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Dong I. Jung and John J. Sošik
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TRANSFORMATIONAL LEADERSHIP IN WORK GROUPS
The Role of Empowerment, Cohesiveness, and Collective-Efficacy on Perceived Group Performance

DONG I. JUNG
San Diego State University

JOHN J. SOSIK
Pennsylvania State University

It has been argued that transformational leaders increase group effectiveness by empowering followers to perform their job independently from the leader, highlight the importance of cooperation in performing collective tasks, and realign followers’ values to create a more cohesive group. A study was conducted to examine whether transformational leadership would be positively related to followers’ perceptions of empowerment, group cohesiveness, and effectiveness. Forty-seven groups from four Korean firms participated in this study. Results of partial least squares analysis indicated that transformational leadership was positively related to empowerment, group cohesiveness, and group effectiveness. Empowerment was positively related to collective-efficacy, which in turn was positively related to group members’ perceived group effectiveness. Implications for research and practice are discussed.

Since the concept of transformational leadership was introduced (Bass, 1985; Burns, 1978), numerous empirical studies have reported that transformational leadership significantly augments transactional leadership, resulting in higher levels of individual, group, and organizational performance (Bass & Avolio, 1994; Dvir, Eden, Avolio, & Shamir, in press; Howell & Avolio, 1993; Lowe, Kroeck, & Sivasubramaniam, 1996). The augmentation

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effect of transformational leadership has been linked to a transformational leader’s ability to motivate followers to perform beyond standard expectations for performance. It has also been argued that transformational leaders help followers achieve a higher level of group performance by elevating the needs of group members from self- to collective interests and inspiring higher levels of commitment to a common mission and/or vision (House & Shamir, 1993; Shamir, House, & Arthur, 1993).

Despite the augmentation effects shown for transformational leadership with its emphasis on collective confidence, identity, and outcomes, most prior research has examined the effect of transformational leadership on followers’ individual performance and effectiveness rather than examining its effects on the collective identity created in the work group and its sense of confidence in group contexts (Shamir, 1990). If a core difference between transformational and transactional leadership lies in the transformational leader’s ability to increase his or her followers’ commitment toward a collective mission and vision, more research should focus on examining transformational leadership in group settings to elucidate the role of transformational leadership in group processes and its effect on group processes and outcomes such as empowerment, group cohesion, collective confidence, and group effectiveness (House & Aditya, 1997).

The purpose of the present study is to examine how transformational leadership influences group members’ perception of empowerment and cohesiveness, which also are hypothesized to have positive relationships with group members’ collective confidence (i.e., collective-efficacy) and perceived group effectiveness. Empowerment involves enabling group members through enhancement of their personal self-efficacy beliefs and intrinsic task motivation (Conger & Kanungo, 1987). Cohesiveness refers to the degree to which group members are attracted to and motivated to stay with the group (Zaccaro, Blair, Peterson, & Zazanis, 1995). Collective-efficacy refers to group members’ shared perceptions about how capable their group is regarding a specific task (Bandura, 1997). The nomological relationships among these constructs, along with proposed hypotheses, are shown in Figure 1.
Based on this model, we discuss our theoretical background and specific hypotheses tested in our study in the following section.

THEORETICAL BACKGROUND AND HYPOTHESES

Transformational leadership was introduced into leadership research by Burns (1978) as a new paradigm of leadership that pays more attention to initiating changes among followers and transforming followers’ personal values and group and organizational cultures. Bass (1985) further developed the construct by comparing transformational and transactional leadership where the former builds a qualitatively different relationship with followers based on personal, emotional, and inspirational exchanges.

Transactional leadership is based on an exchange process whereby followers are rewarded for accomplishing specified goals (Hollander, 1978). Followers are typically given rewards in exchange for achieving certain levels of performance (Waldman, Bass, & Yammarino, 1990). The exchange relationship between transactional leaders and their followers is based on an implied contract that involves positive reinforcement for a higher level of performance. Emphasis is on facilitating the achievement of objectives agreed to by followers, similar to what is described in path-
goal theory (House & Mitchell, 1974). In other words, transactional leaders recognize followers’ needs and desires and clarify how those needs and desires will be met in exchange for enactment of the followers’ work role.

In contrast, transformational leadership encourages human development and interaction and promotes collective motivation and outcomes (Avolio, 1999; Bass, 1998; Yukl, 2002). Bass and Avolio (1994) identified four unique but interrelated behavioral components of transformational leadership: idealized influence (charismatic role modeling), inspirational motivation (articulating an appealing and/or evocative vision), intellectual stimulation (promoting creativity and innovation), and individualized consideration (coaching and mentoring). Several empirical and theoretical studies have found that transformational leaders display these four components to realign their followers’ values and norms, promote personal and organizational changes, and help followers exceed their initial performance expectations (e.g., House & Shamir, 1993; Howell & Avolio, 1993; Jung & Avolio, 1999).

Transformational leaders express the importance and values associated with desired outcomes in ways that are more easily understood by followers, while also raising performance expectations for group members (Bass, 1985; Bennis & Nanus, 1985; Conger & Kanungo, 1987; House, Spangler, & Woycke, 1991). They help their followers see the importance of transcending their self-interests for the sake of the mission and vision of their groups or organizations. Oftentimes, they are able to accomplish this shift in perspective by demonstrating their own sacrifices for the group (Avolio, Jung, Murry, & Sivasubramaniam, 1996; Bass, 1997). By developing followers’ self-confidence, self-efficacy, and self-esteem, transformational leaders have a strong, positive influence on their followers’ motivation and goal achievement (Bass, 1990; Yukl, 2002). An extensive amount of empirical evidence now indicates that leaders who display the components of transformational leadership are viewed as more effective leaders and achieve higher performance than leaders who are not transformational (e.g., Howell & Avolio, 1993; Lowe et al., 1996; Sosik, Potosky, & Jung, in press).
Despite these encouraging findings, research on transformational leadership has been mainly conducted based on leader-follower relationships at the individual level of analysis. However, a growing number of researchers are beginning to examine the effects of transformational leadership on group processes and outcomes (e.g., Smyth & Ross, 1999; Sosik, Avolio, & Kahai, 1997, 1998; Tracey, 1998; Yammarino & Dubinsky, 1994). As more organizations increasingly embrace groups and teams as basic building blocks of their business operation and strategy execution (Cohen & Bailey, 1997), the attention of both researchers and group leaders needs to shift its focus from individual- to group-level leadership processes. However, this does not suggest that the nature of transformational leadership processes should be substantially altered when examined at the group versus individual level. Instead, we propose that transformational leadership research can be expanded to group settings and various nomological networks examined in the previous research and can be replicated at the group level.

Prior research on transformational leadership has consistently argued that transformational leaders also increase group performance by empowering their followers to perform their job independently from their leader’s direct supervision and control. Although transformational leaders may sometimes be directive with their followers, they often seek followers’ participation in group work by highlighting the importance of cooperation in performing collective tasks, providing the opportunity to learn from shared experience, and delegating authority for them to execute any necessary action for effective performance (Bass, 1985). As a result, transformational leaders create a group environment where followers feel empowered to seek an innovative approach to perform their job without a fear of being penalized. For example, Dvir et al. (in press) argued that transformational leaders emphasize followers’ development and thus help obtain autonomy for empowered followers in groups. Moreover, prior research has found that creativity among followers tends to be higher when group members work with a transformational rather than transactional leader (Jung,
2001; Sosik et al., 1998). Even if prior research did not directly test the role of empowerment on creativity among followers in groups, Jung (2001), for example, argued that transformational leaders’ encouragement for innovative ideas and a participative decision-making process through empowerment is an important reason for creativity among followers in groups.

Another important characteristic of transformational leaders is their ability to help group members realign their personal values according to their transformational leader’s vision and goals, which creates strong values of internalization, cooperation, and congruence among followers (Jung & Avolio, 2000; Shamir et al., 1993). As a result, there tends to be a strongly shared vision developed in the group, and the group vision in turn helps increase group cohesiveness. Shared vision and strong group identity also help transformational leaders further empower group members to accomplish their goals without closely monitoring group members’ work process. This high degree of collective identification may enhance group cohesiveness among team members. House and Shamir (1993) argued that transformational leaders arouse the affiliation motive among followers, which drives their followers to become more cohesive and perform effectively. Strong group cohesiveness could give group members a sense of where they need to direct their efforts to materialize their common goals. As such, we expected to find a positive association between transformational leadership and group members’ cohesion.

Based on these lines of reasoning, the following hypotheses can be advanced to test the effect of transformational leadership on followers’ perception of empowerment, group cohesiveness, and group effectiveness:

*Hypothesis 1:* Transformational leadership will have a positive relationship with group members’ perceptions of (a) empowerment, (b) cohesiveness, and (c) perceived effectiveness.

Given the strong group cohesiveness developed in groups empowered by transformational leadership, group members are more likely to share common expectations and stronger collective
identity (Dvir et al., in press; Jung & Avolio, 1999). This fuels group members’ level of collective confidence because transformational leaders elevate the salience of the group while also helping followers achieve their common goals (Shamir et al., 1993; Sosik et al., 1997). This sense of collective confidence has been referred to as collective-efficacy, which was developed based on Bandura’s (1986, 1997) concept of self-efficacy. Collective-efficacy and past experience tend to have a cyclic relationship, suggesting that previous positive experience and success can confirm and reinforce group members’ perception and belief about their group (Lindsley, Brass, & Thomas, 1995). Zaccaro et al. (1995) argued that certain positive changes in group cohesion may improve performance capabilities of the group and thus promote a higher level of collective-efficacy. Therefore, it is expected in the present study that there are positive relationships among empowerment, group cohesiveness, and group members’ collective-efficacy. Moreover, because followers’ motivational states under transformational leaders have been proposed to shift from self-interests to collective interests (Shamir et al., 1993), followers are more likely to experience their success through group accomplishments (i.e., enactive attainment through group success).

**Hypothesis 2a:** Perception of empowerment will have a positive relationship with group members’ collective-efficacy.

**Hypothesis 2b:** Perception of group cohesiveness will have a positive relationship with group members’ collective-efficacy.

Collective-efficacy has become an important construct in group research because several prior studies indicated a strong, positive relationship between collective-efficacy and group performance in various work group settings (e.g., Campion, Medsker, & Higgs, 1993; Guzzo, Yost, Campbell, & Shea, 1993; Jung & Sosik, 1999). For example, Campion et al. (1993) tested 19 group characteristics and found that group efficacy was the strongest predictors of six effectiveness criteria. Similarly, Sosik et al. (1997) found group efficacy positively predicted group effectiveness in experimental settings. Finally, in a recent meta-analysis based on 53 empirical
studies, group efficacy was found to be positively related to performance (Gully, Beaubien, Incalcaterra, & Joshi, in press).

Bandura (1986) explained why collective-efficacy could be a positive predictor of group performance by arguing that group members’ perceived efficacy influences what people choose to do in a group and how much effort they put into tasks. In other words, if individuals believe in their group members’ capability to perform the task successfully as a whole, they are more likely to sustain their efforts until they achieve their goals.

_Hypothesis 3: Group members’ perception of collective-efficacy will have a positive relationship with group effectiveness._

**METHOD**

**PARTICIPANTS**

In the present study, 217 employees (47 intact teams) in four large Korean firms located in Seoul, Korea, participated. These companies used a team system for their main operations for several years at the time of this study. A survey instrument was distributed to a total of 400 individuals (65 intact teams), making a response rate of about 54% for our study.

The mean age of participants was 33 years old. About 93% of them were male, and more than 80% of them had a bachelor’s degree. About 35% of the participants had tenure of less than 3 years with their current company, and 50% of them had tenure between 3 to 10 years. Functional backgrounds among the participating teams varied from accounting (18%), human resources (6.9%), strategy and planning (12.9%), marketing and customer services (35.1%), research and development (10.5%), to purchasing (16.6%).

These teams performed various tasks that required an extensive interaction among team members, such as creating and marketing new products, developing new product lines, and maintaining existing human resources system. All teams also had to work with their team leader extensively due to the highly complicated and
interdependent nature of their task. Thus, the impact of the team leader’s quality of leadership on their work experience and group effectiveness was considered to be very high.

MEASURES

Transformational leadership was measured using a 28-item scale from the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1990). Despite some concerns about psychometric validity of this measure, the MLQ has been used extensively in the area of transformational leadership research and is considered a well-validated measure of transformational leadership (Awamleh & Gardner, 1999). A recent study also demonstrated the construct validity of the MLQ using Confirmatory Factor Analysis (cf. Avolio, Bass, & Jung, 1999).

Because transformational leadership as measured by the MLQ is based on four behavioral components, we used four subscales of transformational leadership to represent transformational leadership style in our study. Specifically, transformational leaders exercise idealized influence by acting as a positive role model for group members (e.g., “My team leader goes beyond self-interest for the good of the group”). They also inspire followers’ motivation by articulating an appealing or evocative vision (e.g., “My team leader talks optimistically about the future”) and provide intellectual stimulation by encouraging group members to question their own practices and ways of completing tasks (e.g., “My team leader got me to look at the task from many different angles”). Finally, transformational leaders give individualized consideration and attention by treating each group member uniquely as they coach and mentor him or her (e.g., “My team leader helps team members to develop their strengths”). All items were rated based on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Empowerment was measured using a 12-item scale developed by Spreitzer (1995). This scale measures followers’ perception of empowerment based on the dimensions of meaningfulness, competence, self-determination, and impact (e.g., “I have significant autonomy in determining how I do my job”). All items were rated...
using a 7-point scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). Group cohesiveness was measured using a 4-item scale developed by Bernthal and Insko (1993). This measure included two subscales called task-oriented cohesion (e.g., “I felt that the people in my group had high problem-solving skills”) and social-oriented cohesion (e.g., “I felt that the people in my group had high social skills”). All items were rated using a 7-point scale described above. Collective-efficacy was measured using an 11-item scale originally developed by Bandura (1986) and modified for the current study to a 5-point rating scale described above (e.g., “When we set goals, I’m sure we will achieve them”). Perceived performance was measured through group members’ self-assessment of the group performance based on 5 items developed for the current study (e.g., “My group is effective in getting things done”).

Because we collected data from Korea, all questionnaire items were carefully translated and back-translated to ensure conceptual equivalence and comparability (Brislin, 1986).

REDUCTION OF COMMON METHOD VARIANCE

Group members provided ratings of their leader’s transformational leadership, group process variables, as well as perceived group effectiveness in our study. Thus, there exists the potential for common-method variance to inflate the associations between these constructs. To reduce the potential for such effects, we used in our analyses different sources to measure these variables in each group (Podsakoff & Organ, 1986). Specifically, we randomly selected half of the group members in each group and used their ratings alternatively so that all paths shown in Figure 1 were based on different sources with the same group. In other words, after splitting each group into two subgroups (Groups A and B), we used the data based on Group A to measure transformational leadership and empowerment while we used the data based on Group B to measure empowerment, group cohesiveness, and group effectiveness. We believe that this minimizes the potential for common-method variance because all paths tested in our study were based on different subgroups within the same group. This has been a common
approach adopted by several studies in the past as a way to reduce potential problems associated with common method variance (e.g., Riggs & Knight, 1994; Sosik, Avolio, & Jung, in press).

However, because group members within each group evaluated their leader and group simultaneously, there was still the potential for carry-over effects in their evaluations. Results of $r_{wg}$ analysis reported below suggest similarity between the means of the two subgroups based on homogeneous within-group variance. We also replicated our data analysis after switching the data based on Group A for empowerment, group cohesiveness, and group effectiveness, whereas transformational leadership and collective-efficacy were based on Group B.

**DATA ANALYSIS AND RESULTS**

We ran several exploratory factor analyses based on principal component for extraction method and Varimax with Kaiser Normalization for rotation method to refine the scales used for the current study. Transformational leadership items produced one general scale (8 items) with an eigenvalue of 19.24, which accounted for 68.73% of the variance. Empowerment also created one scale (6 items) with an eigenvalue of 6.55 and 54.56% of variance accounted for by the scale. Group cohesiveness was created (3 items) with an eigenvalue of 2.57, which explained about 36.72% of the variance. Collective-efficacy items created a 5-item scale with an eigenvalue of 5.31, which accounted for 48.24% of the variance. Finally, perceived group effectiveness included all 5 items with an eigenvalue of 2.41, which accounted for the 48.19% of variance. Items for each scale are shown in the appendix.

Because all of our measures were collected at the individual level of analysis, it is important to test for the appropriate level of analysis before data are aggregated to the group level for subsequent analyses. Therefore, we ran $r_{wg}$ analysis (James, Demaree, & Wolf, 1984) to justify aggregation of individual-level perceptual responses within groups to obtain group-level responses for model testing at the group level. Results indicated that all groups exhibited
high levels of within-group agreement ($r_{wg}$ indices > .7) in terms of perceptions of transformational leadership (average $r_{wg} =$ .89), empowerment (average $r_{wg} =$ .92), group cohesiveness (average $r_{wg} =$ .90), collective-efficacy (average $r_{wg} =$ .90), and perceived group effectiveness (average $r_{wg} =$ .94). Thus, statistical analysis for model testing was conducted at the group level ($N =$ 47 groups).

Based on these factor analyses and $r_{wg}$ results, descriptive statistics were run. Table 1 shows descriptive statistics and intercorrelations among scales measured in the present study. All of the measures had adequate reliability. Intercorrelations also showed significant positive relationships among transformational leadership, empowerment, group cohesiveness, collective-efficacy, and perceived performance.

The conceptual model was tested using the partial least squares (PLS) structural equation modeling technique (Wold, 1985). PLS is being adopted by a growing number of group researchers (for detailed information on PLS application to small group research, see Sambamurthy & Chin, 1994; Sosik et al., 1997) because it does not require a large sample for data analysis, which has been a challenging issue in group research due to the difficulty of obtaining a large number of groups. PLS does not make assumptions about (a) data distributions to estimate model parameters, (b) observation independence, or (c) variable metrics. This feature makes it more suitable than other analysis techniques (e.g., multiple regression and LISREL), which require multivariate normality, interval scaled
data, and large sample sizes. Therefore, PLS is sensitive to relatively small effects due to small standard error even with a relatively small group sample size, as in the current study.

PLS generates estimates of standardized regression coefficients (i.e., path coefficients) for the model paths, which can then be used to measure the relationships between latent variables. A jackknifing procedure called *blindfolding* with an omission distance of 10 was used to evaluate the statistical significance of the path coefficients (Sambamurthy & Chin, 1994). The blindfolding procedure omits a part of the data matrix for a particular variable and then estimates model parameters (e.g., path coefficients) associated with that variable. This process is repeated as often as the omission distance, which refers to how many data points in the data matrix are skipped before omitting the next data point.

Results of PLS analysis with full sample data (*N* = 46 groups) are shown in Figure 2. The results supported Hypotheses 1a, 1b, and 1c because transformational leadership was positively related to empowerment (β = .15, *p* > .001), group cohesiveness (β = .21, *p* > .001), and perceived group effectiveness (β = .18, *p* > .001). Hypothesis 2a was supported because empowerment was positively related to collective-efficacy (β = .17, *p* > .001). However, Hypothesis 2b was not supported because group cohesiveness was not significantly related to collective-efficacy, although the relationship was in the expected direction. Hypothesis 3 was supported

![Figure 2: Results of Partial Least Squares (PLS) Analysis (N = 47 groups)](http://sgr.sagepub.com)

**Figure 2:** Results of Partial Least Squares (PLS) Analysis (*N* = 47 groups)

**p** < .001.
because collective-efficacy was positively related to group effectiveness ($\beta = .20, p > .001$).

**REPLICATION OF PLS ANALYSIS**

As described above, we randomly created two subgroups in each group and ran the PLS analysis so that each path we examined was based on different group members. To make sure that the results present above were not biased due to unknown sampling errors, we replicated the PLS analysis by switching the data based on Group A for empowerment, group cohesiveness, and group effectiveness, while transformational leadership and collective-efficacy were based on Group B. The results showed very similar path coefficients and thus confirm that the findings presented earlier were not contaminated due to the split-group approach that we took for the present study. Specifically, transformational leadership was positively related to empowerment ($\beta = .07, p < .01$), cohesion ($\beta = .15, p < .001$), and perceived group effectiveness ($\beta = .12, p < .001$). Empowerment was positively associated with collective-efficacy ($\beta = .14, p < .001$). However, as was the case earlier, cohesion was not statistically related to collective-efficacy ($\beta = .03, ns$). Finally, collective-efficacy was positively and significantly related to perceived group effectiveness ($\beta = .28, p < .001$).

**DISCUSSION**

This study examined the effect of transformational leadership on empowerment, group cohesiveness, and group effectiveness. Empowerment and group cohesiveness were also examined to see if they were positively related to group members’ collective confidence. All of the measured variables showed adequate levels of construct reliability and validity. Results provide empirical support for previous theoretical arguments highlighting the role of transformational leadership in group processes and outcomes (e.g., Bass, 1990, 1998; Bennis & Nanus, 1985; Burns, 1978) and offer
some interesting implications for future small group research and practice.

Results of PLS showed moderately strong, positive relationships between transformational leadership and empowerment, group cohesiveness, and perceived group effectiveness. This pattern of results is in line with previous transformational leadership research findings. For instance, Avolio and Bass (1995) argued that transformational leaders provide mentoring and coaching to their followers for them to develop a sense of self-confidence. Bass (1998) also argued that one of the key differences between transformational and charismatic leadership is that a transformational leader tries to develop followers’ potential so as to help their followers become independent instead of making them continue to rely on their leader’s guidance for their work. Although we did not test causal relationships in the current study, our study extended these previous research findings by suggesting that transformational leaders could make a group of followers feel empowered and help develop a strong sense of cohesion in a team setting.

The relationship between transformational leadership and cohesiveness may have also been due to a transformational leader’s articulation of his or her vision and goal for the group, which would require followers’ collective efforts (Avolio, Bass, Jung, & Berson, 2002). Consistent efforts made by group members for accomplishing group goals could have helped maintain a high level of cohesion. In addition, group members working with leaders who used more transformational behavior may have had a higher level of intention to stay with their current group due to a heightened level of motivation and satisfaction, which in turn increased cohesion in their team. Similarly, when a transformational leader articulates what his or her followers need to accomplish for the good of the team, team members are more likely to feel a high level of group cohesiveness (Dvir et al., in press). This is consistent with prior research suggesting that transformational leaders can communicate with their followers in a way that is easy to understand by their followers, which helps them realign their values according to the
vision and personal values presented by their leader (Kirkpatrick & Locke, 1996).

As expected, group members’ sense of being empowered had a positive association with their collective-efficacy. By definition, empowered followers are more likely to initiate any work that they feel is interesting and important (Kouzes & Posner, 1995). In addition, they are more likely to perform tasks for which they believe they possess necessary skills and resources. Therefore, they may have more positive work experiences than those who are not empowered by their leadership. Such empowerment is an important condition for self- and collective-efficacy (Bandura, 1997). The present study empirically examined and supported this line of reasoning.

Contrary to arguments made by Zaccaro et al. (1995), we did not find a significant relationship between cohesiveness and collective-efficacy. This may have been due to the fact that cohesive perceptions about their group by itself could not create a sufficient condition in which group members felt efficacious. Although cohesive group attitudes might be an important condition for a high level of collective confidence (Bandura, 1997), we found that cohesiveness alone did not make a significant positive effect on collective-efficacy. It may be that group members need to have some actual positive experience in working with other group members before they could develop a sense of collective-efficacy. We believe that this is an important area for effective group work processes, and further research is necessary to draw a firm conclusion.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Our study may provide several important implications for future research on transformational leadership and its effects on group processes and outcomes. First, we explored a nomological network of transformational leadership and several important group variables that have been proposed to affect group effectiveness. Although there has been some consideration of how transformational leaders shift group members’ focus from individual to group interests, a majority of them have been theoretical discus-
sions (e.g., Bass, 1998; Shamir et al., 1993). The present study examined these relationships empirically and found that transformational leadership indeed had positive associations with the measured group process variables.

We believe that more research is certainly warranted to examine the role of transformational leadership in group settings because one of the most important characteristics of transformational leadership is its ability to heighten followers’ collective motivation (Shamir, 1990). However, a dominant number of prior studies on this topic have been conducted at the individual level of analysis. In the present study, transformational leadership was positively associated with followers’ empowerment and group cohesiveness as well as perceived group effectiveness. Future research should expand other types of potential mediating/moderating variables that may be involved in the transformational leadership process (e.g., task type, task interdependence, communication, work flow, and power dynamics).

Second, our study investigated determinants of collective-efficacy as a criterion variable. We believe that to better understand the role of collective-efficacy in group processes it is important to examine not only how it affects group effectiveness but also how it is affected by other variables. Although prior research has continuously supported a positive relationship between collective-efficacy and performance (Gully et al., in press), a limited number of studies have examined the construct from a leadership and group process perspective (Ilgen, Major, Hollenbeck, & Sego, 1993). Given the positive relationships we found in our study among transformational leadership, empowerment, and collective-efficacy, managers who want to improve group effectiveness might consider building their transformational leadership skills while emphasizing the empowerment process, which collectively affect group members’ collective confidence and group effectiveness.

In terms of practical implications, as more organizations increasingly embrace groups and teams as the basic building block of their business operation (e.g., software development teams and customer support teams), the attention of effective leadership might have to be changed by shifting its focus from one-to-one to
one-to-group leadership building processes. This requires the
leader to understand not only how to motivate his or her followers
as an individual but also to figure out how to cultivate a high level of
collective commitment toward a common goal. Numerous group
studies have demonstrated that group performance is not merely
a mathematical sum of individual members’ ability and skills
(Cohen & Bailey, 1997). Our research illustrated that transfor-
mational leadership may create high levels of collective confidence
and group cohesion and eventually create more effective group out-
comes. Thus, the current study could provide a useful guideline for
organizations to come up with more effective training programs for
leadership development in a team-oriented work environment.

LIMITATIONS AND CONCLUSION

Although these results are encouraging, the present study also
has some limitations. First, all of our constructs used in the PLS
analysis came from the same source, thus posing a common
method bias. Although we split our groups into two subgroups to
reduce the potential for common source bias (Podsakoff & Organ,
1986), there still exists the potential for carryover effects that may
inflate the associations between study variables. Thus, caution
must be exercised when interpreting our results, and future research
should collect group input (e.g., transformational leadership), pro-
cess (e.g., empowerment), and outcome (e.g., performance) vari-
ables from independent sources. Also, the correlational nature of
this study prevents the drawing of conclusions regarding the causal
relationships between the study variables. Experimental and/or
longitudinal research designs are needed to address this limitation.

Second, there are some important variables that should have
been included as control variables (e.g., length and nature of team
history and tenure of the leader in each team). Such variables could
have affected leadership process, team dynamics, and ultimately
members’ perception of their team effectiveness. Third, the perfor-
ance measure used in this study was based on group members’
perceptions. Such perceptual measures are often inflated and sub-
ject to socially desirable responding (Paulhus, 1988). More objec-
tive measures collected from higher level individuals outside of the
team, performance management records, or company human
resource departments may offer an independent and appropriate
measure of group performance outcomes.

Fourth, the theoretical model examined in the study and its
results should be replicated and validated in other cultural settings
because data were collected from four large companies in Korea.
Moreover, the majority of our samples was male (93%) and thus
may not represent a typical work setting. The results reported in the
present study may have been due to Korean cultures and/or male
workers, and they should be subject to further validation based on
more heterogeneous settings. A related issue concerns our transla-
tion of an English version of the MLQ, which was designed and
developed in a Western culture. Although we carefully translated
and back-translated the survey instrument, we might have missed
some cultural implications of the items and subtle differences due
to different cultural meanings that we were not able to detect under
the current research design. Therefore, we advise readers to use
cautions when interpreting our findings.

Despite these limitations, we believe this study represents a first
step toward understanding the complex interaction among
transformational leadership, empowerment, and group cohesive-
ness that influence group members’ collective-efficacy and group
effectiveness. As more organizations use team-based work systems,
we believe that it is important for researchers to evaluate the role of
leadership in group processes that make teams more effective.

APPENDIX
RETAINED ITEMS BASED ON
EXPLORATORY FACTOR ANALYSES

Transformational Leadership

My team leader expresses confidence that goals will be achieved.
My team leader talks about the importance of team values.
My team leader talks optimistically about the future.
My team leader sets high standards.
My team leader specifies the importance of having a strong sense of purpose. My team leader spends time teaching and coaching team members. My team leader goes beyond self-interest for the good of the team. My team leader emphasizes the importance of having a collective sense of mission.

**Empowerment**
I have significant autonomy in determining how I do my job. I can decide on my own how to go about doing my work. I have considerable opportunity for independence and freedom in how I do my job. My impact on what happens in my department is large. I have a great deal of control over what happens in my department. I have significant influence over what happens in my department.

**Group Cohesiveness**
I felt that the people in my group had high social skills. I felt that the people in my group had high problem-solving skills. I felt that my group was focused on completing the task.

**Collective-Efficacy**
My group can find solutions to problems with its performance. This group can pull itself out of a slump. I believe that failure will make our group try harder. My group members go above and beyond the call of duty. My group members work hard to fulfill the group’s overall responsibilities.

**Group Effectiveness**
My group is effective in getting things done. My group does a great job in getting things done. My group is effective in meeting task requirements. My group accomplishes its goals successfully. My group completes its task successfully.

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**NOTE**

1. Study variables did not differ significantly across the four Korean firms constituting the sample.
REFERENCES


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Dong I. Jung is an associate professor of management at San Diego State University. He teaches organizational behavior and international management. His areas of...
expertise include transformational/charismatic leadership, cross-cultural leadership, team dynamics and international entrepreneurship.

John J. Sosik is an associate professor of management and organization at the Penn State University, Great Valley School of Graduate Professional Studies. His current research interests include antecedents and consequences of charismatic and transformational leadership, computer-mediated group/team processes and outcomes, and mentoring in organization.