., Finegan, J. E., Shamian, J. and Wilk, P. (2004), “A Longitudinal Analysis of the Impact of Workplace Empowerment on Work Satisfaction,” *Journal of Organizational Behavior*, 25(4), 527-545.
- Spreitzer, G. M. (1995), “Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation,” *Academy of Management Journal*, 38(5), 1442-1465.
- Spreitzer, G. M. (1996), “Social Structural Characteristics of Psychological Empowerment,” *Academy of Management Journal*, 39(2), 483-504.
- Spreitzer, G. M., Kizilos, M. A. and Nason, S. W. (1997), “A Dimensional Analysis of the Relationship between Psychological Empowerment and

Effectiveness, Satisfaction, and Strain,” *Journal of Management*, 23(5), 679-704.

- Thomas, K. W. and Velthouse, B. A. (1990), “Cognitive Elements of Empowerment,” *Academy of Management Review*, 15(4), 666-681.
- Wang, H., Law, K. S., Hackett, R. D., Wang, D. and Chen, Z. X. (2005), “Leader-member Exchange as a Mediator of the Relationship between Transformational Leadership and Followers’ Performance and Organizational Citizenship Behavior,” *Academy of Management Review*, 48(3), 420-432.