**Transformational and Transactional Leaderships, Empowerment Climate, and Innovation: A Multi-Level Analysis in the Chinese Context**

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TRANSFORMATIONAL AND TRANSACTIONAL LEADERSHIPS, EMPOWERMENT CLIMATE AND INNOVATION PERFORMANCE: A MULTI-LEVEL ANALYSIS IN THE CHINESE CONTEXT

ABSTRACT

Innovation through creativity is an important factor in the success and competitive advantage of organizations. Theory and research suggest that both leadership and organizational climate have important consequences for individual creativity. However, researchers have rarely considered the interactive effects of leadership and organizational climate. This study taking a “Substitute for Leadership” perspective, develops and tests the idea that empowerment climate affect the relationship between leadership and followers’ creative performance. Data were collected from 93 teams, including 465 team members and 93 team supervisors, in a large multinational company based in China. Hierarchical linear modeling was used to examine the hypothesized cross-level model. As expected: Transformational leadership and team empowerment climate were positively related to subordinates’ creative performance and transactional leadership was negatively related to subordinates’ creative performance. In addition, the relationship between leadership and subordinates’ creative performance was moderated by team empowerment climate. The study resulted in the implication of several major variables for explaining individual creativity in the Chinese context.

Keywords:

Empowerment climate; Transformational leadership; Transactional leadership; Creative performance; Chinese context.
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INTRODUCTION

In recent years, lack of innovation has limited Chinese enterprises’ abilities to enhance their international competitive strengths. Evidence from the National Bureau of Statistics of China and the World Bank indicate that on average from 2000 to 2004 China’s economy contributed to 15% of the global economy, which was second only to the US. However, China’s per capita GDP was only 1,703 US dollars in 2005, which was only 1/25 of US’s per capita GDP, 1/21 of Japan’s per capita GDP, and 1/4 of the average global level. In addition, while China consumes 25% to 40% of the annual global consumption of coal, iron ore, steel, alumina and cement, China’s GDP accounts for only 5% of the global GDP. Much of these outcomes could be explained by a lack of innovation from Chinese enterprises. The number of enterprises in China, for example, that have intellectual property rights to their own core techniques is only 3 in 10,000 (Shanghai Securities News, 2006-10-10). Chinese enterprises will only be successful in the global competitive environment, if they break through the traditional patterns of business and operation, develop independent innovative competencies, and eventually achieve the development of quantity and quality simultaneously. Innovation through creativity is an important factor in the success and competitive advantage of organizations (Woodman, Sawyer & Griffin, 1993; Gumusluoglu and Ilsev, 2009).

Hulsheger, Anderson and Salgado (2009) conduct a meta-analysis of team-level antecedents
of creativity and innovation in the workplace. Results revealed that team process variables of support for innovation, vision, task orientation, and external communication displayed the strongest relationships with creativity and innovation. In the current study, we focus on how to identify and improve individual creativity, since the innovation of an organization is a product of individuals’ creativity.

Theory and research suggest that both leadership and organizational climate have important consequences for individual creativity. There is an emerging literature examining how a leader in an organization can encourage followers’ partaking of creative behaviors (Oldham & Cummings, 1996; Amabile, 1998; Jung, 2001). For example, it was found that employees produced more creative work when they developed good exchange relationship with their supervisors (Tierney, Farmer, & Graen, 1999), were supervised by a supportive, non-controlling manner (Oldham & Cummings; 1996). Amabile, Conti, Coon, Lazenby & Herron (1996) further suggest that an individual’s perception of the work environment is a key determinant of his or her creativity. For example, studies show perceptions of support for innovation (Scott & Bruce, 1994) and psychological empowerment (Deci, Connell & Ryan, 1989) to be important sources of creativity. However, researchers have rarely considered the interactive effects of leadership and organizational climate.

In this study, we take a “Substitute for Leadership” perspective (Kerr & Jermier, 1978) in arguing that understanding the effects of leadership will be enhanced by considering the interactive effects of leadership and empowerment climate, taking the
relation between leadership and creativity as a critical case in point. First, we touch upon theories concerning leadership and empowerment climate suggesting that both serve important functions that should not be treated in isolation from each other. Then, we review research on the relation between leadership and empowerment climate and creative performance, building the argument that both variables have the potential to contribute in important and different ways to creativity.

**THEORY AND HYPOTHESES**

**Transformational Leadership Theory**

Transformational leader are similar to charismatic leaders but are distinguished by the ability to bring about change, innovation and entrepreneurship (Seltzer & Bass, 1990). In the past two decades, transformational leadership theory has captured much of the research attention (Judge & Bono, 2000). Bass and his colleagues made a great contribution to the development of this theory by conceptualizing the constructs of transformational leadership and transactional leadership in a more systematic manner, which offered researchers some basic concepts and a complete framework.

Bass (1985) argued that transactional leadership is a mutual exchange-process based on the performance of promissory obligations, typified by goal-setting, supervisory control and output control. Transactional leadership includes the following three factors: (1) Contingent rewards, a style of leadership which provides material and mental rewards according to the completion of promised obligations by subordinates, based upon specific role and task requirement. (2) Active management-by-exception, which refers to a style
of leadership whereby the leader carries out positive supervision of performance to avoid mistakes. (3) Passive management-by-exception, a style of leadership whereby the leader intervenes only after the appearance of behaviors or mistakes against the requirements. Both forms of management-by-exception result in the leader’s attempt to achieve the expected level of performance by preventing or correcting individual mistakes.

Bass (1985) proposed that theories of leadership should understand how leaders influence subordinates to achieve the highest level of performance mainly for higher profits in his/her department or organization rather than his/her own interests, by focusing on the clarity of a subordinate’s role and goals and using rewards and punishment according to the subordinate’s behaviors. He referred to this as transactional leadership. Although transactional leaders utilize transformational strategies at appropriate moments, they mostly motivate subordinates by means of predicting the future and depicting the vision.

Transformational leadership includes the following four factors: (1) Charisma. Whether or not the leader feels self-confidence and powerful, and whether or not he/she seems to focus on the high-level vision, moral requirements, and the charismatic behaviors centered on communicating values, beliefs, and missions. (2) Inspiration. The leader inspires subordinates by looking forward to the future optimistically, emphasizing ambitious goals, depicting ideal vision, and communicating with subordinates so as to make them believe the realization of the vision. (3) Intellectual stimulation. In order to improve the subordinate’s capacity for logical thinking and analyzing, the leader
challenges the creative thinking ability of subordinates so that they will find the solutions for difficult problems. (4) Individualized consideration. The leader improves employee satisfaction by suggesting, supporting and considering individuals’ needs, and giving them the allowance for development and self-realization. Rafferty and Griffin (2004) reported five facets of transformational leadership: (1) Vision. (2) Inspiration communication. (3) Intellectual stimulation. (4) Supportive leadership. (5) Personal recognition. Avolio and Bass (1988) conceptualized the two forms of leadership as two separate structures. Each structure has a predictable impact on innovation performance and behaviors. The transactional leader often assigns tasks to subordinates by the law of “the correct way leads to success”, placing an emphasis on performing tasks as they have been performed in the past and using methods that are routine and predictable; thereby reducing the potential for creative performance. On the other hand, the transformational leader delegates more power to subordinates, providing them motivation, strategies and power to try new methods in an effort to solve problems in new ways, and achieve goals.

Empowerment Climate Theory

Empowerment in organizations has gained a lot of attention from scholars over the years. Lee and Koh (2001) suggested that empowerment involves two concepts: First, the “objective behavior” conducted by the supervisor to the subordinates, which was called managerial empowerment. Second, the “subjective psychological state” perceived by the subordinates toward the empowerment, which was called psychological empowerment.
Research on the psychological empowerment involves two levels. One level is the individual psychological empowerment research that gradually developed on the basis of the generally recognized measurements developed by Spreitzer (1995); and the other level is the empowerment climate research, which developed from the classical demonstration of team empowerment. Research on empowerment climate has been increasing due to the cross-level research highly popularized by the scholars in recent years.

Through an 8-year study of 10 organizations, Randolph (1995) concluded that building team empowerment climate involves three important actions: sharing information, creating autonomy through structure, and letting teams become the hierarchy, the settlement of which is the key to building team empowerment climate in an organization.

By sharing information, many managers expected to exert empowerment through establishing self-oriented teams and carrying out annual training programs on various topics including leadership, team building, problem settlement, and conflict management. However, it seemed to have no effective outcomes because the counterforce of managers feeling their status threatened with the subordinates viewing the change as formalization overpowered the effects of training. Empowerment will develop and a team will become self-oriented only if the top managers are willing to share sensitive financial information, market shares, further opportunities, and even competitive strategies with team members and immediate supervisors. Sharing sometimes sensitive information helps the employees
understand the business operation, establishes trust and mutual relationships, and creates the potential for self-management.

Create autonomy through structure. Creating autonomy through structure involves the following managerial behaviors: communicating a vision statement, goal setting, decision making, performance appraisal, and continuous training. Although real empowerment requires a simple structure that gives employees more independence, the development of an empowering structure should be a step-by-step process starting from an existing complicated structure and simplifying the structure over time. Subordinates and immediate supervisors may not accept too much transformation in a short period of time; transforming the structure over time allows individuals the opportunity to be involved in the transformation processes, leading to greater understanding and commitment to the change.

Let teams become the hierarchy. For the creation of self-determination, organizations should reduce the dependence on hierarchy in the construction of new regulations and structures, which means to let teams become the hierarchy. Many managers are reluctant to abandon the right of control on individual employees because they have to account for individual performance even if they delegate the power to teams. Furthermore, many managers object to empowerment because they consider it a threat to their right of control. If teams became the hierarchy, managers should translate their roles into coaches, consultants and leaders. Letting teams become the hierarchy focuses on providing new-skill training, offering encouragement and support for the change, helping
immediate supervisors gradually give up control, accepting the need to exist for a time in an empty period with no leaders, and accepting the risks and fears.

**Leadership and Subordinates’ Creative Performance**

Creativity is a process of destroying established rules to develop new ones, which breaks through and reforms the various limited conditions, and it indicates the reform of the elements which have already existed. Past research results claimed that individual intrinsic-motivated behavior is an important factor to facilitate creativity (Amabile, et al., 1996; Deci & Ryan, 1985) and individual creative performance requires not only the promotion of external force but also the stimulation of an individual’s intrinsic motivation.

According to the transformational leadership theory, the transformational leaders tend to adopt an empowerment strategy rather than a control strategy. They challenge the thoughts, imagination, and creativity of subordinates through intellectual stimulation, and identify their values, beliefs and thinking tendency (Conger, 1999); they encourage subordinates to reevaluate their past behavior and to try newly creative ways to solve problems and achieve goals (Bass & Avolio, 1994, 1997). Transformational leaders play their roles as coaches and friends and inspire subordinates to undertake more responsibility and to eventually act as leaders themselves (Bass, 1985; Kim & Yukl, 1998). They help subordinates increase their recognition of self-competence through feedback, encouragement and support (Hughes, Ginnett, & Curphy, 1999).

Transformational leaders show individualized consideration by listening to and caring
about the needs of the subordinates toward individual development and goal achievement (Avolio, Bass & Jung, 1999; Bass & Avolio, 1994; Kark, Shamir & Chen, 2003). All the efforts of transformational leaders mentioned above are helpful for increasing subordinates’ levels of intrinsic motivation, enhancing their identification with the leader, increasing their desire to undertake more important responsibilities and more challenging goals, and facilitating the individual’s creative performance. To date a few empirical research studies have validated the positive relationships between transformational leadership and the subordinates’ creativity (Amabile, Hennessey & Grossman; 1986; Sosik, Avolio & Kahai, 1997; Manz & Sims, 2001; Krause, 2004; Lee, 2008).

Contrary to the transformational leader, the transactional leader (Bass, 1985) is recognized as the person who has influence in the existing system and culture, and he or she takes delight in avoiding risks, emphasizing more the limits of time and efficiency, and taking control of the performance process rather than the content itself. Consequently, there is a strong likelihood that transactional leaders are more effective in predictable circumstances when a detailed plan is the most effective strategy and when the leader can easily satisfy the subordinates’ needs through an exchange only if their performances achieve the basic expectation. In a team under the charge of a transactional leader, subordinates’ freedoms are constrained so that there is little opportunity for self-determination or creative performance. Evidence from previous empirical research studies also supports this conclusion. For example, analyses of transactional leadership revealed that contingent rewards have a destructive influence on the creative performance
(e.g., Amabile, Hennessey & Grossman, 1986; Eisenberger & Shanock, 2003). Jung (2001) found that subordinates who are under the control of a transactional leader will show less creativity than the ones who are under the control of a transformational leader. Lee (2008) discovered a negative relationship between transactional leadership and the subordinate’s creative performance.

**Culture’s Role and Influence**

In addition to above, we are also agreed that the individual creativities are being affected by not only leaderships and empowerment climate but also important characteristics of the Chinese culture.

Hofstede (1988) defined culture as "an interactive aggregate of common characteristics that influence a group’s response to its environment". Since different cultures may have different influence on leadership and innovation, therefore, the Chinese culture may play a critical role in moderating the specific ways for the various individual creative performances (Huo & Si, 2001) in the Chinese context. Recently, scholars also use ambicultural approach to explore the Chinese culture influence on management and the issue of West meeting East and vice versa (e.g. Chen & Miller, 2010; Paine, 2010).

This paper did not treat the Chinese culture as a specific variable, but the study was conducted in China and all the variables in the study are culture dependent. We hypothesize and test how leadership and empowerment climate interact to influence creative performance in the Chinese context.
H1: Transformational leadership is positively related to subordinates’ creative performance.

H2: Transactional leadership is negatively related to subordinates’ creative performance.

Team Empowerment Climate and Member’s Creative Performance

Innovation is change-oriented, involving the creation and improvement of a new products, services, ideas, and processes (Woodman, Sawyer & Griffin, 1993). Ekvall (1996) pointed out that team empowerment climate is composed of ten factors: challenge, freedom, support of ideas, trust and openness, vitality and liveliness, funny and humorous, argument, conflict, risk preference, and time looseness. He suggested that such climate could inspire more creative behaviors and result in more effective innovations. Subsequently, Lauer (1994) supported Ekvall in a review of the innovation literature, concluding that the above ten factors are certain to facilitate team creativity.

Referring to Randolph’s (1995) theory, teams operating in a high-level empowerment climate share information as much as possible, so that the team members will have a clear understanding of team visions, goals, and interrelated work roles, so that there will be a harmonious relationship of trust between team members, and so that the team leader will need to take less control of the team members resulting in more self-determination of the members. Empowerment climate is consistent with the creativity characterized by “freedom”, “trust and openness”, “vitality and liveliness”, “argument”, and “time looseness”; therefore, high-level empowerment climate should facilitate the improvement of team creative performance.
To some extent, previous empirical research on creative behaviors has validated the conclusion that creativity is relative to the characteristics of team empowerment climate such as work independence, self-management, and information sharing. For example, Amabile & Gitomer (1984) found that individuals create more innovative outcomes when they have choices in the process of work accomplishment. Shalley (1991) observed that those who have a high and definite goal and higher freedom of action will have more creativity than those who lack goals and free actions. Krause’s (2004) research testing 399 immediate managers of German organizations revealed that there is a positive effect on innovative behaviors by delivering autonomy and freedom and introducing specialized knowledge and information. When the individuals and teams work in a relatively free environment, they will experience greater self-determination and take control of their own ideas and work process, which leads to the stimulation of their creativity (Amabile, Conti, Coon, Lazenby & Herron, 1996). Therefore, we predict the following hypotheses:

**H3: Team empowerment climate is positively related to team members’ creative performance.**

**The Moderation of Team Empowerment Climate**

Randolph (1995) argued that in a team with insufficient empowerment climate, team members, in turn, lack intrinsic motivation or a desire to undertake greater responsibilities and accept challenges. Their response to the environment is passive rather than active, and their achievement of work goals heavily relies on other internal factors of the team. Meanwhile, their creative thoughts and motivation greatly depend on other factors such as leadership, yet they only obtain a little support for the team empowerment
climate. Consequently, the transformational leadership suffering from “weak disturbance” of the low-level empowerment climate will have an influence on the subordinates’ creative performance. In the team with low-level empowerment climate, the more significant the transformational leadership is, the more creativity and performance the subordinates will show; while the weaker the transformational leadership is, the lower will be the subordinates’ creativity. Referring to transactional leadership which has a negative influence on the subordinates’ creative performance, the negative relationship between transactional leadership and the subordinates’ creative behaviors will be even worse when team empowerment climate is low. Information sharing will be limited, tense relations among the members will exist, and supervisors will exert comparatively more control on the individual behaviors.

On the contrary, in the team with sufficient empowerment climate, there is a higher level of trust among team members, more frequent flow of information, more open team goals, and less supervisory control from the managers. The result is greater feelings of respect, more self-determination, more sense of common values, and more harmonious work climate, leading to more intrinsic motivation and willingness, and thus, more creative performance. In such climates, the transformational leaders suffering from “strong disturbance” of the high-level empowerment climate will have little influence on the subordinates’ creative performance. In high-level team empowerment climates, transformational leaders have a relatively weak influence on the subordinates’ creative performance, and the creative performance will not be improved too much beyond the
already high level of performance with the enhancement of transformational leadership. Referring to transactional leadership, the enthusiasm and self-determination stimulated by the high-level empowerment climate will supply a gap or remedy to the negative effect of transactional leaders on the subordinates’ creative performance. Therefore, we predict a moderated effect, as shown in the following hypotheses:

**H4: Team empowerment climate moderates transformational leadership-subordinates’ creative performance relationship in such a way that the relationship is stronger when empowerment climate are low than when they are high.**

**H5: Team empowerment climate moderates transactional leadership-subordinates’ creative performance relationship in such a way that the relationship is positive when empowerment climate are high, while it is negative when empowerment climate are low.**

**METHOD**

**Sample and Procedures**

Two sets of questionnaires were used: one for subordinates and another for their immediate supervisor. The questionnaires were administered to the groups of employees and supervisors in separate rooms. The respondents are from a large multinational communication company branch in Shanghai and the company’s headquarter is in France. The respondents received a questionnaire, a return envelope, and a cover letter introducing the survey that we prepared. Each questionnaire was coded with a researcher-assigned identification number to match employees with their immediate supervisor. To ensure confidentiality, the respondents were instructed to seal the completed questionnaires in the return envelopes and return them directly to us on-site.

All the questionnaires were collected in Shanghai China and 93 usable teams with 465
subordinates and 93 supervisors were returned, giving response rates of 62%. In the supervisor sample, 72.3% were men, 99% had been educated to undergraduate level or above, and 91% were between 31 to 40 years old. In the subordinate sample, 70.4% were men, 92% had been educated to undergraduate level or above, and 60.4% were between 31 to 40 years old.

**Measures**

**Leadership.** Bass and Avolio’s (1995) Multifactor Leadership Questionnaire (MLQ) Form 5X was adopted, in which 28 items measuring the transformational and transactional leadership. The questionnaire required subordinates to rate their direct supervisor’s leadership styles on a seven-point scale ranging from 1 (not at all) to 7 (frequently, if not always). The four scales used to measure transformational leadership were: including idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Avolio, 1997). The three scales used to measure transactional leadership were: contingent reward leadership, management-by-exception active leadership, management-by-exception passive leadership. Because we did not have any a priori expectation that individual components of transformational or transactional leadership would differentially affect creative performance, similar to previous research (Judge & Bono, 2000; Bono & Judge, 2003, Kark, Shamir, & Chen, 2003, Avolio, Zhu, Koh & Bhatia, 2004), we combined the four dimensions into an overall measure of transformational leadership, and the three dimensions into transactional leadership. Sample items in the dimensions are: My supervisor treats me as an individual rather than
just a member of the group (transformational leadership), my supervisor points out what I will receive if I do what is required (transactional leadership). The cronbach’s alpha are 0.96 and 0.82 respectively.

**Empowerment climate.** Blanchard, Carlos, and Randolph’s (1995) empowerment barometer was used to measure the empowerment climate of each team. All participants were instructed to reflect on their perception of the climate on a seven-point scale ranging from 1 (never) to 7 (always). The measure reflects three subscales: information sharing, autonomy through boundaries, and team responsibility and accountability. Each subscale consists of 10 items. Sample items in the dimensions are: We receive the information needed to help us understand the performance of our organization; we use teams as the focal point of responsibility and accountability in our organization. The cronbach’s alpha is 0.95.

**Creative performance.** We assessed subordinates’ creative performance by supervisor ratings. All Responses were instructed to reflect on eight items adapted from George & Zhou’s (2001). The seven-point scale range from 1 (not at all characteristic) to 7 (very characteristic). Sample items are “Comes up with new and practical ideas to improve performance” and “suggests new ways of performing work tasks”. The cronbach’s alpha is 0.94.

**Analytic Approach**

The data in the present study were multilevel in nature, with empowerment climate at the group level and supervisor’s leadership and subordinates’ creative performance at
the individual level of analysis. The most appropriate analytical method for this multilevel data structure is hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992; Hofmann, 1997; Hofmann, Griffin, & Gavin, 2000). The method allows variance in outcome variables to be analyzed at multiple hierarchical levels, whereas multiple linear regression effects are modeled to occur at a single level. The method also allows us to make simultaneous inferences on the effects of variations in the independent variables at the individual level and group level on the dependent variables, and the cross-level moderating effect of the independent variables on the dependent variable at the individual level (Hui, Chiu, Yu, Cheng and Tse, 2007). In addition, HLM is particularly well suited for estimating the type of cross-level interactions hypothesized here (Hypothesis 4 and 5).

Data Aggregation

Both rwg (James, Demaree & Wolf, 1993) and intra-class correlation (ICC, Bliese, 2000) as computed through a random intercepts model indicated the proportion of total variance between teams. The median rwg value for empowerment climate (rwg =.68) was near the .70 recommendation (James, Demaree & Wolf, 1993; Klein & Kozlowski, 2000). The ICC values for empowerment climate (ICC1=.18, ICC2=.52) were all statistically significant. The ICC1 values were generally above the .12 recommended level (James, 1982) and the ICC2 values were above the .47 recommended cutoff (Schneider, White & Paul, 1998).

RESULTS

The means, standard deviations, reliability coefficient and intercorrelations among
the key variables are presented in Table 1. Table 1 provides initial support for Hypotheses 1-3. There were significant correlations between transformational leadership and creative performance ($r = .411$; Hypothesis 1), between transactional leadership and creative performance ($r = -.281$; Hypothesis 2), and between empowerment climate and creative performance ($r = .392$; Hypothesis 3). However, these correlations do not take into account the multilevel nature of the data. Thus, we turn to the HLM for further analyses.

Table 2 provides a summary of the models and results used to test Hypotheses 1–3.

Hypothesis 1 predicted that transformational leadership is positively related to subordinates’ creative performance. HLM revealed that transformational leadership was significantly related to subordinates’ creative performance ($\gamma_{10} = .318$, $p<.001$), supporting Hypothesis 1. Hypothesis 2 predicted that transactional leadership is negatively related to subordinates’ creative performance. Once again, HLM analyses ($\gamma_{10} = -.317$, $p<.05$) provided support for Hypothesis 2. Hypothesis 3 predicted that team empowerment climate is positively related to team members’ creative performance. The results of the analysis provided support for Hypothesis 3 ($\gamma_{10} = .297$, $p<.001$).

Hypothesis 4 and 5 suggested that team empowerment climate would moderate the relationship between transformational/transactional leadership and subordinates’ creative performance. Since these moderated hypotheses constitute a cross-level relationship, they...
were investigated by using group–mean centering in HLM with the between-group variance in empowerment climate included in the Level 2 intercepts model (Hofmann & Gavin, 1998; Hoffman, Morgeson & Gerras, 2003).

Table 3 provides a summary of the models and results used to test Hypotheses 4–5. As shown in Table 3, HLM revealed that team empowerment climate moderates the relationship between transformational leadership and subordinates’ creative performance ($\gamma_{11} = -0.188, p<0.01$), supporting Hypothesis 4. In addition, HLM analyses ($\gamma_{11} = 0.303, p<0.001$) provided support for Hypothesis 5.

To interpret the interaction effect on creative performance in Table 3, we considered two levels of leadership behavior and two levels of empowerment climate by taking the standard deviation from its own mean and forming high and low levels of leadership behavior and of empowerment climate. Figure 1 shows that when the empowerment climate is lower, a supervisor who displays transformational leadership behavior enhances subordinates’ creative performance more.

Figure 2 shows that when the empowerment climate is low, a supervisor who displays transactional leadership behavior reduces subordinates’ creative performance; when the empowerment climate is high, a supervisor who displays transactional leadership behavior enhances subordinates’ creative performance.
DISCUSSION

Transactional Leadership: Positive or Negative Factor?

Past research on the leadership effectiveness revealed that there were two kinds of leadership which were called active leadership and passive leadership. The transformational leader and contingent rewards are recognized as active leadership, while the non-interference leader is recognized as passive leadership. For example, Judge & Piccolo’s (2004) meta-analysis revealed that the transformational leader, contingent rewards and active management by exception are positive predictors of leader effectiveness, while passive management by exception and the non-interference leader are negative predictors. Although some conclusions of research in China are different from this conclusion (e.g., Lee & Wei’s (2008) research suggested that the positive impact of the contingent reward on the leadership effectiveness is not significant in any context, and management by exception has either positive or negative relationship with it), the conclusions, in general, support the impact of most factors of transactional leadership on the leadership effectiveness.

However, it is necessary to point out that leadership effectiveness in the past were referring to satisfaction, performance, organizational commitment, and extra efforts et al., not including creative performance. The present study investigating the relationship between transactional leadership and creative performance found that transactional...
leadership is a destructive power to the subordinates’ creative performance. Accordingly, with respect to creative performance, transactional leadership is in the domain of passive leadership.

In the management practice of organizations, transactional leadership is common so managers should not only understand the negative influence of this behavior on creative performance, but also accept it, especially for the active effect of contingent rewards on other indexes of the leadership effectiveness (e.g., the leadership satisfaction, organizational commitment, and OCB). However, respondents indicate that transformational is more used than transactional that indicates the Chinese society’s changing over the past years, if the organization pays more attention to the creative performance, it is necessary for it to use other ways to cover the gap created by the destruction of transactional leadership. Among the factors for the respondents’ indication, social desirability could be a key factor leading to transformational leadership being used more frequently in China now though transactional leadership was more common in China. This could be related with the current Chinese governments lay emphasis a lot on individual creative performance.

**Team Empowerment Climate: Substitutes or Principal?**

Previous research on leadership consistently focused on the importance of leaders toward the leadership effectiveness, for example, traits theories of leadership consider that the leader’s performance depends on the leader’s unique qualities and unconventional skills; behavioral theories of leadership assume that the leader’s
performance depends on the leader’s proper behaviors of leadership; and a series of empirical studies repeatedly demonstrated the effect of the leader’s personal power on innovation (e.g., Deci & Ryan, 1985; Amabile et al., 1996; Bass & Avolio, 1994, 1997; Kark & Shamir, 2002; Krause, 2004; Lee, 2008). However, the conclusion of this study is a little surprising. Specifically, team empowerment climate can serve as a substitute for transformational and transactional leadership.

The interpretation of this phenomenon is Kerr and Jermier’s (1978) theories of substitute for leadership. Substitutes for leadership theories state that specific situational factors can substitute or neutralize the supervisor’s leadership and thereby influence the subordinates’ work performance. Not all motivation and restriction requires the leader’s personal behaviors, and other sources (e.g., the subordinate’s personal traits, job and task characters, organization and team system, culture and climate) can also provide instruction, recognition, motivation and inspiration. In such cases, the employee’s need for the formal leader is low, and the “substitute for leaders” will take place, which results in the failure of the effect of behaviors of leadership (Dionne, Yammarino, Howell, & Villa, 2005). In this theory, the environment variable involves two factors: leadership substitutes and leadership neutralizers. The term leadership substitute refers to instances when the influence of the formal leader is replaced, resulting in its impossibility and lack of necessity. In contrast, the term leadership neutralizer refers to instances when the influence of the formal leader is blocked or weakened, thereby limiting or eliminating its potential effect.
The present study found that team empowerment climate is a substitute for personal leadership behavior in creative performance situations, weakening the active effect of transformational leadership as well as preventing the passive influence of transactional leadership. Thus, the correct viewpoint of the impact of leader behaviors is: (1) Pay attention to the various effects of different behaviors of leadership on the subordinates’ creative performance, then striving to improve the leader’s behavior; (2) Focus on cultivating a team empowerment climate.

**Implications for Theory and Practice**

This research contributes to leadership theories in two main ways. First, the results presented here help in the “Search for a Needle in a Haystack” as discussed by Podsakoff, MacKenzie, Ahearne, & Bommer (1995). Podsakoff (1995) has suggested that the basic emphasis of leadership research should be to identify and describe the moderating role of situational variables on the relationship between leader behaviors and subordinate outcomes. They suggest that to date few conclusions can be drawn and that more work is needed in this area. The present study helps advance this call by identifying team empowerment climate as a significant situational factor and by uncovering the role it plays in moderating the impact of transformational and transactional leadership on creative performance.

Second, the current study is a useful response to the demand for cross-level research in the field of leadership. In recent years there has been a significant appeal for cross-level research (Mumford, Campion, & Morgeson, 2007). However, Yammarino,
Dionne, Chun and Dansereau (2005) found that little research in the field of leadership involves the analysis of levels in spite of the tremendous amount of leadership research and abundant achievements. The results presented here helped fill that void. The implications for the application of this research to practice are: First, the conclusions clarify the different effects of the transformational leadership and the transactional leadership on the subordinates’ creative performance, and provide managers with ideas for improving innovation and its management or control. Specifically, the positive effect of transformational leadership should be facilitated, while the negative influence of transactional leadership should be prevented. In practice, leaders should show confidence in front of subordinates, stimulate subordinates’ work motivation and confidence by focusing on such things as identifying ambitious goals, depicting ideal vision, displaying care, and supporting the personalized need of subordinates in order to make them feel the consideration of leader and organization. Furthermore, by selecting the occasion for rewards and cultivating the capability of flexibility, the leader can utilize the advantage of transactional leadership and avoid the passive influence of over rewarding or lack of principles on the organization creative performance.

Second, the substitution effect and moderating effect of team empowerment climate on the relationship between leadership style and creative performance also offers some useful advice to managers. Actively building an empowerment climate is a useful method for promoting creative performance separate from the behavior of leadership. In practice, we can establish a trusting relationship and enhance self-management through
information sharing, gradually strengthening the subordinates’ self-determination and capabilities by means of replacing hierarchy for team.

The limitation and directions for future research of this research are: First, the current study is a cross-sectional study, which lacks data information of time sequence and similar experiment design. Therefore, more complicated and time series research design is a direction in the future. Second, all of the samples in this study were sourced from the same organization, which could result in an unfavorable influence on the external validity of conclusions. In addition, as a cross-level research study, the study is short of the amount of samples which only includes four-five members of each team for the validation. Thus, future research should use more abundant and plentiful amounts of samples. Third, the measure on the behavioral style of leadership should be expanded. For example, there still remains space for further research upon direct leadership and empowering leadership which generally exist in Chinese organizations. The current study used the MLQ 5X which also could be with some disadvantages compared to other measurements, thus, future research should largely consider this for their measurements. The forms of leadership should be examined with the effects of transformational leadership and transactional leadership at the same time, the conclusion of which could be more valuable for both theory and practice. In addition, the national culture may affect the relationship among transformation leadership, transaction leadership and individual creativity and innovation. Further more studies are necessary to discover the link and the validity of the proposed model and explore in depth the relationships among leaderships,
empowerment climate, individual innovation performance under the Chinese culture background and political and economic systems.
REFERENCES


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Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational...


<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transformational leadership</td>
<td>5.07</td>
<td>1.02</td>
<td></td>
<td>(0.96)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Transactional leadership</td>
<td>3.68</td>
<td>0.80</td>
<td>-0.248***</td>
<td>(0.82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Empowerment climate</td>
<td>4.14</td>
<td>0.84</td>
<td>0.676***</td>
<td>-0.309***</td>
<td>(0.95)</td>
<td></td>
</tr>
<tr>
<td>4. Creative performance</td>
<td>4.87</td>
<td>1.04</td>
<td>0.411***</td>
<td>-0.281***</td>
<td>0.392***</td>
<td>(0.94)</td>
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</tbody>
</table>

Note: n = 465, * p < 0.05, ** p < 0.01, *** p < 0.001; Coefficient alphas are in parentheses.
# TABLE 2

Hierarchical Linear Modeling Models and Results for Hypotheses 1–3

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>$\gamma_{00}$</th>
<th>$\gamma_{10}$</th>
<th>$\tau_{00}$</th>
<th>$\tau_{11}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1</td>
<td>4.850***</td>
<td>0.318***</td>
<td>0.318***</td>
<td>0.170***</td>
</tr>
<tr>
<td>Level-1: Y = $\beta_0 + \beta_1$(TFL) + r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_0 = \gamma_{00} + U_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_1 = \gamma_{10} + U_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>4.851***</td>
<td>-0.137*</td>
<td>0.306***</td>
<td>0.276***</td>
</tr>
<tr>
<td>Level-1: Y = $\beta_0 + \beta_1$(TAL) + r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_0 = \gamma_{00} + U_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_1 = \gamma_{10} + U_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>4.850***</td>
<td>0.297***</td>
<td>0.320***</td>
<td>0.214***</td>
</tr>
<tr>
<td>Level-1: Y = $\beta_0 + \beta_1$(ECM) + r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_0 = \gamma_{00} + U_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_1 = \gamma_{10} + U_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: TFL-- transformational leadership ; TAL-- transactional leadership ; ECM-- empowerment climate ; $\gamma_{00}$-- Intercept of Level 2 regression predicting $\beta_0$ ; $\gamma_{10}$-- Intercept of Level 2 regression predicting $\beta_1$ ; $\tau_{00}$-- Variance in Level 2 residual for models predicting $\beta_0$ ; $\tau_{11}$-- Variance in Level 2 residual for models predicting $\beta_1$
### TABLE 3
Hierarchical Linear Modeling Models and Results for Hypotheses 4–5

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>$\gamma_{00}$</th>
<th>$\gamma_{10}$</th>
<th>$\gamma_{11}$</th>
<th>$\tau_{00}$</th>
<th>$\tau_{11}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 4</td>
<td>4.850***</td>
<td>0.288***</td>
<td>-0.188**</td>
<td>0.317***</td>
<td>0.110***</td>
</tr>
<tr>
<td>Level-1: $Y = \beta_0 + \beta_1*(TFL) + r$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_0 = \gamma_{00} + U_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_1 = \gamma_{10} + \gamma_{11}*(ECM) + U_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis 5</td>
<td>4.851***</td>
<td>-0.155**</td>
<td>0.303***</td>
<td>0.308***</td>
<td>0.103**</td>
</tr>
<tr>
<td>Level-1: $Y = \beta_0 + \beta_1*(TAL) + r$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_0 = \gamma_{00} + U_0$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level-2: $\beta_1 = \gamma_{10} + \gamma_{11}*(ECM) + U_1$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: TFL—transformational leadership; TAL—transactional leadership; ECM—empowerment climate.

$\gamma_{00}$—Intercept of Level 2 regression predicting $\beta_0$; $\gamma_{10}$—Intercept of Level 2 regression predicting $\beta_1$; $\gamma_{11}$—Slope of Level 2 regression predicting $\beta_1$; $\tau_{00}$—Variance in Level 2 residual for models predicting $\beta_0$; $\tau_{11}$—Variance in Level 2 residual for models predicting $\beta_1$. 
FIGURE 1
Empowerment Climate as a Moderator of Transformational Leadership - Subordinates’ Creative performance Relationship
FIGURE 2
Empowerment Climate as a Moderator of Transactional Leadership - Subordinates’ Creative performance Relationship.