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## The role of knowledge sharing and LMX to enhance employee

## creativity in theme park work team: a case study of Taiwan

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#### Abstract

**Purpose** – The research empirically tests individual, team, and multi-level relationships among knowledge sharing (KS), leader–member exchange (LMX), employee creativity (EC), and team innovation (TI). The study tests how KS affects EC via LMX at lower and multi-levels. At higher level, how creativity affects TI also is tested.

**Design/methodology/approach** – Questionnaires were sent to 43 team leaders and 215 team members from the largest theme park in Taiwan, E-DA, who are engaged in offering creative and innovative customer services. Multilevel analysis was conducted based on the questionnaires received.

**Findings** – Major findings agree the contention that KS can improve EC via LMX at both employee and multi-level. The results also indicate that KS affects team creativity (TC) at the team level; however, TC and TI do not have a significant positive relationship.

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**Originality/value** –The study examined how to enhance employees' creativity from the individual and team level in a theme park, which related literature rarely covers. The authors found that LMX is an important mediator between KS and EC. The mediated effect of KS affect EC through LMX is higher in a cross level than individual level. In addition, team's KS has more effect on EC than the individual level does.

**Keywords:** Leader-member exchange (LMX); Intention to share knowledge; Employee creativity; Multilevel model; Hierarchical linear modeling (HLM); Theme Park.

#### Introduction

Milman (2001) indicated theme parks are the favorite modes of mass entertainment in mature markets worldwide and are star players in the tourism industry (Cheng et al., 2014). However, they must continue to change because business environment changes rapidly (Fotiadis and Vassiliadis, 2016).

In the few past decades, researchers have conducted in-depth studies on the use of creativity in various industries; managers, especially those in the tourism industry, have strived to encourage employees to increase their creativity at the workplace (Hon et al., 2013). Previous researchers paid more attention to discussing visitors' behavior in theme park industry (e.g., Fotiadis and Vassiliadis, 2016). For example, Cheng et al. (2014) indicated that there are seven factors influencing visitor brand-switching behavior. Frontline employees are important to ensure customer satisfaction (Bitner et al., 1990). Creativity is the key to

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enhance the competitive edge for an organization as it is regarded as the first step toward innovation (Shalley at al., 2004). Therefore, how to promote the confidence of employees in contributing new or novel ideas is crucial for innovation in an organization. However, there is research that explores how to increase employees' creativity capabilities in the theme park industry.

The study investigated how knowledge and leadership stimulate the generation of creativity, thereby promoting TI and building their competitive advantage. To explore this issue, this study adopted theory of social exchange, knowledge management (KM), and social learning. Our research variables based on related literature, built the relationships among those variables, and then proposed a theoretical framework (Figure 1) based on those relationships. Knowledge is considered to generate, enhance, and facilitate creativity (e.g., Amabile, 1988; Williams and Foti, 2011). The empirical study by Tsai et al. (2015) indicated that KS could improve students' creative performance, especially for tourism and hospitality management. Most studies have explored KS and creativity at team, organization, or staff level (e.g., Zhang et al., 2011; Carmeli and Paulus, 2014), though few studies have explored KS from a multi-level perspective (Liu et al., 2011). Furthermore, it remains unknown whether the relationship between KS and EC differs with differing levels of KS. We try to link this space, which is its first contribution.

Our second contribution is to explore how KS enhances EC. Although KS can enhance EC,

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the path toward creativity is uncertain, which reduces employees' confidence in contributing new ideas or processes, even when the employees have sufficient work-related knowledge and experience. To increase the confidence of employees in exhibiting high creativity, organizational or team factors might be more crucial than individual factors. For example, empirical evidence has revealed that organizations that support innovation also encourage EC (Erne et al., 2013; Hon and Lui, 2016). Studies have also revealed that high-quality LMX in a team or organization encourages employees to attempt risk-related tasks or to promote their work performance and attitude (e.g., Graen and Cashman, 1975; Janssen and Van Yperen, 2004; Wang, 2016). LMX stresses that supervisors should establish a unique social exchange relationship with each of their employees, and the relationships should be based on mutual respect and trust (Gerstner and Day, 1997). However, high quality-LMX is not always observed in teams and organization; thus, determining what benefits the LMX relationship is necessary. LMX is a type of interactive relationship between supervisors and subordinates, the quality of which is based on their behavioural interactions. In discussions on the employee-organization leadership relationship, employees' KS receives more attention (e.g., Zhang et al., 2011; Cheng and Fu, 2013; Lee, 2016), indicating that it is worth exploring. Therefore, the present study discusses how KS affects LMX at both the employee and group levels. Furthermore, our study explores the best path of KS that promotes EC through LMX at different levels. At employee level, team members can enhance the supervisor-subordinate

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relationship by sharing knowledge, which in turn improves their creativity outcome. From team perspective, KS behaviors of team members were aggregated as team-level variables, and used to determine whether team's KS affects EC through LMX. Moreover, these two paths of EC promotion were compared. Most researchers have paid more attention on how KS affects creativity at a single level (e.g., Chiang et al., 2014; Carmeli and Paulus, 2014). Our study discusses the rarely examined cross-level effect as well as the teamwork model as it gradually becomes part of the mainstream in workplaces.

Third, our contribution is to explore how creativity affects TI after aggregating EC from individual to team level. EC is mainly increased in terms of innovation in teams and organizations. Therefore, creativity promotion focuses not only on what factors affect it (e.g., Černe et al., 2013) but also on whether creativity can benefit the process of innovation. Ultimately, innovation is the final deciding factor in sustaining organizational competitive advantage (e.g., Küçükoğlu and Pınar, 2015).

#### Hypotheses

#### Individual Level Mediation Effect of LMX

Social learning theory indicated that KS is tightly related to the creativity of workplace (Schepers and Van den Berg, 2007). Individuals must have a certain level of understanding of their areas in order to launch original and useful ideas (Mumford and Hunter, 2005). Carmeli et al. (2013) argued that there must be a reason for the occurrence of creativity because a

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crucial factor that influences creativity is knowledge (e.g., Vincent et al., 2002). Madjar (2005) stressed that others who present new information may stimulate employees' creativity and that knowledge in turn triggers the production of novel ideas and alternative solutions.

A conducive business environment is essential in encouraging creative efforts because it helps motivate and engage creative workers (e.g., Tsai et al., 2015). Previous articles have used social exchange theory to explore various aspects of the employment relationship (e.g., Bucaria, 2006). LMX is considered as one such theory (Rousseau, 1989). Moreover, scholars also studied hard to explore the role of LMX on subordinates' attitude and conduct in supervisor-subordinate relationship (Henderson et al., 2008). Researchers demonstrated that subordinates would like to take job-related risks if they have a higher degree of LMX (Graen and Cashman, 1975). According to previous studies, relationship quality between subordinates and their supervisors in relation to the exchanges is predictive of employee job outcomes (George and Zhou, 2001). For example, a previous study revealed that LMX is predictive of EC (e.g., Chughtai, 2014). LMX agreement also has been found to enhance work outcomes of hospitality workers (Kim et al., 2016).

Accordingly, while knowledge can stimulate creativity, the process of promoting creativity does involve risk and uncertainty. Creative subordinates may not have sufficient empowerment, resources, or opportunities to perform their jobs creatively even if they want to. Therefore, another mechanism may be necessary for bridging the gap between KS and

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creativity in workplaces to increase confidence and reduce employee risk. In a study on enabling organizational members to learn from failures, Gittell (2002) found that coordinating or knowledge-sharing mechanisms support high-quality relationships. Similarly, in an empirical study, Carmeli and Gittell (2009) implied that KS is a crucial part of the team's relationship. We propose that if employees share their knowledge, they will have more opportunity to improve interpersonal relationships with their supervisors and get more support from their supervisor, in turn, improve their creative capabilities. Therefore, the hypothesis was proposed:

H1: There is a mediation effect among LMX, employee intention to share knowledge (EISK) and EC.

#### Cross Level Mediation Effect of LMX

Tang (2010) indicated that KS creates a team knowledge environment that encourages team divergent thinking and creativity. KS behavior among team members may form a kind of team context factors that directly affect or moderate lower level variables (Kozlowski and Klein, 2000). The team's productivity is greater than the individual's work alone and KS among team members can provide complementarity, which, in turn, yields synergy (Liu et al., 2011). KS might shape collective knowledge (Grant, 1996; Cabrera et al., 2006), whereby a combination of the knowledge of individuals surpassed the sum of what each individual can do (Liu et al., 2011). Based on this viewpoint, team's KS may affect EC more than individual

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pattern of the KS behavior exhibited by an entire work team promotes EC by improving the LMX relationships with supervisors and that the effect of team's KS affecting EC through LMX will be more than individual KS. So, the hypothesis was raised: and EC.

H2-1: There is a mediation effect among LMX, team intention to share knowledge (TISK)

KS. In addition, similar to individual level KS, which promotes LMX quality, team's KS

might enhance LMX quality. That, in turn, affects EC. This study proposes that the overall

H2-2: The mediation effect of the team level KS on EC through LMX will be stronger than that KS to EC through LMX at individual level.

TISK and Team Creativity (TC)

Amabile (1996) argued that it is the basis of four-stage creative process to share knowledge among team members. In order to develop team creative potential, KS acts an important role within team (Zhang et al., 2011). Several researchers have emphasized the role of KS on TC (Kessel et al., 2012). For instance, a study stressed KS among group members affected group creativity in China. Kessel et al. (2012) also confirmed that is positively related to TC in healthcare work teams. This study speculated that KS affects creativity at both team member level and team level. Therefore, we submitted:

H3: TISK positively affects TC.

TC and TI

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In the process approach, creativity is seen as original and useful ideas from employee or work team. It is different from innovation. Innovation is to realize creativity successfully (Amabile, 1988). Researchers suggested creative subordinates will be more creative ideas to problems and present a suitable implementation plan for creative ideas (Gumusluoglu and Ilsev, 2009). Previous research found if creative staffs successfully transfer their creative ideas to their colleagues through idea generation and implementation, such individual level creativity is able to develop innovative products at organizational level (Shalley et al., 2004). Previous empirical research also supports creativity can improve innovation. For example, in an empirical study to investigate team innovation in primary care teams, Somech and Drach-Zahavy (2013) observed that TC could promote innovation implementation. Thus, we raised the following hypothesis:

H4: TC and TI are positively related.

#### 

#### Methods

#### Research Setting, Sample, and Procedures

Job performance benefits greatly from teamwork (Murakami, 1995), and excellent services are more likely to occur when people are working together (Berry, 1995). Therefore, the study collected empirical data from supervisors and subordinates working in the theme park E-DA work team, the largest theme park in Taiwan as of May 2013. The study adopted

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cross-sectional survey. Initial interviews with a senior manager were conducted to describe the study and to request their support. In total, 60 teams' questionnaires were received which returned through a key informant. Each team was given six questionnaires. One questionnaire was filled out by the team leader and five by team members. These participants performed various jobs, including customer service, equipment operating, presenting, sales, cooking. The team members provided all the information regarding research variables, except the team level outcome variable, which was rated by the team leaders at this time. Individuals and teams matched data on independent and dependent variables. This study uses 60% response rate as a threshold for whether or not the team data should be included in the further analysis (Somech and Drach-Zahavy, 2013). So, the data from 43 teams will be used for a further analysis.

On average, five members from every team participated in our research. The team leaders were aged approximately 29 years (SD = 6.7), mostly male (59.6%), and had worked for more than 3 years (SD = 0.8) in their current organization. The team members were approximately 26 years old (SD = 5.7), mostly female (59.4%), and had worked in the organization for 2 years on average (SD = 0.9). Table 1 demonstrated demographic data of respondents.

#### \*\*\*\*\*\*\*\*\*\* Insert Table 1 here \*\*\*\*\*\*\*\*\*\*

Our research prepared and administered two sets of survey questionnaires to group

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supervisors and subordinates for decreasing the impact of common method error (Yoshida et al., 2014). TI was rated by group supervisors, and the team members completely rated the independent variables and EC. There are identification codes on the questionnaires to guarantee employee anonymity and confidentiality and also to match and group data from leaders and subordinates for analysis.

#### Measures

The measures about our study will be provided in this section. In addition to the team outcome, all questions were evaluated by the team members on a 7-point Likert scale.

*EISK:* KS can be considered an individual behavior and has not been easily measured. Personal behavioral intention is a significant predictor of creativity, and employees' KS behavior is decided by personal KS intention (Chow and Chan, 2008). Previous empirical studies have used employee intention to evaluate KS (e.g., Liu et al., 2011). The EISK is defined as the degree of the belief of an employee that he or she will engage in KS and followed a 5-item scale to assess (Chow and Chan, 2008), with a Cronbach's alpha of .92. KS was self-reported. Although the measurement method will limit research explanations and prevent causal inference, self-reported KS behaviors was used in the previous studies (Wang and Noe, 2010). *LMX:* The degree of team member perceives that the relationship with their team leader as being based on mutual trust, respect, and obligation, which taken together influence the relationship between employees and their supervisors. We followed a 7-item

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questionnaire to assess LMX (Janssen and Van Yperen, 2004). The Cronbach's alpha of LMX was .91. EC: The degree of employee perceives that they produce original and useful ideas about products, services, procedures, and work processes in the work environment. A 13-item questionnaire was used to assess (George and Zhou, 2001). The Cronbach's alpha of EC was .89. Creativity was self-reported. Some researchers oppose this approach and suggest that creativity should be assessed by supervisors (Binyamin and Carmeli, 2010) or peers (e.g., Raja and Johns, 2010). However, a large portion of relevant research still uses self-reported measures for creativity (Coelho and Augusto, 2010) as it is easier for an individual to assess his or her creative performance than others. TI: TI is defined as proposing fresh operation modes, management ways, and technique that can enhance existing operation processes. Team leaders evaluated their team innovation performance following a 4-item scale to evaluate (Wang and Ahmed, 2004), with a Cronbach's alpha of .76. Control variable: Age, gender, and tenure were considered in our study because they were related to employee creativity in previous studies (e.g., Černe et al., 2013). Gender was classified under a dummy code (0 = female and 1 = male).

#### Results

#### Preliminary Analysis of Data

This study used AMOS 20 software to assess the suitability of measurement instruments. We examined that the loading path of each item for Convergent validity and unidimensionality.

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Loading paths exceed 0.50 which means statistically significant. Through a series of procedures to purify the measurement questionnaires, six questions were deleted, and the remaining 20 questions were used to measure four constructs, namely EISK, LMX, EC and TI.

Table 2 demonstrated the descriptive statistical analysis of the present study. CRI and AVE were adopted to ensure validity and reliability of our measuring instrument when values exceeded the thresholds (.50 for AVE and .70 for CRI) (Černe et al., 2013). Table 3 provides evidence for the validity and reliability.

#### \*\*\*\*\*\*\*\*\*\*\* Insert Table 2 here \*\*\*\*\*\*\*\*\*\*

#### \*\*\*\*\*\*\*\*\*\*\* Insert Table 3 here \*\*\*\*\*\*\*\*\*\*

#### Level of Analysis

This study explores two hierarchically nested levels: staff (level-1) and team (level-2). Staff level has 215 team members which nested within team level which includes 43 teams. Each team has only one team leader. The team member is responsible for providing data such as their creative performance, the perception of LMX and the intention to share their own knowledge. In the present study, the above data was used as a level 1 analysis. On the other hand, team leaders provide data about team innovation performance as a level 2 data analysis. In addition, the variables of EC and EISK were aggregated at the team level.

Rousseau (1985) suggested whether a study variable can be aggregated should be justified

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using theoretical and empirical arguments. The researcher also stated that:

For many reasons, team members may be expected to share perceptions of their work environment, such as team climate. Members' frequent interactions, shared tasks, the clear delineation of team boundaries, and the long-standing establishment of most of the teams should allow members to develop collective views, thereby creating shared norms and perceptions (Jehn et al., 1997). It is therefore critical to demonstrate high within-team agreement to justify using the team average as an indicator of a team-level variable (James et al., 1993) (Somech and Drach-Zahavy, 2013, pp. 696).

Empirically, to check the viability of TISK and TC was suggested (e.g., James et al., 1984). Therefore, rwg, ICC1, and ICC2 were calculated. The rwg value of TISK and TC was .87 and .84. The ICC(1) and ICC(2) for TC were .32 and .67. All of the above values were acceptable (e.g., Bliese, 2000). Therefore, EC and EISK variables have to perform aggregation.

Individual Level Analysis: Tests of Simple Mediation. This study used bootstrap analyses to test the mediation effect in our research model (Hayes, 2009). We used the SPSS application to examine a simple mediation model for test Hypothesis 1 because the indirect effect will be estimated quickly. To test a simple mediation model with EC as the outcome variable, the consequences were demonstrated in Table 4. We observed a total statistical effect of EISK on EC (b = .43, SE = .05, p < .05). We also observed a direct effect of EISK

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on LMX (b = .52, SE = .07, p < .00) and that of LMX and EISK on EC (b = .17; b = .34). Furthermore, the estimated value was .09 which supported that there was an indirect effect of EISK on EC via LMX. In addition, this research utilized the test from Sobel (1982) and the asymmetric confidence limits method to examine the mediation effect. We found that partial mediation model was present (z = 3.09, p < .001). Furthermore, because asymmetric confidence limits method provides better evaluation for Type I error (Yoshida et al., 2014), thus we used it to further examine H1 by PRODCLIN software package (MacKinnon et al., 2007). An indirect effect is present if zero lies outside the 95% confidence limits. However, unlike conventional tests of the indirect effect (e.g., the Sobel test), the asymmetric confidence limits method does not assume normality, and providing a more accurate and powerful test of mediation (MacKinnon et al., 2007). We observed that the EISK affected positively LMX (b = .52, SE = .07, p < .00) and LMX affected positively EC (b = .17, SE = .05, p < .00). Indirect effect (.52 \* .17) was thus .09 with 95% confidence limits between .03 and .16. The absence zero of was not included in the upper and lower confidence limits. These results support H1.

#### \*\*\*\*\*\*\*\*\*\*\*\* Insert Table 4 here \*\*\*\*\*\*\*\*\*\*

**Cross Level Analysis: Tests of Mediation and Direction.** This study used HLM 6.0 software to test the existence of a multilevel model of our research structure and the feasibility of cross level mediation relationship among TISK, LMX, and EC.

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First, we examine whether there is a multilevel structure for the proposed model. The study treated EC and LMX as dependent variables in the intercept-only model, we found that intra-class correlation coefficients (ICCs) (1) were .32 and .35 at the team level, which indicates that there are 32% and 35% of creativity variance and LMX could be attributed to the group. The results showed that when employees come from the same group, they may have similar characteristics or performance. Hayes (2006) recommends the use of multilevel modeling in situations where ICCs (1) exceed .05. As such, the multilevel analysis the study used was appropriate.

Furthermore, to test H2-1, multilevel models were built by previous studies (e.g., Hox, 2010). All of the variables were grandmean centered, as advocated by Černe et al. (2013). Table 5 demonstrated the fixed effects of all research patterns. Three steps were developed to test H2-1. First, the present study used TC as a variable to establish Model 1. TISK was added to Model 1 (Model 2) and examined analysis results. The effect of TISK on EC was positive and significant (Model 2:  $\gamma = .55$ , SE = .12, p < .001). Second, to test the effect of TISK as a team-level predictor of LMX, Model 4 was developed with LMX as its dependent variable. The study found that TISK affected positively LMX (Model 4:  $\gamma = .77$ , SE = .15, p < .001). Finally, to test the effect of TISK and LMX on EC, we added LMX to Model 2 (Model 3). The results demonstrated that TISK and LMX were positively related to EC ( $\gamma = .59$ , SE

<sup>= .12,</sup> p < .001;  $\gamma = .28$ , SE = .07, p < .001).

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Model 3 demonstrated the effect of TISK on EC only increased by .04 after adding LMX as a mediator. Model 3 indicated that the relationship between TISK and EC remained significant, although to a higher degree, indicating partial mediation.

In addition, the asymmetric confidence limits method was implemented to examine mediation effect. Table 5 summarizes cross level mediation analysis outcomes. Because we were interested in the potential between-group and within-group effects, we centered the mediator variable LMX on the sample mean (e.g., Mathieu and Taylor, 2007). We observed that TISK was positively related to LMX ( $\gamma = .77$ , SE = .15, p < .001) and LMX was positively related to EC ( $\gamma = .28$ , SE = .07, p < .001). The indirect effect (.77 \* .28) was thus .21 with 95% confidence limits between .10 and .36. The absence zero of was not included in the upper and lower confidence limits. The above results supported H2-1. Furthermore, to compare the mediation effect of individual and multi-level (H1 and H2-1), the results demonstrated that the mediation effect of the team level KS on EC through LMX is stronger than that KS to EC through LMX at individual level. The above results supported H2-2.

#### \*\*\*\*\*\*\*\*\*\*\* Insert Table 5 here \*\*\*\*\*\*\*\*\*

Team Level Analysis: Tests of Simple regression. H3 and H4 proposed that TISK can positively affect TC and TC positively promote TI. The consequences indicated TISK was positive significantly related to TC (Model 1:  $\beta = .52, p < 0.01$ ), thus supporting H3. By contrast, TC was not significantly related to TI (Model 2:  $\beta = .10, p > .05$ ), thus

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rejecting H4.

#### \*\*\*\*\*\*\*\*\*\*\* Insert Table 6 here \*\*\*\*\*\*\*\*\*

#### Discussion

#### Conclusions

This study contains three different levels of variable relationships. In order to examine their relationships, we use there different analysis method. At individual, multi and team level, the SPSS application, HLM, and simple regression analysis of SPSS were used, respectively. The present study yielded several crucial findings about the relationships among KS, LMX, creativity, and innovation in the theme park work teams studied. This study finds some important ideas that contribute to the construction of the theory. Moreover, the study can provide some practical suggestions to work team supervisors and subordinates in improving the creative capacity of individuals and innovation teams.

#### Theoretical Implications

Some theoretical contributions were presented below:

First, we extend the KS and creativity literature by aggregating these factors as team-level variables and investigating their impact on team and individual variables in our research model, as suggested by Jehn et al. (1997). At the lower level, EISK can increase EC and promotes EC when acting as a team variable (TISK). Notably, KS significantly affects EC when playing a higher level role than when playing a lower-level role; thus, higher level KS

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variable cannot be omitted when exploring the effect of KS on creativity. The results of our empirical test support the claim that how creativity affects innovation is necessary to further test from different perspective (e.g., Geng et al., 2014).

Second, we promoted LMX field. Several studies have provided evidence that a high quality LMX stimulates creativity (e.g., Chughtai, 2014; To et al., 2015). However, it was rare to know that KS behavior relates to creative outcome through which LMX. This study's empirical test results indicated that KS is a possible mechanism by which high quality LMX translates into higher creativity. We also discussed the role of LMX in both the single- and cross-level paths. The results demonstrated that LMX is crucial for bridging KS and EC at personal and cross levels. Furthermore, the effect of the TISK on LMX was obviously higher than that of EISK. We conducted further analysis and observed that the cross-level mediation effect of the TISK on EC through LMX is stronger than that in individual-level paths from EISK to EC through LMX. In addition, the effect of cross-level mediation was double that of the individual mediation effect. Few studies (e.g., Yoshida et al., 2014) have analyzed differences in the same research path at different levels. We attempted to bridge this research gap and revealed that this issue warrants further examination.

Third, our findings advised a good cycle in which daily team members share and disseminate work-related knowledge among one another to promote their creative capacity.

Finally, the proposed relationship between TC and TI is not significant. Although our

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outcomes agreed with that of former studies, (e.g., Gumusluoglu and Ilsev, 2009; Baron and Tang, 2011), they did not fit our expectations. Several factors might explain these findings. Burbiel (2009) advocated that in commercial or scientific settings, validation is necessary because only few ideas can be realized. In addition, although creativity is assumed as one of the factors that affect innovation, numerous creative ideas cannot be commercialized or infeasible (e.g., McMullen and Shepherd, 2006). If creative ideas of employees are not considered useful, they are not implemented successfully or converted into actual innovation in the team. The failure of the relationship between TC and TI might be attributable to research methodology because 58.9% of the employee had work tenure of up to 1 year. Therefore, the participating employees might not have had sufficient time to contribute to team innovation although they are more creative, which resulted in a failure of the link between creativity and innovation.

#### Practical Implications

According to the consequences of the present study, some practical implications were presented below:

First, this study provided evidence that higher-level KS has a greater impact on creativity and LMX than lower level knowledge. Thus, encouraging KS in a team is crucial because a combination of the knowledge of individuals surpasses the sum of what each individual can do (Liu et al., 2011). Employees must realize that the path toward creativity might be

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uncertain and risky and they require support from their supervisors to overcome obstacles such as failure risk. KS is a favorable strategy for employees because it is regarded as the core of KM-related research (Hendriks, 1999), which receives more attention from most organizational leaders. If employees open their mind and share their know-how or "know-why" with peers, this might help leaders to build a KM system; thus, their supervisors perceive the contribution of their subordinates in the team, which in turn promotes a leader-members relationship that has the potential to improve employees' creativity.

Second, the effect of a TISK on LMX is obviously higher than that of EISK. The results meant that the knowledge interaction behavior of team subordinates is very important for developing the supervisor-subordinates relationship quality at both employee and team level. Moreover, KS in a team is likely to result in a higher-quality LMX relationship. Overall, the study supports that EISK and TISK can improve EC and TC, which supported the idea that the development of KS behavior in the team should be strongly advocated to enhance employees' creativity and leader-member relationship quality.

Third, the proportion of the study sample (theme park team members) with an average annual basis of less than one year may be a problem with the high turnover rate of employees in the case. The reason for the high turnover rate is nothing more than the welfare, promotion or working environment provided by the organization cannot meet the expectations of employees. This is not only a waste of organizational training costs, but also cannot improve

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the staff's commitment to the organization or organizational citizen behavior. The results of the study also show that TC can improve TI, but the effect is not significant. This conclusion may be attributed to the high turnover rate caused by the staff. Excessive employee turnover rate, resulting in the staff has been in the status of adaptation and learning the current work, and therefore even if the staff itself has a high degree of creativity, but because of the current work content has not yet in-depth understanding, so that dissatisfaction with the customer may not mention a better solution, therefore, presents this result in the conclusion of the study. Case companies should be careful to deal with this issue, in-depth understanding of the staff's voice, is committed to improving the existing system, shorten the gap between staff expectations and reality, so that employees look to the future vision. So employees will be willing to stay in the organization, contribute to the organization director.

Fourth, the study found team member level KS and creativity can be upgraded to the team level, showing that the team members of the case company in the KS and creativity have higher degree consistency; in addition, our research also found the case company's work teams have a high degree of KS and creative atmosphere. Case companies should encourage and guide so that they can form a corporate culture. Like Walt Disney's, the company also teaches that the company should encourage employees to take risks and make them a culture that contributes to the development of innovative ideas (Capodagli and Jackson, 1999). Therefore, the case company should also encourage employees to make creative and

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innovative ideas to enhance the competitive advantage of enterprises.

Fifth, unlike the general manufacturing and service industries, the theme park focuses on allowing visitors to the park to feel the atmosphere created by an industry (King, 1981). For example, Disneyland created a kind of atmosphere like a fairy tale into the world. This whole atmosphere creates a need for every member of the organization with a high degree of loyalty and commitment. Teamwork is seen as a way to promote loyalty, motivation, and commitment (Gopalakrishnan et al., 2010). We found team KS can not only enhance the relationship between leaders and subordinates but also to stimulate employees' creativity. This effect is more effective than individual KS. It is recommended that the case company should instill the importance of the team to consolidate the cooperation between the team members.

Sixth, even the pioneer of the theme park, Walt Disney Company also recognized creativity must be able to be cautious and continuous management (Capodagli and Jackson, 1999). This study suggests that case companies should establish mechanisms that allow employees to present creative ideas that must be long-term, persistent, and supported by the company's top executives. Each employee's creative ideas should be respected and explore its feasibility, once the company received and produce specific results, should be rewarded to enhance the staff intention to put forward the motive of creative ideas, and thus help organizations break through the current situation.

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Finally, to investigate how KS behavior affects LMX and creativity is rare in Taiwan in the past. Moreover, few studies have conducted research on the theme park industry. This sector is particularly crucial for Taiwan because theme parks are a critical component of the tourism industry and their development is a major government project. All stakeholders require that managers and employees develop individual, team, and organizational competitiveness in this industry, which otherwise will be eliminated rapidly because of strong competition.

#### Limitations and Future Research

This study has several limitations. First, team supervisors assessed TI. It is more appropriate to adopt more objective measurement method, such as the number of new product development (e.g., Baron and Tang, 2011). Second, our study, the sample was from a Taiwan theme park to examine the relationships among research constructs at different levels using a sample of only 43 teams and 215 team members. Under this premise, the interpretation of the results of the study must avoid excessive interpretation. Third, we surveyed the willingness of participants to share knowledge and not employees' real behavior. Although it is appropriate that the KS intentions have to be treated as real KS behaviors in the KS research field (e.g., Taegoo et al., 2013), measuring real behavior will provide more effective results to be drawn, particularly when captured from multiple perspectives (Effelsberg et al., 2014). This represents a crucial avenue for future research. Finally, our study argued that KS influences LMX and, in turn, affects EC. Based on our study is not experimental or longitudinal research.

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the causal relationships proposed in this study cannot be proven. KS may also be affected by

LMX. Future studies are required to verify reverse and reciprocal causality. To generalize our

theoretical model, additional studies should include samples obtained from various

participating teams with a wide range of scope such as diverse companies (C<sup>\*</sup>erne et al., 2013)

in future research.

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## Figure

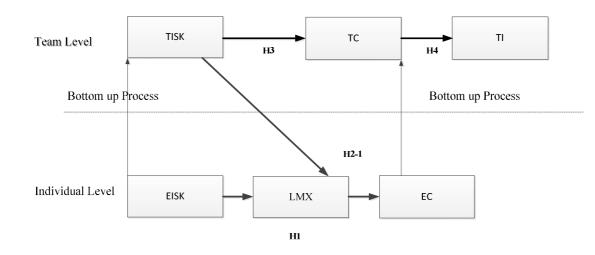


Figure 1. Research framework

## Tables

Table 1.	Demogra	phic of	research	data
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	Team supervisor	Team subordinates
	N=43	N=215
Age		
Up to 30	61.7%	83.1%
31-35 years	21.2%	9.6%
36-40 years	8.6%	3.3%
Over 41 years	8.5%	4.0%
Gender		

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Male	59.6%	40.6%
Female	40.4%	59.4%
Work tenure		
Up to 1 years	6.4%	58.9%
2–3 years	59.6%	36.1%
Over 4 years	34.0%	5.0%

 Table 2. Correlation matrix

No	Variable	Mean	Standard deviation	1	2	3	4	5
Теа	am-level variab	les						
1	TC	5.13	.52	1				
2	TI	5.75	.76	.07	1			
3	TISK	5.77	.58	.58**	.26**	1		
Ind	lividual-level va	riables						
1	Age	24.41	5.82	1				
2	Tenure	1.73	.97	.44**	1			
3	EISK	5.80	.86	.12	.03	1		
4	LMX	5.52	.98	06	03	.45**	1	
5	EC	5.13	.78	.10	00	.46**	.38**	1

N=43 teams comprising of 215 employees; \*P < .05, \*\* P < .01

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 Table 3. Reliability

Construct	items (final)	CRI	AVE
EISK	5	.93	.73
LMX	7	.94	.70
EC	11	.94	.58
TI	3	.86	.68

Table 4. The results of simple mediation model

	Mediator LMX						Outcome EC					
	b	SE	t	р	95%	%CI	b	SE	t	р	95%	6CI
					Lower limit	Upper limit					Lower limit	Upper limit
Total effect							.43	.05	8.05	.00	.33	.54
Direct effects												
Gender							.37	.09	4.34	.00	.18	.55
EISK	.52	.07	7.38	.00	.38	.65	.34	.05	5.84	.00	.23	.46
LMX							.17	.05	3.43	.00	.07	.27
Indirect effect	(bootstra	apping)					М	SE		95%	%CI	
										Lower limit	Upper limit	
							.09	.03		.03	.17	

Note. Hypothesis 1 was examined by using the SPSS application; N=215; Bootstrap sample size=5,000; 95% CI

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		LMX		
	Model 1	Model 2	Model 3	Model 4
Employee level				
(level 1)				
Intercept	5.15**	5.15**	5.16**	5.53**
gender	.26*	.24*	.24*	
EISK				
LMX			.28**	
Team level				
(level 2)				
TISK		.55**	.59**	.77**
TC				
Deviance	475.25	458.03	435.71	553.52
n(level 1)	215	215	215	215
n(level 2)	43	43	43	43

 Table 5. Results by multilevel analysis

Note. Hypothesis H2-1 and H2-2 were examined by using HLM analysis; \*P < .05, \*\*P < .01

 Table 6. Simple regression analysis

		Model 1	Model 2
		TC	TI
TISK	β	.52**	.10
ТС	t	10.48	1.06
	$R^2$	.34	.005

Note. Hypothesis H3 and H4 were examined by using simple regression analysis of SPSS.

#### **Biographies:**

### Authors' Biographical note

Dr. Shu-hsien Liao is a professor in the Department of Management Sciences, Business and Management College, Tamkang University, Taiwan, Republic of China. He received the Ph.D. degree in Operational Research/System Group of Business School, University of Warwick, U.K., in 1996. His publications have appeared in the Decision Support Systems, European Journal of Operational Research, Annals of Operations Research, Journal of the Operational Research Sciences, Information processing & management,

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