

# Leader-member exchange and employee creativity

## Knowledge sharing: the moderated mediating role of psychological contract

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419

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### Abstract

**Purpose** – The purpose of this paper is to test the mediating role of LMX in the relationship between knowledge sharing and employee creativity and the extent to which this mediating role is moderated by transactional psychological contract.

**Design/methodology/approach** – A total of 286 employees working at the theme park in Taiwan and then analyzed using a structuring equation model with SPSS 12.0, LISREL 8.8 and SPSS PROCESS.

**Findings** – Results suggested that LMX mediated the relationship between knowledge sharing and employee creativity. Also, results suggested that transactional psychological contract moderated this mediating pathway: low transactional psychological contract increases the mediating role of LMX. Furthermore, the study showed that LMX can buffer the negative effects of transactional psychological contract on employee creative performance.

**Originality/value** – The originality of this study is to explore whether there is a moderated mediation model relationship among research variables and contributed to the LMX literature because there are few studies to discuss how knowledge sharing might stimulate creative outcome through LMX.

**Keywords** Knowledge sharing, Psychological contract, Leader-member exchange, Employee creativity, Moderated mediation model

**Paper type** Research paper

### Introduction

Previous researchers paid more attention to discuss visitors' behavior in theme park industry (e.g. Cheng *et al.*, 2014). For example, Cheng *et al.* (2014) indicated that there are seven factors influencing visitor brand-switching behavior. In fact, how to satisfy customers needs employees to contribute their creative performance. Frontline employees are important to ensure customer satisfaction (Bitner *et al.*, 1990). Frontline employees' creativity can be of great value for service organizations (Coelho *et al.*, 2011). However, there are fewer articles to explore how to increase employees' creativity capability in theme park industry.

Some previous studies have been conducted on the impact of employee creativity and innovation in the field of general management and hospitality, hence the call of some researchers and practitioners for the need to analyze the influence of creativity and innovation on service organizations (Hon and Lui, 2016). Empirical evidence has revealed that an organization wants to support innovation to encourage employee creativity (Černe *et al.*, 2013). Some studies on knowledge sharing among employees have indicated that knowledge is a key advantage that employees possess for influencing their organization to implement changes (Wynder, 2007; Kessel *et al.*, 2012). Because diverse knowledge serves as the foundation for creativity in an organization, it is necessary for employees to take the initiative on sharing this knowledge (Perry-Smith, 2006). In addition, compared with hard characteristics, leadership is a personal behavior that is likely to be affected by interpersonal interactions (Cheung and Wong, 2011; Edú-Valsania *et al.*, 2016). In various leadership, leader-member exchange (LMX) stresses the importance of building relationships between mutual respect and trust on both supervisors and their subordinates



(Gerstner and Day, 1997), whereas other leadership focuses more on a top-down, one-way relationship between these two parties (Zhao, 2015). Therefore, this study determines whether the use of LMX in employee knowledge sharing could affect the relationship between supervisors and their subordinates. A psychological contract is a critical factor to determine the effort that employees exert in their work (Landry *et al.*, 2014). Studies also have shown that both full-time and part-time employees are deeply concerned about a transactional psychological contract from their supervisors (Erkutlu and Chafra, 2016). Therefore, this study investigates the role of a transactional psychological contract if it can enhance creativity in employees.

The research scope aims to discuss the relations among knowledge sharing, LMX, transactional psychological contract, and employee creativity in theme park employees in Taiwan. This study proposes that employee knowledge-sharing behavior may increase LMX quality, which, in turn, enhances employee creativity. We constructed a research model on the basis of the proposed research hypotheses (Figure 1) and addressed three research questions:

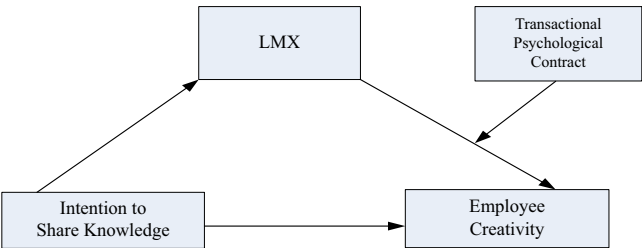
- RQ1.* Does knowledge sharing relate to employee creativity through the mediating effects of LMX?
- RQ2.* Does the transactional psychological contract moderate the relationship between LMX and employee creativity?
- RQ3.* Does the transactional psychological contract moderate the mediating pathway?

This study investigates two research issues as the followings: first, this study examines the relationships between transactional psychological contract and LMX. In addition, this study considers that the relationship between LMX and creativity might be weakened by employee's psychological contract. Second, this study explores a moderated mediation model that transactional psychological contract plays a moderated mediating role among intent to share knowledge, LMX and employee creativity.

**Research model and hypothesis development**

*Intention to share knowledge and employee creativity*

In the past few decades, researchers have conducted in-depth studies on creativity for various industries, and managers, especially those in the tourism industry, have also strived to encourage employees to increase their creativity at a workplace (Hon *et al.*, 2013). Pikkemaat and Schuckert (2007) concluded that a successful theme park requires a permanent process of developing and implementing innovations to attract new customers and retain them. To support this finding, Shalley *et al.* (2004) suggested creativity as a first step in the innovation because creativity provides a competitive edge in a dynamic business environment; in other words, without creativity, competitiveness would be severely limited. Merlo *et al.* (2006) also believed that the service industry such as the



**Figure 1.**  
Research model

tourism and hospitality industry, which has a more dynamic environment than other industries; organizations must encourage employee creativity to develop new services or products for facing rapidly changing customer demands derive and keeping their primary competitive advantage. Therefore, how to increase employees' creativity become a surviving object to the theme park.

Previous studies on creativity fall into one of the following two levels: individual (e.g. Binyamin and Carmeli, 2010), and team (e.g. Tang, 2010). Most researchers agree that individual creativity is the starting point as well as a prerequisite for organizational innovation (Amabile *et al.*, 1996). Therefore, most research on creativity focuses on the individual level. In addition, many researchers regard individual creativity a presentation of extrinsic outcome (e.g. Hu *et al.*, 2009). For example, George and Zho (2001) argued that creativity can be deemed novel and useful ideas in products, services, ideas, processes, or procedures which are developed by employees in a complicated social system where they collaborate with others. Tsai *et al.* (2015) proposed four dimensions for the working environment: knowledge sharing, motivation, procedural justice, and promotion because employees need encouragement in order to increase their creativity, so the organization can do so by providing a conducive working environment with the four dimensions mentioned above. Also due to the uncertainty and risk of failure, creative employees need to pay more efforts, courageous, and be persevered in their works (Hon and Lu, 2015). Therefore, how to promote employees' confidence on this aspect becomes a critical factor that influences employee creativity.

Knowledge is a very important resource for preserving valuable heritage, learning new techniques, solving problems, creating core competencies, and initiating new situations (Liao and Wu, 2009). Diverse knowledge serves as the foundation for creativity in an organization; however, it is necessary for employees to take the initiative sharing their knowledge with others. Kessel *et al.* (2012) also stressed that Knowledge may be viewed as a valuable resource that is shared by individuals and then becoming the organization's property when shared. This indicates that knowledge is essential and powerful but it has to be successfully exchanged. Therefore, this study explores how employees make use of knowledge sharing as a strategy to influence their organization.

Knowledge generates, enhances, increases, enables, and facilitates creativity (e.g. Wynder, 2007). Currently, organizations increasingly emphasize teamwork, and various forms of job sharing ensure that knowledge workers interact with others to get their job done (Perry-Smith, 2006). Tang (2010) indicated that knowledge sharing creates a team-knowledge environment, which encourages "team divergent thinking" and creativity. In the tourism industry, knowledge sharing is important particularly because they need rapid information and knowledge exchange to create creative ideas, which in turn satisfy customers (Tan *et al.*, 2014). The empirical study of Tsai *et al.* (2015) also indicated that knowledge sharing can improve the students' creative performance, particularly in the context of the tourism and hospitality management. Therefore, we propose the following hypothesis:

*H1.* Employee intention to share knowledge is positively related to employee creativity.

#### *Mediating role of the LMX*

Empirical studies have suggested that leadership, as one of the key factors in an organization, influences employee creativity (Chen and Chang, 2013; Hon and Chan, 2013). Byrne *et al.* (2009) believed that team or organization leaders have a substantial influence on the climate for creativity in various important ways which is an essential part of the leadership of creative efforts because it helps keep the creative worker motivated and engaged. Cheung and Wong (2011) argued that leadership is a personal behavior that is likely to be affected by interpersonal interactions. Byrne *et al.* (2009) argued that team or

organization leaders considerably influence the environment for creativity in various ways. A conducive business environment is essential to encourage creative efforts because it helps motivate and engages creative workers (e.g. Tsai *et al.*, 2015). When the interpersonal relationship between supervisors and subordinates improves, subordinates receive more support and help from their supervisors and perform their job more effectively. According to previous studies, the level of the relationship quality in the exchanges that develops between subordinates and their supervisor are predictive of employee job outcomes (George and Zho, 2001).

LMX stresses the importance of building relationships based on mutual respect and trust between supervisors and their subordinates (Gerstner and Day, 1997), whereas other leadership focuses more on a top-down, one-way relationship between these two parties. Dansereau *et al.* (1975) considered that one leadership approach on the relationship between leadership quality and members is the LMX approach. Their research assumed that employees take an initiative knowledge sharing strategy to enhance the trust relationship between superiors and subordinates, which, in turn, to obtain more support and resources from their supervisor and assist personal creativity development. The theoretical core of LMX emphasized the construction of vertical trust relationship, thus, this study adopted LMX theory to explore whether the employee creativity can be enhanced by knowledge sharing via LMX. The issue is rarely mentioned in previous related research.

Although knowledge sharing is good for creativity, new ideas mean risks and uncertainties. So, to make employees' confident and to contribute new useful ideas is an essential issue for the organization. Scholars investigated the importance of creativity in the tourism and hospitality industry shown that the workplace atmosphere may affect employee creative behavior (Richards, 2011; Hon, 2013; Horng *et al.*, 2013; Wang *et al.*, 2014). For example, Chiang and Hsieh (2012) found that when employees perceive organizational support, they experience positive feedback at work and feel confident that they can finish their work by themselves.

Numerous studies on knowledge sharing between supervisors and employees have indicated that knowledge is a key advantage that employees possess to influence their organization to implement changes (Wynder, 2007; Kessel *et al.*, 2012). In a study on enabling organizational members to learn from failures, Gittell (2002) found that coordinating or knowledge-sharing mechanisms can support high-quality relationships. Similarly, in an empirical study, Carmeli and Gittell (2009) described knowledge sharing as an indicator of the quality of a team's relationship, which means that knowledge sharing is a crucial part of the team's relationship. Kessel *et al.* (2012) argued that knowledge sharing is an interactive communication process between team members who can rely on each other to accomplish common goals. Therefore, supervisors are pleased with the high level of knowledge sharing among team members since it leads to improve relationships with their subordinates.

Therefore, we propose that if employees share their knowledge, they are more likely to receive the aforementioned resources and support because they have greater chance to improve interpersonal relationships with their supervisors and, in turn, improve their creative capability. Therefore, we propose the following hypothesis:

- H2. LMX mediates the relationship between employee intention to share knowledge and creativity.

#### *Moderating role of transactional psychological contract and the moderated mediation model*

The relationship between an organization and its employees is mostly based on the psychological contract that they have mutually agreed to and signed. A psychological contract is a critical factor determining the effort that employees exert in their work (Landry *et al.*, 2014). Employees have beliefs on the psychological contract concerning the nature of the exchange

agreement between the employee and the organization (Rousseau, 1989). Psychological contract has seen an interpretative factor for understanding employment relationships and is considered, by some researchers, as central to understanding employee attitudes and behaviors (Conway and Briner, 2002a). Aggarwal and Bhargava (2009) noted that psychological contract refers to what an employee owed to the organization and what expected from an organization in return. Most researchers of such issues focus on the psychological contract (e.g. Sharkie, 2005), which can largely determine employee behaviors and attitudes. Traditionally, psychological contracts can be classified into two types: relational and transactional psychological contracts. The transactional psychological contract is based on economic social exchange such as payment, reward, or promotion, and relational psychological contracts, which are based on an affective social exchange that is not purely economic but also includes terms of loyalty in exchange for growth or support in the organization (Robinson *et al.*, 1994). However, full-time and part-time employees may have different perceptions on a psychological contract. For example, a supermarket sample, Conway and Briner (2002a) indicated that part-time and full-time employees have a different perceptions of the psychological contract which is likely to result in, or increase already existing, differences in attitudes and behaviors for certain outcomes. Freese and Schalk (1996) also addressed that part-time and full-time workers have a different concerning on a psychological contract. Their study focused on the transactional contract because full-time and part-time employees have a different perceptions of relational psychological contract but have no difference on the transactional psychological contract (McLean *et al.*, 1998).

Henderson *et al.* (2008) demonstrated that it is as part of an effort to illuminate about how LMX shape employee attitudes and behaviors in the employment relationship, there has been a recent interest in integrating the LMX and psychological contract. Therefore, it is worth to explore the role of psychological contract among LMX and creativity. Graen and Uhl-Bien (1995) postulated that an offer to another to build a partnership of LMX is based on these three factors: respect, trust, and obligation. LMX theory suggests that the quality of the exchanges that develop the relationships between employees and their leaders are predictive of performance-related and attitudinal job outcomes, especially for employees (Gerstner and Day, 1997). Moreover, high-quality exchange relationships are characterized by mutual trust, respect, and obligation that generate influence between an employee and his or her supervisor (Janssen and Van Yperen, 2004).

Jamil *et al.* (2013) indicated that transactional psychological contract can be considered as a moderator on the relationship between feelings of violation and burnout which this relationship will be stronger when the transactional psychological contract is existing a high level. If employees realized that their organization did not fulfill a psychological contract, anger, mistrust, and feelings of betrayal will arise, which, in turn, alter the traditional fabric of employee-employer relationship based on the edifice of trust, loyalty, commitment, and long-term relationship (Jamil *et al.*, 2013). From the perspective of social exchange theory, if employees perceive a negative imbalance on employee' expectations of their organizations, they may have negative responses such as reducing their trust, loyalty, and obligation with the organization. Therefore, an employee with high transactional contract is more likely to exacerbate the LMX quality because trust is one of the important parts to build high-quality LMX (Graen and Uhl-Bien, 1995), which, in turn, decrease the employee creativity. Therefore, we proposed the following hypothesis:

- H3. The transactional psychological contract moderates the relationship between LMX and employee creativity.

#### *Moderated mediating role on a transactional psychological contract*

Furthermore, the preceding discussion suggested that a moderated mediation model is comprehensively explore the relationship between knowledge sharing and employee creativity.

In this regard, first, we propose that LMX is a crucial mediator of the relationship between knowledge sharing and employee creativity, and knowledge sharing affects employee creativity indirectly through LMX. Second, we argue that the effect of LMX on employee creativity depends on how employees perceive their transactional psychological contract. More specifically, employee knowledge sharing indirectly affects employee creativity, and LMX varies for different levels of perception of transactional psychological contract.

Jamil *et al.* (2013) argued that employees with a high transactional psychological contract are more concerned with an economic exchange in this relationship. Therefore, employees with a high transactional psychological contract are more likely to exacerbate LMX quality between a supervisor-subordinate relationships if they realized that their organization did not fulfill contract as compared to low transactional psychological contract. So, when employees have a high transactional psychological contract, we can expect a small or nonexistent mediating effect of LMX on the relationship between employee knowledge sharing and employee creativity. Therefore, this study proposes the following hypothesis on the mediating role of LMX in knowledge sharing and employee creativity.

- H4.* The moderated mediating effect of a transactional psychological contract between LMX and employee creativity.

## Methods

### *Sample and sample procedures*

In Taiwan, E-DA World is the latest theme park and has a Greek Aegean Sea style. Although E-DA World theme park is not the first of Taiwan's theme parks, it was a pioneer in specific areas of this tourism industry because some of the business strategies (soft) and facilities (hard) used had not been previously applied in Taiwan. The creativity and innovation of E-DA World theme park have attracted consumers' attention. Therefore, E-DA World theme park is an appropriate example for exploring employees' creativity and innovation. The data were collected from non-management, lower-level employees. Initial interviews with senior managers were conducted to describe the study and to request their support. Although participation in this study was not mandatory, the subordinates were willing to participate in their responses. Meetings were scheduled to inform the employees about the general purpose of the study and to emphasize confidentiality. There were 300 employees from the theme park participated in the study and replied their questionnaires.

In some studies, temporary employees have been omitted. However, temporary employees can provide greater scheduling flexibility and reduce company costs (Conway and Briner, 2002b). Furthermore, temporary employees have become a source of the workforce for entire industries, such as the service industry (Feldman, 1990). On the other hand, temporary employees may have more creative ideas than full-time employees because they have lower knowledge inertia, which affords them greater freedom than full-time employees. Employees responded by providing self-reports of their intention to share knowledge, as well as their views on LMX, employee creativity, and transactional psychological contract. Because of incomplete information, results from 14 individuals were excluded, so 286 employees participated, for a response rate of 95 percent.

### *Measures*

This section provides an overview of the measures that used in this study. In the following, all items were rated by employees on a seven-point Likert scale ranging from 1 "strongly disagree" to 7 "strongly agree." Employee creativity is defined as the extent to which employees perceive that they generate novel and useful ideas about products, services, procedures, or work processes the work environment place. This variable was assessed on the basis of the employee's perspectives according to creativity questionnaires developed

and used in prior research by George and Zho (2001). Therefore, this study adopted employee self-reports to measure employee creativity. A total of 13 items were scored and the Cronbach's  $\alpha$  was 0.95 (Appendix A). The intention to share knowledge is defined as the degree of an employee's belief that he or she will engage in knowledge sharing, which was assessed using the scale of Chow and Chan (2008). Total five items were scored and the Cronbach's  $\alpha$  was 0.93 (Appendix B). LMX is defined as the extent to which employees perceive their relationships with their supervisors as being based on mutual trust, respect, and obligation, which together generate influence between employees and their supervisor (Graen and Uhl-Bien, 1995). This variable was used in prior research by Janssen and Van Yperen (2004). In total, seven items were scored and the Cronbach's  $\alpha$  was 0.95 (Appendix C). A transactional psychological contract is defined an individual's beliefs about his or her mutual obligations in a contractual relationship (Rousseau, 1989). The variable was used in prior research by Raja *et al.* (2004) and Guerreor and Herrbach (2008). The six items were scored and the Cronbach's  $\alpha$  was 0.85 (Appendix D). In addition, we controlled for various factors to limit the influence of unobserved variance. Employee creativity may be affected by demographic variables such as age, gender (Burroughs and Mick, 2004). Hence, we included these two variables in our framework as control variables.

## Results

This study conducted CFA on the four research variables of intention to share knowledge, LMX, employee creativity, and psychological contract to measure their internal consistency reliability, convergent validity, and discriminant validity. The result showed that the standardized factor loadings and the critical ratio of all individual items ranged from 0.50 to 0.97 and 6.90 to 25.80, respectively. Moreover, the average variance extracted and composite reliability of four research variables ranged from 0.53 to 0.75 and 0.81 to 0.93. To sum up, internal consistency reliability, convergent validity, and discriminant validity were supported on the four variables. In addition, CFA is performed to make sure the four-factor model we hypothesized is appropriated. The results supported that the four-factor model fit the data well ( $\chi^2 = 344.808$ ;  $df = 164$ ;  $\chi^2/df = 2.10$ ; CFI = 0.95; IFI = 0.95; TLI = 0.95; and RMSEA = 0.06).

Table I provides means, standard deviations, and inter-correlations for all variables. The intention to share knowledge was positively related to LMX between employees and their supervisors ( $r = 0.38$ ,  $p < 0.01$ ) as well as to employee creativity ( $r = 0.38$ ,  $p < 0.01$ ). In addition, LMX had significant relationships with both transactional psychological contract and employee creativity ( $r = 0.47$ ,  $p < 0.01$ ); however, the relationship with the transactional psychological contract was negative ( $r = -0.25$ ,  $p < 0.01$ ). Furthermore, there was a negative correlation the employee transactional psychological contract based on transactional relationships among variables. Because age and job tenure did not correlate

Variable	Mean	SD	1	2	3	4	5	6	7
1. Age	36.30	5.66	1.00	\	\	\	\	\	\
2. Gender	0.39	0.49	0.16**	1.00	\	\	\	\	\
3. Tenure	1.71	0.97	0.45**	0.04	1.00	\	\	\	\
4. Intention to share knowledge (ISK)	5.63	0.95	0.09	-0.09	0.06	1.00	\	\	\
5. Leader-member exchange (LMX)	5.48	1.00	-0.05	-0.05	-0.03	0.38**	1.00	\	\
6. Employee creativity (EC)	5.04	0.85	0.09	0.17**	0.02	0.38**	0.47**	1.00	\
7. Transactional psychological contract (TPSC)	3.67	1.17	-0.05	-0.07	-0.01	-0.14*	-0.25**	-0.11	1.00

Notes:  $n = 286$ . \* $p < 0.05$ ; \*\* $p < 0.01$

**Table I.**  
Means, standard  
deviations and  
correlations

with employee creativity, we dropped these variables from further analysis. We maintained gender as a control variable because it was found to be associated with employees creativity ( $r = 0.17, p < 0.01$ ). Including potential control variables only in the case of a significant correlation with the outcome criterion in focus has been recommended to avoid spurious suppression through control variables (Becker, 2005). The aforementioned correlated coefficients were related only to the relationships between some of the variables, although they provided a crucial basis for our further analyses (Effelsberg *et al.*, 2014).

This study used bootstrap analyses to test the research model and the moderated mediation model (Hayes, 2009). Adopting a two-step procedure, we first examined a simple mediation model to test *H1* and *H2*, using the SPSS application. The application facilitates the estimation of the indirect effect. Second, we examined the moderated mediation model to test the moderating effects (*H3*) and the conditional indirect effects (*H4*) using an SPSS macro. The macro-integrated procedures allow researchers to fully consider a significant indirect effect contingent on the value of the opposed moderator. According to Preacher *et al.* (2007), the moderated mediation effect occurring in the second stage of a model (Figure 1) is determined when the interaction term (LMX  $\times$  Transactional psychological contract) in the dependent variable model (employee creativity as a dependent variable in the present study) is significant and when the conditional indirect effects to describe the conditional nature are established. We applied conventional procedures for plotting simple slopes to interpret the interaction effects, at one standard deviation above and below the mean of the moderator variables (mean +1 SD; mean -1 SD; cf. Aiken and West, 1991). Prior to the analyses, all continuous measures were mean centered (Aiken and West, 1991).

Tests of simple mediation

Table II presents the results of testing a simple mediation model with employee creativity as the outcome variable. In our study, we found a total statistical effect of the intention to share knowledge on employee creativity ( $B = 0.22, p < 0.05$ ). This finding supports *H1*. We also found a direct effect of intention to share knowledge on LMX ( $B = 0.40, p < 0.05$ ) as well as a direct effect of LMX on employee creativity ( $B = 0.33, p < 0.05$ ). Furthermore, bootstrapping the indirect effect of intention to share knowledge on employee creativity through LMX supported mediation as the estimated 95 percent confidence interval [0.07, 0.22] did not contain zero (average bootstrap estimate = 0.13). This result fully supports *H2*. The direct effects of the intention to share knowledge on employee creativity did not contain zero, indicating a partial mediation model.

The study results demonstrated knowledge sharing and LMX can enhance employee creativity which is consistent with previous articles (e.g. Tsai *et al.*, 2015). On the other hand, knowledge sharing can affect employee creativity through LMX. The relationship did not

	Mediator LMX				Outcome employee creativity			
	<i>B</i>	SE	<i>t</i>	<i>p</i>	<i>B</i>	SE	<i>t</i>	<i>p</i>
Total effect					0.36	0.05	7.36	0.00
Direct effects								
Gender					0.37	0.09	4.34	0.00
ISK	0.40	0.06	6.89	0.00	0.22	0.05	4.64	0.00
LMX					0.33	0.05	7.29	0.00
Indirect effect (bootstrapping)					<i>M</i>	SE	95% CI	
					0.13	0.04	0.07	0.22

Table II.

Total and indirect statistical effects

Notes:  $n = 286$ . *M* average bootstrap estimate, Bootstrap sample size = 5,000, 95% CI confidence interval, bias corrected and accelerated, first (second) value representing lower (upper) limit



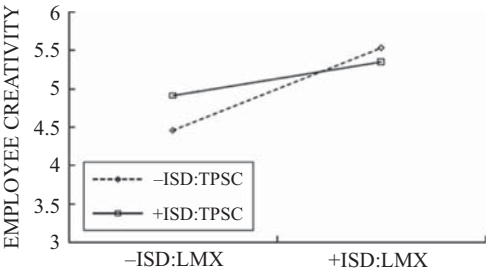
found in tourism-related previous articles. Furthermore, *H3* and *H4* showed that transactional psychological contract acts as a moderator role among knowledge sharing, LMX, and employee creativity which give support that the perception of a contract may affect the subordinates-supervisor relationship, which, in turn, affect employee work performance.

This study next examined moderating effects of the transactional psychological contract on the relationship between LMX and employee creativity. We then further examined whether these effects moderated the indirect effect of the intention to share knowledge on employee creativity through LMX. The results in Table III show that the cross-product term of LMX and transactional psychological contract in the outcome variable model (employee creativity) was significant ( $B = -0.11, t = -3.59, p < 0.05$ ). Consistent with our expectations and supporting *H3*, Figure 2 reveals that the slope of the relationship between LMX and employee creativity was weaker for employees with a high transactional psychological contract ( $B = 0.29, t = 5.39, p < 0.01$ ) than for those with a low transactional psychological contract ( $B = 0.59, t = 9.45, p < 0.01$ ). We further validated the conditional indirect effect of the intention to share knowledge on employee creativity (through LMX) at two values of the transactional psychological contract: one standard deviation above the mean (+1 SD; 1.17) and one standard deviation below the mean (−1 SD; −1.17). We generated bootstrap-based confidence intervals for the conditional indirect effects at three different moderator values. According to Table III, the indirect effect through LMX can be increased when two of the conditional indirect effects were different from zero. These effects were based on the

	<i>B</i>	SE	Employee creativity		95% CI
			<i>t</i>	<i>p</i>	
Direct statistical effect					
Gender	0.36	0.09	4.21	0.00	0.19, 0.53
IKS	0.21	0.05	4.43	0.00	0.12, 0.30
LMX	0.37	0.04	7.95	0.00	0.27, 0.46
TPSC	0.05	0.37	1.46	0.15	−0.02, 0.13
LMX × TPSC	−0.11	0.03	−3.59	0.00	−0.18, −0.05
$R^2(\Delta R^2$ after cross-product term model added)	0.35 (0.04)				
Conditional indirect stat. effect, bootstrap results	<i>M</i>	SE	95% CI		
TPSC M-1 SD	0.20	0.04	0.12, 0.30		
TPSC M	0.15	0.03	0.09, 0.22		
TPSC M+1 SD	0.09	0.04	0.04, 0.19		

**Notes:**  $n = 286$ . M average bootstrap estimate; values for quantitative moderators are the mean and plus/minus one SD; Bootstrap sample size = 5,000; 95% CI confidence interval, bias corrected and accelerated, first (second) value representing lower (upper) limit

**Table III.**  
Regression results  
for moderation  
and moderated  
mediation model



**Figure 2.**  
Moderated effect  
of TPSC on the  
relationship between  
LMX and employee  
creativity

moderator values of M (average bootstrap estimate = 0.15, 95% CI [0.09, 0.22]) and M -1 SD (average bootstrap estimate = 0.20, 95% CI [0.12, 0.30]). The conditional indirect effect became stronger to the level that the transactional psychological contract as the moderator decreased. Furthermore, according to Table IV, the moderated mediation model was proven, which supports *H4*.

The study results demonstrated knowledge sharing and LMX can enhance employee creativity which is consistent with previous articles (e.g. Tsai *et al.*, 2015). On the other hand, knowledge sharing can affect employee creativity through LMX. The relationship did not found in tourism-related previous articles. Furthermore, *H3* and *H4* showed that transactional psychological contract acts as moderator role among knowledge sharing, LMX, and employee creativity which give support that the perception of the contract may affect the subordinates-supervisor relationship, which, in turn, affect employee work performance.

Discussion and implications

Discussion

The present study yielded several crucial findings of the relationships among knowledge sharing, LMX, creativity, and psychological contract in the theme park studied. These findings provide some new insights that can improve theory building about how to processes employees' works within theme park lead to creativity outcomes. Moreover, the study can provide some practical suggestions to theme park supervisors and subordinates in improving possible creative capacity.

Theoretical implications

Some theoretical contributions were presented on the followings: first, the study 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 knowledge sharing behavior relates to creative outcome through which LMX. This study's empirical test results indicated that knowledge sharing is a possible mechanism by which high-quality LMX translates into higher creativity. The results also demonstrated that LMX is crucial for bridging knowledge sharing and EC.

Second, we extended creativity and psychological contract research by demonstrating how the TPSC mechanism moderates the influence of LMX on EC. Our study offered a deeper understanding of the moderated mediation role that TPSC plays in the mediation model. On the issue regarding the use of TPSC as a moderator between LMX and EC, the study demonstrated that when a high-quality LMX existed between the supervisor and subordinates, subordinates' performance in creativity is reached to a high level. Moreover, a subordinate who has a lower level of perception of the TPSC will be more creative.

Practical implications

According to the research results, there are several practical implications might be worthy of consideration by the theme park if the case firm wants to promote employee creativity capability and achieve competitive advantage in the rapidly changing business environment.

Table IV.  
Index of moderated  
mediation

Mediator	Index	SE	95% CI
LMX	-0.05	0.017	-0.09, -0.01

First, employees must realize that the path toward creativity might be uncertain and risky and they require support from their supervisors to overcome obstacles such as failure risk. Knowledge sharing is a favorable strategy for employees because it has been identified as a major focus issue for knowledge management (Sharifirad, 2016), 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 on an organization knowledge management system; thus, their supervisors perceive the contribution of their subordinates, which, in turn, promotes a better leader-members relationship that has the potential to improve employee creativity.

Second, this study demonstrated that subordinate who has a higher level of perception of the TPSC will be less creative. It means when the employees overly emphasize their rights and benefits, such an attitude will weaken the quality between the supervisor and subordinates, which, in turn, reduces the level of mutual trust and prevents employee creativity (Miller and Smith-Genthôs, 2016). However, LMX can promote significantly staff's creativity even though the employees' TPSC status is reached at a higher level. Therefore, even if employees are not satisfied with the work contract psychologically, the supervisor can still mitigate the negative impact of TPSC on the relationship between LMX and EC via establishing a good relationship quality with employees. It is also evident that LMX can buffer the negative effects of TPSC on employee creative performance (Restubog *et al.*, 2010). Therefore, LMX is highly recommended to supervisors.

Third, the proportion of the study sample 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 the staff's commitment to the organization or organizational citizen behavior. 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 company 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.

Finally, this study is the first case study to investigate knowledge sharing behavior and its effects on LMX and creativity in the Taiwan theme park. These study results are particularly crucial for Taiwan private sectors and Government because theme parks are a critical development component of the tourism industry. 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*

Although we attempted to avoid research mistakes and ensured that our research process met statistical method requirements, this study has several limitations. First, the empirical data were collected from only one company, with the relationships among variables based on a sample of only 285 employees. Given the small sample and relatively small coefficients, we must be cautious about excessively interpreting the strength of the relationships supported by the findings of this study. Second, we surveyed the willingness of participants to share knowledge and not their actual behavior. Although knowledge sharing intentions have been used as substitutes for actual behavior in the knowledge

sharing field (e.g. Liu *et al.*, 2011; Taegoo *et al.*, 2013), measuring actual behavior would allow more valid conclusions to be drawn, particularly when captured from multiple perspectives (Effelsberg *et al.*, 2014).

This represents a crucial avenue for future research. First, our study argues that knowledge sharing influences LMX and, in turn, affects employee creativity. Because our study did not have an experimental or longitudinal design, the proposed causality cannot be proven. Knowledge sharing may also be affected by LMX. Future studies are required to verify reverse and reciprocal causality. Second, to generalize our theoretical model, additional studies should include samples obtained from various participating teams with a wide range of scopes such as diverse companies, companies from other countries, and industries to control for the effects of external factors (Černe *et al.*, 2013) in future research.

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### Further reading

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## **Appendix A. Items measuring employee creativity**

### **Employee Creativity**

- (1) I suggest new ways to achieve goals or objectives.
- (2) I come up with a new and practical ideal to improve performance
- (3) I search out new technologies, processes, techniques, and/or product ideals
- (4) I suggest a new way to increase the quality
- (5) I am a good source of creative ideas.
- (6) I am not afraid to take risks.
- (7) I promote and champions ideas to others.
- (8) I exhibit creativity on the job when given the opportunity to.
- (9) I develop adequate plans and schedules for the implementation of new ideas.
- (10) I often have a new and innovative idea.
- (11) I come up with creative solutions to problems.
- (12) I often have a fresh approach to problems.
- (13) I suggest new ways of performing work tasks.

## **Appendix B. Items measuring intention to share knowledge**

### **Intention to share knowledge**

- (1) I will share my work reports and official documents with my organizational members more frequently in the future.
- (2) I will always share my manuals, methodologies and models with my organizational members in the future.
- (3) I will always share my experience or know-how from work with my organizational members in the future.
- (4) I will always share my know-where or know-whom knowledge at the request of my organizational members.
- (5) I will always try to share my expertise obtained from education and training with my organizational members in a more effective way

## **Appendix C. Items measuring leader-member exchange**

### **Leader-member exchange**

- (1) My supervisor would be personally inclined to help me solve problems in my work.
- (2) My working relationship with my supervisor is effective.
- (3) I have enough confidence in my supervisor that I would defend and justify his/her decisions if he or she were not present to do so.
- (4) My supervisor considers my suggestions for change.
- (5) My supervisor and I are suited to each other.
- (6) My supervisor understands my problems and needs.
- (7) My supervisor recognizes my potential.



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## Appendix D. Items measuring psychological contract

### Psychological contract

- (1) I work only the hours set out in my contract and no more.
- (2) My commitment to my firms is defined by my contract.
- (3) My loyalty to my firm is contract specific.
- (4) I prefer to work a strictly defined set of working hours.
- (5) I only carry out what is necessary to get the job done.
- (6) I work to achieve the purely short-term goals of my job.

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