



## **An Integrated Model of Leader-Member Exchange Differentiation and Creativity in Work Teams**

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### **Published**

2012

### **Conference Title**

26th Annual Australian and New Zealand Academy of Management Conference: Managing for Volatility and Instability

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## An Integrated Model of Leader-Member Exchange Differentiation and Creativity in Work Teams

### ABSTRACT

*Although the implication of leader-member exchange (LMX) differentiation for work attitudes and behaviours has been documented in the literature, its unique impact on creativity in work teams remains largely unknown. In this study, we develop an integrated model of LMX differentiation and creativity. Specifically, two new concepts - perceived competition and perceived cooperation are proposed as new concepts that will act as mediators to transmit the effect of high/low LMX differentiation on creativity. Procedural justice climate is also theorized as a moderator to influence the relationships between LMX differentiation and perceived competition and perceived cooperation which in turn mediate the effect of LMX differentiation on creativity. We conclude with a discussion of implications of our model for theory and practice.*

(120 words)

**Keywords:** LMX Differentiation, Procedural Justice Climate, Creativity

## **AN INTEGRATED MODEL OF LEADER-MEMBER EXCHANGE DIFFERENTIATION AND CREATIVITY IN WORK TEAMS**

Many businesses are part of a rapidly changing market, facing intense global competition in terms of cost, quality and speed (Zhou & Shalley, 2011). As such, building innovation capability through the effective management of human capital for creativity development has become increasingly important for today's organisations (Doyague & Nieto, 2012). As employees often work within team settings in organisations, it is critical that research be undertaken which examines how an employee's perceptions of social exchange relationships with his/her supervisor (i.e. the degree of within-team variation when leaders form different leader-member exchange relationships with different members in work teams – LMX differentiation) may influence the employee's creativity in work teams (Tse & Mitchell, 2010; Tse, Dasborough & Ashkanasy 2008). More recently researchers and practitioners alike are investing a lot of time in understanding creativity (Oldham & Cummings, 1996; Amabile, Schatzel, Moneta & Kramer, 2004; Hoegl & Parboteeah, 2007; Liao, Liu & Loi, 2010). Current research has not yet explored the processes and conditions relating to the unique and independent effects of LMX differentiation on employee creativity (Zhou & Shalley, 2011).

LMX theory focuses on differentiated interpersonal exchange relationships that leaders develop and maintain with subordinates using different leadership styles within workgroups (Dansereau, Graen, & Haga, 1975). According to LMX theory (Dienesch & Liden, 1986; Graen & Uhl-Bien, 1995) leaders tend to develop high-quality relationships with only a few subordinates within a workgroup and these relationships serve as channels for leaders to distribute organizational resources, job-related benefits, and psychological support to subordinates. Hence, relative to other group members in a workgroup, members in higher quality LMX relationships are likely to be more advantageously treated. Previous research has shown that employees understand how differently they are being treated against their team members (Vidyarthi, Liden, Anand, Erdogan & Ghosh, 2010). This suggests that LMX differentiation has strong implications for employees' relative standing in work team (Erdogan & Liden, 2002). As evidenced, LMX differentiation has been found to be related to job satisfaction, organizational commitment, turnover, helping behaviour (Erdogan & Bauer, 2010; Vidyarthi et al., 2010). The findings of these studies however are inconclusive. Several researchers

also suggest that the effect of LMX differentiation is contingent upon group member perceptions of justice (e.g., Erdogan & Liden, 2002; Henderson, Liden, Glibkowski & Chaudhry, 2009; Scandura, 1999). We propose three mechanisms that are theoretically relevant to this research: perceived cooperation and perceived competition are theorized as mediators linking LMX differentiation to creativity, and procedural justice climate is proposed as a moderator to influence the link between LMX differentiation and creativity in work teams.

Figure 1 depicts our proposed relationships in the model, and highlights the contributions we attempt to make to the literature. First, we develop a moderated- mediation model that integrates the LMX and climate literatures to examine the psychological process of perceived competition and cooperation, and the boundary of procedural justice climate in the LMX differentiation- creativity relationship. Henderson et al. (2009) have called for more research to unveil the psychological processes and boundary conditions that account for the LMX differentiation-team creativity relationship. This study is the first to examine how perceived cooperation and competition and procedural justice climate are played out in different roles to simultaneously influence the link between LMX differentiation and team creativity.

This study also extends Erdogan and Bauer's (2010) research by being the first to examine how justice climate and perceived cooperation and competition can be related to LMX differentiation and creativity. This is important because existing research has demonstrated that the nature and direction of the relationships between LMX differentiation and work outcomes can be largely dependent on the salience of contextual factors (Boies & Howell, 2006; Erdogan & Bauer, 2010; Liden et al., 2006). Our study adds to more recent studies in this area by explaining why procedural justice climate influences the relationship between within-team LMX differentiation and perceived competition and cooperation differently.

### **LMX DIFFERENTIATION AND TEAM MEMBERS PERCEPTION OF COOPERATION/COMPETITION**

LMX differentiation has been embedded on the platform of Leader member exchange (LMX) theory, the premise of which is that leaders form differential relationships with employees ranging from high quality relationships to low quality relationships (Dansereau et al., 1975). The research on LMX has

suggested that due to leaders having lack of time and resources, they prefer having differential relationships with their subordinates (Graen & Uhl-Bien, 1995). More recently, the researchers such as Maslyn and Uhl-Bien (2001) have suggested that every subordinate has different personality, needs and ability, and therefore leaders when forming differential relationships with their subordinates make necessary adjustments according to their subordinate's qualities. Dienesch and Liden (1986) even suggested that this phenomenon of LMX differentiation is related to team processes and effectiveness and can be used by leaders as a strategy to create role differentiation.

The differential quality of LMX relationships also represents differences in psychological status because high LMX members feel superior and are highly likely to receive extra resources and benefits than low LMX members in their work team (Tse, Ashkanasy, & Dasborough, 2012). The research suggests that subordinates are aware that their leaders form differentiated relationships with them and they get unequal distribution of resources due to that (Van Vrukelen, Schyns, & Le Blanc, 2006). When there is high LMX differentiation in the groups and subordinates get unequal distribution of resources they are likely to think that they have been deprived of what should have belonged to them.

Underpinned by realistic deprivation theory, that states the employee's experience of being deprived of something to which they believe they were entitled to (Walker & Smith, 2002), may give rise to their perception of competition or conflict within the team. Once they have this feeling of discontent due to deprivation from resources, it is likely that this may create a strong perception of competition amongst the team members to fight for the resources. Underpinned by realistic conflict theory that states that conflicts in the groups are generally created because of competition for real resources (Hogg & Abrams, 1988), it is likely that they may want to get those resources that they have been deprived of next time around, and hence they may compete for those resources. Due to this perception of competition, it is likely that the employees may communicate with each other guardedly and misleadingly, as they may want to succeed against their counterparts in the team (Hui, Law, Feng Chen, & Tjosvold, 2008). Underpinned by theory of cooperation and competition, when subordinates want to prove that their ideas are more capable and superior than their team members, they get

frustrated when others develop useful ideas. Competitive work is taken over by self-interest of each worker against each other worker in a conflict to win (Hui et al. 2008). Therefore it is likely that high LMX differentiation may create a perception of competition/ conflict within the team.

In contrast to high LMX differentiation, when there is low LMX differentiation in the group, it is likely that the employees may feel a sense of unity in their work team, and become less sensitive to their relative standing. . Employees' perceptions of low LMX differentiation may tend to work with each other, exchanging information, offering feedback and providing assistance to each other (Tse, et al., 2012). Employees may have a perception of cooperation in the team, and underpinned by the theory of cooperation and competition by Deutsch (1949a) which states that when there is cooperation within the team, employees appreciate that they want each other to pursue their goals effectively, for others effectiveness helps all of them to reach their goals (Hui et al., 2008). Tjosvold (1984) further said that the employees want each other to succeed so that they can all achieve their goals. Because they perceive cooperation within the team, they are likely to communicate with each other more effectively and accurately to help each other to be effective.

This line of discussion is supported by recent evidence showing that LMX differentiation is positively related to disagreement among team members (Ford & Seers, 2006) and perceived conflict within groups (Hooper & Martin, 2008), affirming that LMX differentiation is negatively associated with satisfaction with co-worker relations (Erdogan & Bauer, 2010). Based on the above discussion I propose that:

*Proposition 1a: High LMX differentiation is positively related to perceived competition among team members*

*Proposition 1b: Low LMX differentiation is positively related to perceived cooperation among team members*

#### **THE MODERATING ROLE OF PROCEDURAL JUSTICE CLIMATE**

Procedural justice climate is defined as distinct group-level cognition about how a work group as a whole is treated (Naumann and Bennett, 2000). The organisational literature has shown that employees evaluate the perceived fairness of the decision making process also called procedural justice (Erdogan & Bauer, 2010). Employees do not necessarily judge the resources and benefits they

receive in isolation (Lind & Tyler, 1988). Individuals usually compare their own LMX relationship with co-workers' LMX relationships, and usually it is easier to do social comparisons in teams (Colquitt, 2004; Colquitt, Noe, & Jackson, 2002). Justice theory states that such comparisons may influence perceptions of fairness within the workplace (Kabanoff, 1991).

A procedural justice climate reflects collective perceptions of fairness of the procedures, practices, and systems used in evaluating behaviours, and making decision about outcomes (Folger & Greenberg, 1985). Hence, team members are interested in procedural justice climate, because if there is a high level of procedural justice climate, that will convey to members that all members in the group are important, everyone is treated equally, and the decision making will be fair, consistent, accurate and unbiased (Leventhal, 1980). Erdogan and Liden (2002) also proposed that when procedural justice climate is low, leaders who differentiate are highly likely to favour members who are closer to them when making decisions, resulting in favouritism. Those members who are not close to the leader are highly likely to experience resentment, thinking that those who are closer to the leader receive favourable treatment. Erdogan and Bauer (2010) further suggest that those members who do receive the favoured treatment, who are closer to the leader will feel backlash from their co-workers. LMX differentiation has implications for co-workers relations. According to Sherony and Green (2002), co-workers having dissimilar exchanges with their leader, which means one employee with close relationship and the other with distant relationship with their leader will affect the relationships between co-workers negatively. This means that the team with a high LMX differentiation will have poor relationship amongst their team members.

In line with the above discussion, it is expected that the relationships between LMX differentiation and perceived cooperation and perceived competition are much more salient. We contend that strong procedural justice climate coupled with low LMX differentiation are likely to facilitate perceived cooperation among employees because low within-group LMX differentiation is reflected by a strong justice climate that guides the way the supervisor forms similar quality of LMX relationships in work teams (Erdogan & Bauer, 2010). Such perception creates a consistent message to all team members that their supervisor is fair and honest. He/she does not mistreat any team members because of their relative status in the team. Hence, the team members believe that their right

is well-protected and all members will be treated in a similar manner receiving equal amount of work-related benefits, organizational resources and psychological support from the supervisor. Once the procedure of distributing resources and decision making is transparent and clear, they are more likely to regard other co-workers as companions, developing a high-quality relationship with each other and supporting each other when needed (Erdogan & Bauer, 2010)..

Conversely, it is arguable that LMX differentiation is more likely evoke a sense of perceived competition when the procedural justice team climate is weak. When high LMX differentiations is combined with low justice climate, employees are more likely to perceive that there is a politics involved in decision making and those who are closer to the leader will always be favoured no matter how much effort they put into work (Erdogan & Bauer, 2010, Tse, Dasborough & Ashkanasy, 2005). This may create a sense of competition within co-workers, which may affect the way they look at each other at work. In groups with high LMX differentiation, and low justice climate it is also possible that co-workers' behaviours may become negative towards each other because their right is not protected (Mossholder, Settoon, & Henagan, 2005). Furthermore, when employees experience low levels of procedural fairness in conjunction with low LMX differentiation with team members they can retaliate (Barrett-Howard & Tyler, 1986) by withholding instrumental and emotional support, and they may distance themselves from high-LMX members as a way of expressing their resentment and anger toward their supervisor (Erdogan & Bauer, 2010). Given the procedure of distributing resources and decision making is not transparent and unclear, employees are likely to be more collective helping each other to compete against with those who are close to the leader. Hence, we propose:

*Proposition 2a: Procedural justice climate will moderate the relationship between LMX differentiation and perceived cooperation, such that the relationship is stronger for teams with high procedural justice climate and low LMX differentiation than for teams with low procedural justice climate and high LMX differentiation.*

*Proposition 2b: Procedural justice climate will moderate LMX differentiation and perceived competition, such that the relationship is stronger for teams with low procedural justice climate and*

*high LMX differentiation than for teams with high procedural justice climate and low LMX differentiation.*

### **PERCEIVED COOPERATION AND PERCEIVED COMPETITION/CONFLICT AND TEAM CREATIVITY**

Team work refers to the set of interrelated thoughts, actions and feelings that each team member engages in to facilitate coordinated and adaptive performance (Goodwin, Burke, Wildman, & Salas, 2009; Salas, Sims, & Klein, 2004a; Joo, Song, Lim, & Yoon, 2012). Chen (2007) defined teams as a group of individuals where “talent, energy and skills are integrated into a team, and this collective capacity to innovate becomes greater than the sum of individual contribution” (p.239). In today’s business environment, much of the work is interdependent and so teams are a dominant means of getting the work done (Barczak, Lassk, & Mulki, 2010). To constantly flourish in the competitive market, organisations need to give their employees freedom to show their creative potential, because, employee’s creative ideas can function as building blocks for organisational innovation (Amabile 1996; Woodman, Sawyer, & Griffin, 1993; Zhou & George, 2001). The belief that the teams perform differently and better than individuals on creative problem solving, dates back to Crosby (1968), where he mentioned that man has always believed that two heads are better than one (Vissers & Dankbaar, 2000). When related to creativity, this belief has given rise to some important aspects of research (Vissers & Dankbaar, 2000).

For any team to succeed in their projects there are certain qualities that should exist within a team (Hoegl & Gemuenden, 2001). Rigby, Gruver and Allen (2009) studied teamwork in the most innovative firms in the United States and identified seven important characteristics that nurture successful partnership among diverse members of a team, which were awareness of strengths and weaknesses, complimentary cognitive skills, trust, raw intelligence, relevant knowledge, strong communication channels, and motivation. Similarly, Hoegl and Gemuenden (2001) suggested six characteristics that enhance team work quality for the success of innovative projects. The six facets that they described were; team communication, team coordination, balance of member contributions, mutual support, team effort and team cohesion. Therefore it seems from the above discussion that in order to succeed in team environment cooperation within the team members play a vital role.

Research suggests that working together in a team implies greater cooperation and information sharing, which are expected in turn, to lead to higher team creativity (Larson & LaFasto, 1989; Grant, 1996; Nahapiet & Ghoshal, 1998). In contrast, if there is competition or conflict in a team, it can lead to reduced willingness to work cooperatively (Paulus, 2004). According to Kohn (1992), competition can have negative effects on creativity. He further mentions that competition in a team has downsides such as it promotes rebellion because “being better than” can distract employees from being different and unique, competition promotes risk aversion because employees want to stay away from the different and the imaginative path which presents more risks, and competition distracts from creativity because employees tend to take short cuts and try to copy others’ success rather than indulge in creating something novel (Barczak et al., 2010).

Research till date has not suggested whether employee’s perception of cooperation and employee’s perception of competition or conflict will affect team creativity or not. From the past research discussed above it seems like competition may be a hindrance to creativity. Similarly, it is likely that employee’s perception of competition or conflict may also negatively affect creativity. Underpinned by realistic conflict theory and realistic deprivation theory, when the employees will be deprived of what they believe belongs to them, it is likely that they may have anxiety or they may get aggressive to achieve what they have been deprived of. The researchers have discovered higher levels of anxiety in people who compete, which in turn, correlated with inferior performance, whereas cooperative behaviour pointed to the reduction of anxiety and higher productivity (Blau, 1954). Competitive behaviour in the team has also been related with aggression (Kohn, 1992). Deutsch (1985) mentioned that a competitive relationship can create people to have suspicion, hostility, aggressiveness, and psychologically closed to each other. On the other hand cooperation takes advantage of the skills of each member as well as the mysterious but undeniable process by which interaction seems to enhance individual’s abilities (Deutsch, 1949a). Coordination of effort and division of labour are possible when people work with each other. Johnson and Johnson (1989) pointed out that people who feel accepted by others also feel safe enough to explore problems more freely, take risks, play with possibilities, and benefit from mistakes rather than creating a climate in which mistakes must be hidden to avoid a mockery of them. None of this is possible when there is

competition within the team. As discussed above it seem like if the employees perceive that there is cooperation in the team, they may work together for creativity and hence achieve their goals. Hence we propose that:

*Proposition 3a: Perceived cooperation is positively related to employee creativity in work teams.*

*Proposition 3b: Perceived competition/conflict is negatively related to creativity in work teams.*

### **THE MEDIATING ROLE OF PERCEIVED COOPERATION AND PERCEIVED COMPETITION/CONFLICT**

As discussed earlier perceived cooperation and perceived competition/conflict is underpinned by three theories that are realistic conflict theory, realistic deprivation theory, and theory of cooperation and competition. The mediating role of perceived cooperation and perceived competition/conflict in the relationship between LMX differentiation and team creativity is a new concept and is premised on the idea that perceptions of cooperation and competition/conflict represent a key element in the outcomes of an organisation.

As stated earlier, Hypotheses 1 predicts positive relationship between low LMX differentiation and perceived cooperation, and negative relationship between high LMX differentiation and perceived competition, and Hypotheses 3 predicts positive relationship between perceived cooperation and team creativity, and negative relationship between perceived competition/conflict and team creativity. The two hypotheses together specify a model in which LMX differentiation indirectly moderates team creativity by contributing to overall perception of competition and perception of cooperation within the team members. Although there is no empirical evidence yet to directly support the mediating role of perceived cooperation and perceived competition/ conflict in LMX differentiation-team creativity relationship, the above arguments and discussion regarding Hypotheses 1 and 3 propose and support that the level of LMX differentiation influence the perceptions of employees towards cooperation or competition/conflict, and thus effecting team creativity. I therefore anticipate that perceived competition and perceived cooperation/conflict is a strong mediator in the relationship between LMX differentiation and team creativity. Hence we propose:

*4a: Perceived cooperation will mediate the relationship between LMX differentiation and team creativity, such that, low LMX differentiation, will create a perception of cooperation amongst team members, which will be positively related to team creativity.*

*4b: Perceived competition/conflict will mediate the relationship between LMX differentiation and team creativity, such that, high LMX differentiation, will create a perception of competition/conflict amongst the team members, which will be negatively related to team creativity.*

### **SCOPE OF THE MODEL**

It needs to be acknowledged that the effect of LMX differentiation on creativity in teams can also be affected by numerous contextual variables which have not been explicitly included within this model. Other variables which may impact team member perceptions of fairness include for example, distributive justice climate, team and task structure, task interdependency and team size (Randel & Jaussi, 2003; Choi, Price & Vinokur, 2003; Van Der Vegt, Van De Vilvert & Oosterhof, 2003). In the case of future empirical examinations of this model, these variables could also be included as controls. Although the model presented here is not all-encompassing, it does attempt to explore further the effect of LMX differentiation on creativity within teams.

### **DISCUSSION**

#### **Implications for Theory and Research**

We attempt to make some contribution to the literature on LMX differentiation and creativity in work teams. First, we develop a model that explores how LMX differentiation influences team members' perceptions of competition and cooperation. We have taken an initiative to identify the role that LMX differentiation plays within team social exchange processes, and to understand the underlying attribution and emotional processes of how team members perceive authentic leadership. Existing theories and current research have focused on examining the effect of LMX differentiation on work attitudes (e.g., (Erdogan & Bauer, 2010)). The exact nature, however, of how LMX differentiation influences creativity processes is largely unknown.

Second, the proposed model contributes to LMX and fairness theories by integrating concepts from the two literatures. LMX differentiation is a new construct, which explicates the implications of relationship differentiation criteria on which a leader embraces to form relationships with an individual. Fairness theory explains how employees evaluate the perceived fairness of the decision

making process. In this respect, researchers to date have seldom considered the link between perceived LMX differentiation and fairness theory. Erodgan and Bauer (2010) were among the first to address this issue. They developed and tested a model to explain how justice climate moderated the relationships between LMX differentiation and work attitudes including job satisfaction, organisational commitment, turnover and co-worker relationships. The current model differs from their model however, by specifically attempting to understand the relationship between fairness of LMX of differentiation in a creativity context.

### **Implications for Practice**

Besides the theoretical contributions, we believe that the proposed model of LMX differentiation on creativity has practical implications. We suggest that leaders should pay attention to understanding how an individual team member perceives and feels about the way the supervisor forms relationships with other team members by engaging in frequent communication for feedback.

Another practical implication is related to the idea of team members' perceptions of LMX differentiation. Erdogan (2001, 2002) has suggested that it is important for all team members to understand what they can do in order to be recognised by leaders as in-group members, and therefore to enjoy the benefits such membership brings. It appears to be essential that leaders learn to differentiate between team members based on objective criteria, such as their contribution, rather than subjective criteria (Allinson, Armstrong, & Hayes. 2001; Liden, Wayne, & Stilwell, 1993; Strauss, Barrick, & Connerley, 2001). This will ensure that team members are loyal to each other, and have a sense of companionship and form high quality relationships with other team members.

Another practical implication is related to the idea of team members' perceptions of procedural justice climate. Akgun et al. (2010) suggested that leaders should enhance the procedural justice climate to enhance creativity in teams including establishing psychologically safe environment, understanding and listen everyone's ideas, promote cooperation and mutual interaction between team members, and define team member's task boundaries and clarify norms and goals. They further suggest that leaders should allow team members to challenge creative ideas, and decisions and modify them with consensus. This will enhance creativity in teams.

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*FIGURE 1: Model of LMX Differentiation and Creativity in Organisations*

