

## ABSTRACT

Title of Document: ADMIRATION AND ENVY AS AN  
IMPETUS: JOINT EFFECTS OF LEADER-  
MEMBER EXCHANGE DIFFERENTIATION  
AND GROUP INCENTIVE PAY ON GROUP  
AFFECTIVE CLIMATES, COORDINATION,  
AND PERFORMANCE

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Drawing upon cognitive appraisal theory of emotions in conjunction with incentive pay research, I examine the mechanisms and boundary conditions for the effects of group leaders' differentiated development of leader-member exchange (LMX) relationship on group coordination and performance. I propose that it is when groups receive a higher average proportion of group, as opposed to individual, incentive pay that LMX differentiation is more likely to foster group climate of admiration, rather than envy, which then enhances group coordination and subsequent performance.

Using data on 828 sales groups in a major Chinese retailer, I find evidence that groups' use of group, rather than individual or hybrid (i.e., [1] incentive pay based on individual and group performance or [2] incentive pay based on individual, group, and store performance), incentive pay with a higher average proportion in total pay

facilitated LMX differentiation to improve group coordination by cultivating group admiration climate. Also, group, as opposed to individual or hybrid, incentive pay buffered the negative effects of group envy climate on group coordination. Lastly, it was found that group coordination predicted groups' six-month lagged sales performance above and beyond prior sales performance. Several theoretical and practical implications are discussed.

ADMIRATION AND ENVY AS AN IMPETUS: JOINT EFFECTS OF LEADER-  
MEMBER EXCHANGE DIFFERENTIATION AND GROUP INCENTIVE PAY  
ON GROUP AFFECTIVE CLIMATES, COORDINATION, AND PERFORMANCE

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*To my family*

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# **Chapter 1: Introduction**

## **1.1. Motivation and Purpose**

Work group leaders distribute various work resources to group members to increase the performance of their groups. One primary way for leaders to allocate work resources is by developing exchange relationships characterized by trust and respect, i.e., leader-member exchange (LMX), with group members (Graen & Scandura, 1987). In doing so, leaders differentiate among group members such that they forge higher quality relationships with some, not all, members, and provide more important roles along with commensurate resources to the selected members. This is not only because work resources are mostly limited (Bergeron, 2007), but also because equality of resource allocation among group members may sometimes cause inefficiency in the use of work resources (Mitchell, Tetlock, Mellers, & Ordonez, 1993). As such, leaders' differentiated development or disparity of LMX within groups, which is termed LMX differentiation, has been widely acknowledged as a central feature of leadership behavior in work groups (Erdogan & Bauer, 2010; Liden, Erdogan, Wayne, & Sparrowe, 2006).

Nevertheless, it still remains unclear whether leaders' engaging in LMX differentiation helps or hurts an effective functioning of work groups. In particular, there exists a theoretical puzzle over the relationship between LMX differentiation and effectiveness of work group coordination which is a central process leading to

group performance (Okhuysen & Becky, 2009; Rico, Sánchez-Manzanares, Gil, & Gibson, 2008). On the one hand, LMX differentiation may contribute to the group coordination by facilitating a clear division of roles, direction, and deference among group members (Liden et al., 2006; Magee & Galinsky, 2008). That is, leaders may enhance group coordination by assigning more important roles and more work resources to some group members who can make more contributions and be more trusted than others. This perspective is based upon role theory (Dienesch & Liden, 1986; Liden et al., 2006) and social hierarchy theory (Magee & Galinsky, 2008).

On the other hand, LMX differentiation may undermine coordination of a work group by causing relational problems among its members. For instance, leaders' favorable treatment of a few members may lead to relationship conflicts and lack of group cohesion, thereby impairing group coordination and ultimately performance (Hooper & Martin, 2008). In line with these contrasting theoretical views, empirical evidence on the impact of LMX differentiation on group-level outcomes is inconclusive (Le Blanc & González-Romá, 2012).

This study aims to resolve this puzzle over the roles of LMX differentiation in work groups by examining the mechanisms and conditions where LMX differentiation contributes to the effectiveness of group coordination and resultant group performance. I note that there are a few prior studies on this issue, but they have largely focused on cognitive variables related to justice perceptions such as perceived unfairness (Sias & Jablin, 1995) and justice climate (Erdogan & Bauer, 2010). The present study goes above and beyond the previous studies by examining

groups' affective mechanisms for the effects of LMX differentiation based upon the cognitive appraisal theory of emotions (Roseman, Spindel, & Jose, 1990) and theory of social comparison-based emotions (Cuddy, Fiske, & Glick, 2007; Smith, 2000) in particular.

Further, I integrate the theory of social comparison-based emotions and compensation literature (Gerhart, Rynes, & Fulmer, 2009) to examine boundary conditions for the effects of LMX differentiation on group affective mechanisms and coordination. Specifically, I investigate the impact of LMX differentiation in the context of different incentive pay practices, which constitute another important mode of resource allocation in work groups (Gerhart et al., 2009), and posit that the impact of LMX differentiation on group affective mechanisms (i.e., group climates characterized by admiration and envy among group members) and coordination may vary depending on the nature (i.e., types and the extent of use) of incentive pay practices.

## **1.2. Intended Contributions of the Study**

This study makes three important contributions to leadership, compensation, and emotions literature. First, it extends the leadership literature and LMX research in particular by revealing unexplored mediators and moderators for the effects of LMX differentiation in work group context. As noted above, although LMX differentiation has been considered “the norm in work groups” (Anand, Vidyarthi, Liden, & Rousseau, 2010, p. 974), prior research has not paid sufficient attention to LMX

differentiation as a focal study variable (Henderson, Liden, Glibkowski, & Chaudhry, 2009). Further, the few studies on LMX differentiation largely focused on its outcomes such as group performance rather than intervening mechanisms and moderating conditions (e.g., Liden et al., 2006). Hence, by shedding light on a novel mediator and moderator for the effects of LMX differentiation, this study will enhance our understandings on how LMX differentiation operates in work group settings.

Second, the present study advances the compensation literature by unveiling the roles of incentive pay to serve as a condition for the emergence and impact of groups' affective processes—i.e., group climates of admiration and envy. Prior research on incentive pay has typically focused on establishing its performance effects at either individual- or organizational-level (Gerhart et al., 2009; see for exception Pearsall, Christian, & Ellis, 2010). In doing so, it has paid relatively little attention to affective or emotional outcomes of incentive pay as intermediate mechanisms relating to its performance effects. This study shows that work groups' incentive pay based on group, rather than individual, performance plays a critical role for the occurrence of the groups' affective climates of admiration and envy and their impact on group coordination.

Lastly, this study contributes to the body of research on emotions and social comparison-based emotions in particular (Cuddy et al., 2007; Smith & Kim, 2007) by conceptualizing feelings of admiration and envy as group-level constructs and identifying their antecedents and consequences in work group context. Despite

emerging interests in group-level emotions such as group emotions (Kelly & Barsade, 2001) and group affective tone (Sy, Côté, & Saavedra, 2005), extant research on admiration and envy has been typically conducted at an individual-level. Further, prior studies on group-level emotions have largely focused on contagion or sharedness of individual emotions among group members (e.g., Barsade, 2002; Sy et al., 2005). Hence, my conceptualization of admiration and envy as group affective climate constructs develops previous research on admiration and envy in new directions.

### **1.3. Chapter Outline**

In what follows, I first provide an overview of extant theories and research on LMX differentiation, social comparison-based emotions, group affective climate, and incentive pay in Chapter 2. Then, I provide definitions of key study variables and propose a theoretical model in Chapter 3 where group leaders' engaging in LMX differentiation fosters the emergence of group admiration and envy climate to a different degree depending on the types and average proportion of incentive pay. The group admiration and envy climates are then hypothesized to relate to group coordination in a positive and negative way, respectively, which then affects performance of the groups. This theoretical framework is empirically tested using data from 828 sales groups in a major Chinese home appliance retailer. Detailed information about research site, sample, survey translation, measures, discriminant validity test, and analytical strategy is provided in Chapter 4. Chapter 5 contains

information about descriptive statistics and hypotheses testing results. Lastly, I summarize key findings and offer theoretical and empirical implications of the findings along with several limitations and future research directions in Chapter 6. After Chapter 6, I include a copy of Institutional Review Board (IRB) approval letter and an English version of actual survey questionnaires in Appendices, followed by a list of references, Tables, and Figures.



## **Chapter 2: Literature Review**

### **2.1. Extant Research on LMX Differentiation**

As I noted earlier, prior empirical studies on LMX have largely focused on level or quality of LMX rather than dispersion of LMX within work groups (Erdogan & Bauer, 2010; Henderson et al., 2009). However, a growing body of research has examined LMX differentiation as a focal study variable at both individual and group levels. Specifically, at the individual-level, leadership scholars have examined the effects of LMX differentiation on various kinds of employee attitudinal and behavioral outcomes. As a result, they first revealed that LMX differentiation may have negative impact on employees' relationship with peers, which then negatively influences their attitudes. For example, Hooper and Martin (2008) found that employees' perceived LMX differentiation may foster relationship conflict among them, which in turn impair their job satisfaction and well-being. In a similar vein, Sherony and Green (2002) found that differences in LMX among coworkers led to poorer exchange relationship among them.

Second, scholars have further found that the effects of LMX differentiation on employee attitudes and behavior may be contingent upon levels of justice climate in work groups. For example, Erdogan and Bauer (2010) found that LMX differentiation negatively related organizational commitment, satisfaction with coworkers, and withdrawal behavior when procedural and distributive justice climates were low; but

positively related to helping behaviors toward coworkers when distributive justice climate was high. In addition, it was also found that the effects of LMX differentiation on employees' job performance varied depending on levels of their levels of LMX. For example, Liden and colleagues (2006) found that LMX differentiation positively related to employee job performance only for those with low LMX. When employees had high levels of LMX, LMX differentiation did not lead to any change in their job performance.

A related body of research has focused on relative LMX (or RLMX), defined as a divergence between a focal employee's LMX and group's average level of LMX, and found that RLMX may affect employees' psychological contract fulfillment when groups' LMX differentiation is high (Henderson, Wayne, Shore, Bommer, & Tetrick, 2008), their social identification and job performance (Tse, Ashkanasy, & Dasborough, 2012), and their social comparison perceptions which then influence their job performance and organizational citizenship behavior (Vidyarathi, Liden, Anand, Erdogan, & Ghosh, 2010). These studies suggest that if leaders engage in LMX differentiation to a greater degree, it may lead to a divergence among employees in terms of their attitudes and performance.

At the group-level, I found that much less attention has been paid to the effects of LMX differentiation (Le Blanc & González-Romá, 2012). First, the few studies failed to find main effects of LMX differentiation on group performance (Le Blanc & González-Romá, 2012; Liden et al., 2006). Rather, the effects of LMX differentiation on group performance were moderated by average level of LMX such

that LMX differentiation was positively related to group performance when the group mean LMX was low (Le Blanc & González-Romá, 2012; Liden et al., 2006). Stewart and Johnson (2009) further found that the interactive effects of LMX differentiation and group mean LMX on group performance were moderated by group diversity such that the interactive effects were stronger for more diverse groups in terms of gender.

In contrast to the above studies in which the performance effects of LMX differentiation were more positive under low level of group mean LMX, Boies and Howell (2006) found that LMX differentiation negatively related to team potency and positively affected team conflict when groups' mean LMX was low. Similarly, Van Breukelen and colleagues (2012) found that leaders' differential treatment of followers on social issues negatively affected followers' perceived team atmosphere, but the effects of task-related differential treatment on followers' perceived team performance were mixed.

Taken together, there has been relatively less attention paid to the effects of LMX differentiation, and the limited body of research on LMX differentiation has largely focused on its negative consequences on employees' coworker relationship and attitudes, and the buffering roles of justice climate for the potential negative effects of LMX differentiation on employee attitudes and performance. At the group-level, a few studies showed that LMX differentiation may lead to positive outcomes such as group performance under low level of group mean LMX, but some other studies found opposite or mixed effects on group-level outcomes. I extend this limited, but important body of research on LMX differentiation by identifying (1)

unexplored moderator for the effects of LMX differentiation and (2) novel mediating mechanisms based on groups' affective states.

## **2.2. Extant Research on Admiration and Envy**

Individuals' feelings of admiration and envy have been studied by a group of psychologists and more recently by management scholars as their reactions to interpersonal or intergroup social comparisons (e.g., Cuddy et al., 2007; Smith, 2000; Smith, Parrott, Ozer, & Moniz, 1994; Tai, Narayanan, & McAllister, 2012). Specifically, they have been considered two typical emotional states that individuals and groups may experience when they compare themselves with superior others (Cuddy et al., 2007; Smith, 2000).

Admiration refers to upward assimilative emotions directed toward others with superior outcomes and consists of a sense of inspiration, pride, respect, and pleased approval (Cuddy et al., 2007; Fiske, Cuddy, Glick, & Xu, 2002). There has been only a limited number of empirical studies on admiration. For example, Cuddy and colleagues (2007) found that people feel admiration toward a group of people who are perceived warm and competent, which in turn leads to both active and passive facilitation toward the admired others. Similarly, Fiske and colleagues (2002) found that people do not admire others who are perceived neither competent, nor warm. Also, Algoe and Haidt (2009) provided evidence that feelings of admiration leads to individuals' motivation to improve themselves. However, this was contradicted by Van de Ven and colleagues (2011) who failed to find support for the

effects of admiration on self-improvement.

Unlike admiration, envy has received relatively more attention not only from psychologists but from management scholars. Envy is generally defined as a painful feeling characterized by inadequacy and inferiority (Smith & Kim, 2007). First, regarding antecedents of envy, Vecchio (2005) examined employees' job longevity, Machiavellianism, and sense of competitive reward as possible predictors of feeling envied by others, and identified self-esteem, Machiavellianism, LMX, sense of competitive reward, and job dissatisfaction as antecedents of feeling envy toward others. Schaubroeck and Lam (2004) found that employees felt envy toward promotees who were similar to themselves and when they had high promotion expectations. They also identified a few outcomes of envy by revealing that promotion envy led employees to perceive reward allocation injustice, but enhanced their job performance. Further, Duffy and Shaw (2000) found that group members' average level of envy was negatively associated with group performance by positively relating to social loafing and negatively relating to cohesiveness and potency. Also, Cuddy and colleagues (2007) found that envy may foster anger which then leads to engaging in active harm. In a more recent study, Duffy and colleagues (2012) found that envy may foster social undermining through employees' moral disengagement, particularly when they have low social identification with their coworkers and when teams are low in team identification and high in team undermining norms.

Taken together, extant research on admiration and envy has largely focused on exploring individual-level predictors and outcomes. This study extends this body of research by taking admiration and envy to group-level and identifying their novel antecedents and outcomes in work group settings.

### **2.3. Extant Research on Affective Climate**

Although emotion has been typically studied as a micro-level (i.e., intra-individual-, individual-, or interpersonal-level) phenomenon (Elfenbein, 2007), a growing body of research has conceptualized emotion at group-level and examined the processes of its emergence as well as its impact on various group outcomes. For example, in their review article, Kelly and Barsade (2001) suggested several implicit emotional sharing processes such as emotional contagion, vicarious affect, behavioral entrainment and interaction synchrony, as well as explicit processes including intentional affective induction/influence and affective impression management. Some parts of their model were empirically tested. For example, Barsade (2002) examined how emotions are shared among group members through conscious and subconscious contagion processes and how such shared emotions affect group behaviors and performance. Likewise, Bartel and Saavedra (2000) hypothesized and found that group members display and detect mood information through behavioral cues, thus leading to mood convergence in groups. Group members' shared feelings have been conceptualized as group affective tone that is defined as homogenous emotional reactions within groups (George, 1990; Sy et al., 2005). For example, in Sy

and colleagues' (2005) study, leader's mood influenced group members' mood convergence, thereby inducing group affective tone which then affected group coordination and effort expenditure.

While the mood or emotion convergence has been a primary approach to conceptualizing group-level emotions, there has an emerging body of research that examines emotions in a work group as affective group climate constructs. Broadly, organizational climate is defined as organizational members' shared perceptions of organization attributes (Reichers & Schneider, 1990). Put differently, it refers to "shared perceptions of the way things are around here" and is different from psychological climate that concerns individuals' own perceptions of work environment (Reicher & Schneider, 1990, p. 20). Extant research on organizational climate has largely focused on employees' shared perceptions of specific organizational practices and procedures such as climate for service that is defined as employees' shared perceptions of practices and procedures rewarding and supporting their delivery of quality service (Schneider, White, & Paul, 1998) and climate for safety which refers to employees' shared perceptions of practices and procedures emphasizing organizational safety (Zohar & Luria, 2005) among others.

Applying the concept of organizational climate to group emotional phenomena, Ashkanasy and Nicholson (2003) proposed the notion of affective climate as shared perceptions of emotion among organizational members and examined climate of fear as a work unit-level construct. Likewise, Tse, Dasborough, and Ashkanasy (2008) also examined team affective climate in terms of being

enthusiastic and warm as a moderator for the effects of LMX on workplace friendship. This study draws upon this line of research on affective climate and adds to it by examining antecedents and outcomes of group affective climates in terms of admiration and envy.

#### **2.4. Extant Research on Incentive Pay**

A great deal of research has examined the outcomes of incentive pay for several decades (see for review Gerhart, Rynes, & Fulmer, 2009; Rynes, Gerhart, & Parks, 2005). Specifically, previous research has extensively investigated incentive and sorting effects of various kinds of incentive pay practices such as individual performance-based pay (e.g., merit pay), group or unit performance-based pay (e.g., gainsharing), and organizational performance-based pay (e.g., profit-sharing). Despite the extensiveness of empirical studies on incentive pay, their focus was predominantly on performance effects of incentive pay programs with relatively less attention paid to mediating mechanisms behind the performance effects (Gerhart et al., 2009). Further, the limited research on the mediating mechanisms generally focused on cognitive or behavioral process variables such as personal goals and goal commitment (Wright, 1989) and information allocation and social loafing (Pearsall et al., 2010) rather than affective or emotional mechanisms. This study extends the large body of research on incentive pay by proposing and finding that groups' incentive pay practices (in conjunction with LMX differentiation) may influence group



coordination and performance by affecting the emergence and impact of group affective climates.

## **Chapter 3: Theory and Hypotheses Development**

In Chapter 1, I introduced the puzzle over the effects of LMX differentiation on group coordination. As noted above, on the one hand, LMX differentiation may enhance group coordination by facilitating division of roles, responsibilities, and direction among group members. On the other hand, it may impair group coordination by creating relational problems among them. I suggest that these two divergent perspectives on the effects of LMX differentiation are built upon different assumptions about groups' responses to leader's engaging in LMX differentiation. The first view assumes that groups approve the LMX differentiation, such that group members accept their own roles and resources as well as those of others distributed by the LMX differentiation. By contrast, the latter view assumes that groups challenge the current state of LMX distribution, such that group members compete for better roles and more resources than those of their coworkers. These different responses of work groups to the same event, i.e., LMX differentiation, can be explained by the cognitive appraisal theory of emotions (Frijda, Kuipers, & ter Schure, 1989; Roseman et al., 1990). Since LMX differentiation tends to create social comparison situations in work groups (Vidyarthi et al., 2010), I draw upon the cognitive appraisal perspective in the social comparison situations (i.e., theory of social comparison-based emotions; Cuddy et al., 2007; Smith, 2000) in conjunction with incentive pay research (Gerhart et al., 2009) to provide a more integrative model on the groups'

differential responses to LMX differentiation and their influences on group coordination and performance. Below I provide an overview of each of the three theoretical perspectives in turn.

### **3.1. Theoretical Backgrounds**

**3.1.1. Cognitive appraisal theory of emotions.** This theory suggests that individuals' evaluations of the events or situations, rather than the events or situations *per se*, determine whether or not they will feel an emotion and which emotion they will feel (Frijda et al., 1989; Roseman et al., 1990). Put differently, two individuals may experience the same emotional states even when they are in different situations as long as their appraisals of the situations are the same. Likewise, two individuals may feel different emotions even when they are in the same situation if they interpret the situation in different ways (Roseman et al., 1990). Building upon this perspective, I suggest that group members may respond differently with different emotional states to their leader's display of LMX differentiation.

**3.1.2. Theory of social comparison-based emotions.** Since group leader's differentiated development of LMX may trigger social comparisons among group members (Vidyarthi et al., 2010), I draw upon theory of social comparison-based emotions (Smith, 2000) which is a specific application of the cognitive appraisal theory of emotions to social comparison situations. This perspective suggests that people tend to feel either admiration or envy when they compare themselves with others who have superior outcomes and/or qualities (Cuddy et al., 2007; Smith, 2000). Since leader's LMX differentiation provides more important roles and more

work resources to a few group members who can be trusted more and make more contributions to a group, it will lead to group members' upward social comparisons toward the few select members and thus induce their feelings of admiration and/or envy. Furthermore, the theory of social comparison-based emotions suggests that the extent to which upward social comparisons give rise to admiration and/or envy depends on outcome interdependence among individuals. Specifically, they are more likely to experience admiration when their outcomes vary depending on others' outcomes (i.e., high outcome interdependence), whereas they tend to feel envy when their outcomes are determined irrespective of others' outcomes (i.e., low outcome interdependence) (Smith, 2000).

**3.1.3. Incentive pay research.** Extant theory and research in compensation suggests that incentive pay is a primary way to determine outcome interdependence among individuals (Wageman, 1995, 2001; Wageman & Baker, 1997). When group members' compensation is determined by group (versus individual) performance, they will experience high (versus low) level of outcome interdependence. For this reason, I integrate theory of social comparison-based emotions and incentive pay research to develop hypotheses in my theoretical framework.

## **3.2. Definitions of Key Study Variables**

**3.2.1. LMX differentiation.** This is generally defined as a within-group dispersion of LMX among group members (Erdogan & Bauer, 2010; Henderson et al., 2009). Prior studies conceptualized LMX differentiation as a separation concept according to Harrison and Klein (2007) and thus operationalized it as variance or standard

deviation within a group. A separation refers to differences in opinion or position among group members such that high level of separation indicates a greater extent of disagreement or opposition among them (Harrison & Klein, 2007). However, LMX does not usually reflect a position or opinion so much as a valued asset that can give group members with high quality LMX an access to more work resources and higher status (Liden, Sparrowe, & Wayne, 1997). Put differently, LMX is considered a primary way by which work resources are distributed among group members wherein high LMX is usually instrumental for obtaining valued outcomes at workplace (Liden et al., 1997; Sparrowe & Liden, 2005). Hence, LMX differentiation is conceptually a disparity that is defined as within-group concentration of valued resources such as power and status. Therefore, I define LMX differentiation as within-group differences in concentration of LMX (i.e., within-group disparity of LMX) and operationalize it accordingly.

**3.2.2. Group affective climates.** In consistent with Ashkanasy and colleagues' studies (Ashkanasy & Nicholson, 2003; Tse et al., 2011), I define group affective climate as shared perceptions of emotions in a group by its members. Specifically, group admiration climate refers to group members' shared perceptions about the degree to which group members admire each other in a typical week at work. Likewise, group envy climate is defined as the extent to which group members envy each other in a typical week at work. These conceptualizations based on shared perceptions of emotions among group members are different from other concepts of group emotions such as emotional contagion (e.g., Barsade, 2002) and group

affective tone (e.g., Sy et al., 2005) that concern sharedness of a focal emotion itself among group members.

**3.2.3. Types of incentive pay.** This study focuses on two kinds of incentive pay—i.e., group incentive pay and individual incentive pay. Group incentive pay refers to incentive pay in which group members are rewarded on the basis of group performance such that they receive an equal share from group performance improvements, whereas individual incentive pay indicates individual performance-based pay in which group members are rewarded differentially in accordance with their individual performance (Gerhart et al., 2009). Group and individual performance can be based on results- and/or behavior-based measures. In other words, the theoretical rationales behind my hypotheses are more general and do not depend on types of performance measures.

**3.2.4. Average proportion of incentive pay.** Employees' compensation consists of multiple elements based on their seniority, competency, job, position, and performance among others (Gerhart & Rynes, 2003). Thus, each employee tends to have different proportion of performance-based incentive pay in his/her total compensation. Since this study examines the effects of LMX differentiation at group-level, average proportion of incentive pay is defined as group average of each group member's proportion of incentive pay. Also, since each group is under different type of incentive pay, "incentive pay" in this variable refers to each group's respective incentive pay (e.g., group or individual incentive pay).

**3.2.5. Group coordination.** This concerns the process of interactions by group members that integrate their contributions toward a group goal by articulating plans, defining their individual roles, responsibilities, and control, negotiating deadlines, and sharing information (Marks, Mathieu, & Zaccaro, 2001; Rico et al., 2008). Group coordination has been considered not only a primary mechanism for group effectiveness (Rico et al., 2008), but also a central purpose of an organization (Okhuysen & Bechky, 2009).

**3.2.6. Group performance.** Group performance in this study refers to sales performance because my sample is drawn from sales groups from a large Chinese home appliance retailer.

### **3.3. Effects of LMX Differentiation on Group Affective Climates**

Research on LMX and social comparisons suggests that group members often compare leaders' treatments of themselves to those of other members to evaluate their status in work groups (Vidyarathi et al., 2010). As a result, they may feel admiration and/or envy toward other members with higher LMX because admiration and envy are considered two primary emotions that arise from upward social comparisons (Cuddy et al., 2007; Smith, 2000). Admiration refers to a feeling of inspiration, respect, and pride directed toward those with superior outcomes (Cuddy et al., 2007), and envy is a painful feeling characterized by inferiority caused by a comparison with someone(s) having superior outcomes (Tai et al., 2012).

Hence, in work groups, the more leaders differentiate among members in developing LMX, the more likely groups will have members who admire their

coworkers. Since LMX is more concentrated on a few select members when leaders engage in higher levels of LMX differentiation, groups will consist of a greater number of members who feel admiration towards the few higher LMX coworkers. Further, under higher levels of LMX differentiation, the average distance among group members in terms of levels of LMX becomes larger. Thus, group members with lower LMX may feel stronger admiration toward the higher LMX coworkers. Likewise, under higher levels of LMX differentiation, groups will have more members who envy higher LMX members to a greater degree. As a result, it is more likely that group members' feelings of admiration and envy are displayed and communicated among them under higher (versus lower) LMX differentiation, thereby promoting the emergence of their shared perceptions about overall degree of group members' admiring and envying each other, which I define as group climates of admiration and envy, respectively, in consistent with an emerging body of research on group affective climate (e.g., Ashkanasy, & Nicholson, 2003; Tse et al., 2008). Based on this reasoning, I propose:

*Hypothesis 1a: Group leaders' LMX differentiation will be positively related to group climate of admiration.*

*Hypothesis 1b: Group leaders' LMX differentiation will be positively related to group climate of envy.*



### **3.4. 1<sup>st</sup> Stage Moderating Effects of Incentive Pay**

As noted above, LMX differentiation has been conceived as a mechanism for leaders to differentially allocate group resources to its members (Graen & Scandura, 1987; Liden et al., 1997; Sparrowe & Liden, 2005). While various kinds of resources can be distributed via LMX (e.g., roles, information, and support), there exists another important resource that LMX may not have direct impact on its allocation—i.e., money (Wilson, Sin, & Conlon, 2010). Money (i.e., financial reward) is typically distributed based on a group's pay practices. Specifically, group members can be rewarded either equally based on group performance (i.e., group incentive pay) or differentially based on their individual performance (i.e., individual incentive pay; Gerhart et al., 2009). Hence, groups' incentive pay practices can also differentiate among group members to a different degree and thus may play a role in the differentiation processes by LMX.

More importantly, theory of social comparison-based emotions suggests that the extent to which individuals' engaging in upward social comparisons gives rise to admiration and/or envy may depend on outcome interdependence among them (Smith, 2000). When individuals' outcomes (e.g., rewards) are determined jointly by others' decisions and actions (i.e., high outcome interdependence), they will more likely admire rather than envy superior others. By contrast, when outcome interdependence is low, individuals are more likely to envy rather than admire the superior others. Since outcome interdependence in work groups can be created by their incentive pay practices such that it tends to be high under group, as opposed to

individual, incentive pay (Gerhart et al., 2009), I examine these two types of incentive pay as key moderators for the effects of LMX differentiation.

Specifically, I propose that LMX differentiation will lead to a higher level of group climate of admiration under group incentive pay. People feel admiration when others' superior outcomes do not detract from themselves (Cuddy et al., 2007; Smith, 2000). Since group members under group incentive pay are rewarded equally regardless of their levels of LMX, they will benefit from higher LMX members who usually take on more important roles and make more contributions to group performance (Nahrgang, Morgeson, & Ilies, 2009; Sparrowe & Liden, 2005). Conversely, under individual incentive pay, group members tend to compete with each other for higher performance and resultant more rewards. Hence, group, rather than individual, incentive pay will facilitate the LMX differentiation to foster group members' overall degree of admiring, thereby boosting its effects on the development of group admiration climate.

Second, LMX differentiation will less likely lead to groups' envy climate under group incentive pay. Since group incentive pay rewards group members equally no matter what LMX each member has, it will render the differences in LMX among members less important and less salient to them. Therefore, LMX differentiation will less likely lead lower LMX members to feel inadequate and inferior. By contrast, when rewarded on the basis of individual contributions, higher LMX members may be paid more because they tend to perform better (Sparrowe & Liden, 2005; Zhang, Waldman, & Wang, 2012). Hence, LMX differentiation will lead lower LMX

members to feel more inadequate and inferior (Tai et al., 2012). Therefore, group, rather than individual, incentive pay will hinder LMX differentiation to promote group members' overall degree of envying, thereby weakening its effects on the emergence of group envy climate. Together, I propose:

*Hypothesis 2a: Groups' use of group (versus individual) incentive pay will strengthen the positive relationship between LMX differentiation and group climate of admiration specified in Hypothesis 1a.*

*Hypothesis 2b: Groups' use of group (versus individual) incentive pay will weaken the positive relationship between LMX differentiation and group climate of envy specified in Hypothesis 1b.*

While Hypotheses 2a and 2b concern the moderating effects of types of incentive pay, another important element in incentive pay design is the proportion of incentive pay in total pay of employees (Gerhart & Rynes, 2003). Because of several possible impediments to raising ratio of incentive pay (e.g., employees' ability to control performance measures and inaccuracy of performance measures), organizations use incentive pay practices with a varying intensity (Zenger & Marshall, 2000). Hence, even when work groups claim to use the same type of incentive pay, they may implement it differently by using different proportions of incentive pay in employees' total compensation. If payouts from incentive pay take only a low proportion in total compensation, the hypothesized effects of incentive pay will be weaker. Put differently, since the significance of incentive pay practices in determining outcome interdependence will increase in accordance with increase in the

ratio of incentive pay, I suggest that the moderating effects of group (versus individual) incentive pay will be magnified when groups consist of members whose ratio of the incentive pay is higher rather than lower. Therefore groups' average ratio of incentive pay will serve as a three-way moderator in the following ways:

*Hypothesis 3a: Groups' use of higher rather than lower average proportion of incentive pay will strengthen the interaction effects of LMX differentiation and group (versus individual) incentive pay on group climate of admiration specified in Hypothesis 2a.*

*Hypothesis 3b: Groups' use of higher rather than lower average proportion of incentive pay will strengthen the interaction effects of LMX differentiation and group (versus individual) incentive pay on group climate of envy specified in Hypothesis 2b.*

### **3.5. Effects of Group Affective Climates on Group Coordination**

Group climates of admiration and envy will in turn affect group coordination that concerns integrating individual members' contributions to achieve group goals by defining individual roles and responsibilities and aligning individual actions (Rico et al., 2008). First, high levels of admiration climate will reflect high degree of group members' overall feelings of admiration. More importantly, the admiration climate will signal to group members that admiring other members is valued and expected in the work groups (Zohar, 2000). And, it is when group members are admiring each other that they will be more likely to approve each other's different roles and

responsibilities and be more willing to cooperate with each other (Algoe & Haidt, 2009), all of which can contribute to the effectiveness of group coordination (Rico et al., 2008).

In a similar vein, high levels of envy climate will reflect high degree of group members' overall envying. Further, it can promote group members' feelings of envy by signaling that envying other members is acceptable in their work groups (Zohar, 2000). However, it is when group members envy each other that they tend to be dissatisfied with the way that a leader differentiates among them in terms of LMX, may be motivated to challenge the current allocation of LMX by either promoting themselves (e.g., compete for more resources from the leader) or pulling others down (e.g., undermine others with higher LMX; Tai et al., 2012). Hence, group envy climate is likely to hurt group coordination (Kwaadsteniet & van Dijk, 2010).

Therefore:

*Hypothesis 4a: Group climate of admiration will be positively related to group coordination.*

*Hypothesis 4b: Group climate of envy will be negatively related to group coordination.*

### **3.6. 2<sup>nd</sup> Stage Moderating Effects of Incentive Pay**

Moreover, I argue that work groups' incentive pay will moderate the effects of group climates of admiration and envy on group coordination. First, group incentive pay will strengthen the positive effects of group admiration climate on group

coordination because it provides further incentives for admiring members to cooperate with admired others more closely (Gerhart et al., 2009). That is, group members will be more willing to cooperate with the admired, superior others to enhance group performance so that they get paid more. Conversely, individual incentive pay will dampen the cooperation among group members even when they admire each other (Gerhart et al., 2009).

Second, group incentive pay will weaken the negative effects of group envy climate on group coordination. Even when group climate of envy leads group members to envy each other, they will be less likely to withdraw from coordinating with others because such withdrawal will hurt group performance and thus reduce their reward under group incentive pay. To the contrary, individual incentive pay will augment the negative relationship between group envy climate and group coordination by leading envious members to focus more on the enhancement of their individual performance to address their envy, thereby further withdrawing from collaborating with others (Tai et al., 2012). Therefore:

*Hypothesis 5a: Groups' use of group (versus individual) incentive pay will strengthen the positive relationship between group climate of admiration and group coordination specified in Hypothesis 4a.*

*Hypothesis 5b: Groups' use of group (versus individual) incentive pay will weaken the negative relationship between group climate of envy and group coordination specified in Hypothesis 4b.*

Further, as in Hypotheses 3a and 3b, I expect that the moderating effects of group incentive pay will be more pronounced when groups use the incentive pay to a greater extent. By contrast, if group members receive only a small amount of compensation from incentive pay, they will be less responsive to group (versus individual) incentive pay's motivational forces for cooperation with admired and/or envied coworkers. Formally stated:

*Hypothesis 6a: Groups' use of higher rather than lower average proportion of incentive pay will strengthen the interaction effects of group admiration climate and group (versus individual) incentive pay on group coordination specified in Hypothesis 5a.*

*Hypothesis 6b: Groups' use of higher rather than lower average proportion of incentive pay will strengthen the interaction effects of group envy climate and group (versus individual) incentive pay on group coordination specified in Hypothesis 5b.*

### **3.7. Moderated Mediation Effects**

Given that group leaders' LMX differentiation may affect group climates of admiration and envy, which in turn may influence group coordination, I suggest that LMX differentiation will be indirectly linked to group coordination via group climates of admiration and envy. Specifically, since both the relationship between LMX differentiation and group admiration climate and that between group admiration climate and group coordination are expected to be positive, and both relationships

may be more pronounced under the use of group, rather than individual, incentive pay to a greater extent, I propose that groups' use of higher average proportion of group incentive pay will strengthen the positive indirect effects of LMX differentiation on group coordination via group admiration climate. By contrast, since LMX differentiation is less likely to induce group envy climate under high use of group, rather than individual, incentive pay, and group envy climate may likewise impair group coordination to a lesser extent under high use of group, rather than individual, incentive pay, I hypothesize that groups' implementation of group incentive pay with a higher average proportion will weaken the negative indirect effects of LMX differentiation on group coordination through group envy climate. Formally stated:

*Hypothesis 7a: Groups' use of higher (versus lower) average proportion of group (versus individual) incentive pay will strengthen the indirect relationship between LMX differentiation and group coordination via group climate of admiration.*

*Hypothesis 7b: Groups' use of higher (versus lower) average proportion of group (versus individual) incentive pay will weaken the indirect relationship between LMX differentiation and group coordination via group climate of envy.*

### **3.8. Effects of Group Coordination on Group Performance**

Lastly, in consistent with prior research, I propose that effectiveness of group coordination will lead to high group performance. As noted above, coordination



concerns integrating individual members' contributions by developing strategies, assigning tasks and resources, and aligning individuals' disparate actions through sequencing and synchronization (Kozlowski & Bell, 2003; Marks et al., 2001). A group with effective coordination is characterized by its members that have a clear understanding of what and how to do and work together smoothly and efficiently without process loss (Lewis, 2003; Steiner, 1972). As a result, such well-coordinated group tends to accomplish its group tasks effectively and thus exhibit high group performance. In support, a number of empirical studies have found a positive relationship between groups' effectiveness of coordination and their performance (see for review Kozlowski & Bell, 2003). Therefore, I finally propose the following:

*Hypothesis 8: Group coordination will be positively related to group performance.*

## **Chapter 4: Methodology**

### **4.1. Research Site and Sample**

Empirical investigation of my theoretical framework was conducted using data from sales groups in a large electrical appliance retailer in China. It belongs in the top 50 Asian companies by Forbes with recent annual revenue and profit around 10 billion and 300 million dollars, respectively, in 2011. This company provided a particularly appropriate research context in that it experimented various kinds of incentive pay practices for different sales groups. Put differently, the company used group incentive pay for a certain number of sales groups while using individual incentive pay for some other groups. I gained access to the entire employees of this company through the personal connection of my colleague who works for a prestigious business school in China.

I administered surveys via the company's online system with the help of my Chinese colleague and human resource (HR) manager of the company to two different sources (i.e., group directors and group members) in May, 2012. The respondents were informed of the survey objective and procedures, and were assured of the voluntary nature of participation and confidentiality of survey responses via the cover letter of the surveys. In particular, a coding system was used so that respondents did not write their names on the surveys. Each survey carried coding numbers for identification purposes; only researchers have access to the coding

system and therefore neither HR manager nor anyone from the company would be able to identify any employees individually based on the responses. Then, I obtained data on actual sales records of sample groups in November, 2012 along with those in May, 2012. I chose the six month time frame because it was the shortest possible one for the company to make sales data available to me.

After all necessary data were collected, my Chinese colleague and I conducted data matching processes that merged data from the three different sources (i.e., group directors, group members, and sales data archives) to prepare for analyses. As a result, I obtained usable data from 828 sales groups and 3,019 group members out of 1,626 groups and 4,555 members who participated in the survey (51% and 66% response rates, respectively). These sales groups were from 650 stores across China. Each sales group was responsible for one or multiple products that belonged to three categories: (1) traditional (e.g., color TV, audio, refrigerators, washing machines, and air conditioning), (2) life (e.g., kitchen, bath, and small home appliance), and (3) 3C (i.e., computer and office automation, communication, and consumer electronics).

Since a large portion of the data was eliminated due to missing values in the study variables, I compared the final sample and original sample to examine if the data elimination led to any systematic differences in terms of sample groups' size and classification into the three product categories. As a result, I found that the two samples had a largely consistent group size (i.e., 9.71 and 8.83 for final and original samples, respectively;  $F(1, 2449) = 7.56, p < .01$ ) and showed almost the same proportions of groups belonging to the three categories (i.e., 26%, 43%, and 31% of

sales groups in the final sample and 26%, 42%, and 32% of sales groups in the original sample belonged to traditional, life and 3C categories, respectively;  $F(1, 5365) = .12, p > .10$  for traditional category,  $F(1, 5365) = .78, p > .10$  for life category, and  $F(1, 5365) = .31, p > .10$  for 3C category). Therefore, I concluded that it is not likely that the data elimination led to meaningful systematic differences between the final and original samples.

## **4.2. Survey Translation Procedure**

Since the measures in this study were originally in English, I followed an iterative translation procedure (Brislin, 1990). My doctoral advisor and Chinese colleague, both of whom are Chinese natives, engaged in the iterative process of translation and back-translation until no concerns and issues about the Chinese version were detected. An English versions of group member and director surveys are provided in Appendix B.

## **4.3. Measures**

**4.3.1. LMX differentiation.** LMX was measured by group members using LMX-7 scale taken from Graen and Uhl-Bien (1995). Sample items include “Regardless of how much formal authority he/she has built into his/her position, what are the chances that your group leader would use his/her power to help you solve problems in your work?” and “Again, regardless of the amount of formal authority your group leader has, what are the chances that he/she would “bail you out,” at his/her expense?” Cronbach’s alpha was .93. Since LMX differentiation in this study

concerns within-group disparity of LMX relationships across group members, I calculated the coefficient of variation score (i.e., standard deviation divided by mean) from the group members' ratings of LMX to measure LMX differentiation (Harrison & Klein, 2007).

**4.3.2. Group admiration climate.** Group admiration climate was measured by asking group members to indicate the extent to which they generally feel admiration toward each other using six items adapted from Cuddy and colleagues (2007). Example items include “admiring,” “respectful,” and “inspired.” Cronbach’s alpha was .95. Then, individual group members’ responses were aggregated to group-level. This was supported by a high median rwg(j) value of .89 indicating that group members in the participating sales groups overall strongly agreed on their assessment of admiration climate (LeBreton & Senter, 2008), as well as an ICC(1) value of .17, which is considered a medium to large effect (LeBreton & Senter, 2008) and indicates that a group membership accounted for 17% of the variance in the admiration climate ratings (Bliese, 2002). ICC(2) that indicates the reliability of group means was .42, which was relatively low. This can be explained by relatively small numbers of responses per group (i.e., average number of group member responses per group = 3.65; Bliese, 2002). However, F-test results associated with ICC(1) and ICC(2) were statistically significant,  $F(827, 2191) = 1.73, p < .001$ , and low ICC(2) value makes it difficult to detect relationships involving aggregated variables, thereby producing more conservative results (Bliese, 2002).

**4.3.3. Group envy climate.** Group envy climate was measured by asking group members to indicate the extent to which they generally feel envy toward each other

using nine items adapted from Cohen-Charash and Mueller (2007). Sample items are “a desire to have what others in the sales group have,” “feeling lacking some of the things others in the sales group have,” and “envious of each other.” Cronbach’s alpha was .96. I aggregated individual group members’ responses to group-level based on high median rwg(j) value of .98 and ICC(1) value of .12, a medium to large effect (LeBreton & Senter, 2008). As in the group admiration climate, I found relatively low ICC(2), i.e., .33, which is again related to the relatively small numbers of responses per group (Bliese, 2002), but proceeded to the aggregation based on acceptable rwg(j) and ICC(1) values as well as significant F-test results,  $F(827, 2191) = 1.50, p < .001$ .

**4.3.4. Types of incentive pay.** Group leaders indicated types of incentive pay practices in their group. I dummy-coded types of incentive pay because the sales groups were organized under either group or individual incentive pay practice. In addition, it turned out that many of sales groups were rewarded based on the combination of individual, group and/or store performance. Thus, these hybrid incentive practices (i.e., [1] individual and group performance-based incentive and [2] individual, group, and store performance-based incentive pay) were also included as dummy variables. In other words, sales groups were using one out of four different kinds of incentive pay based on (1) individual performance, (2) group performance, (3) individual and group performance, and (4) individual, group, and store performance. Individual performance included both individuals’ sales performance and subjective performance ratings provided by leader, while all other types of performance were sales performance at respective levels (e.g., group sales

performance and store sales performance). I excluded individual incentive pay condition as a reference category because the hypotheses in this study concern the effects of group incentive pay as compared to individual incentive pay.

**4.3.5. Average proportion of incentive pay.** Group members provided a ratio of incentive pay in their total compensation (i.e., sum of basic pay and incentive pay). Because each member had different levels of basic salary that were determined by their position, background, and experiences, they had different proportions of incentive pay. Thus, I averaged each group member's ratio of incentive pay in total pay to form group-level average proportion of incentive pay.

**4.3.6. Group coordination.** Group coordination was assessed by group members using an established five-item scale taken from Lewis (2003). Sample items include "our sales group works together in a well-coordinated fashion," "our sales group does not need to backtrack and start over a lot," and "we integrate our efforts smoothly and effectively." Cronbach's alpha was .91. Then, I averaged group members' individual ratings to form group coordination. A median  $rwg(j)$  was .95 and  $ICC(1)$  was .16, a medium to large effect, and  $ICC(2)$  was .40 (LeBreton & Senter, 2008). F-test results associated with the  $ICC(1)$  and  $ICC(2)$  were statistically significant,  $F(827, 2191) = 1.68, p < .001$ .

**4.3.7. Sales performance.** I obtained actual sales data through HR manager of the company for each of the participating sales groups on two time points. Since the survey was administered in May, 2012, the first set of sales data was from May 31, 2012 (T1). Then, I obtained the second set of sales data on November 31, 2012 (T2)

to examine the effects of group coordination on lagged T2 sales performance above and beyond T1 sales performance. Although the six-month time interval was determined by the company based on its sales data collection policy, I believe that the six months will give sales groups a sufficient time to realize the benefits of effective coordination in the form of increases in sales records. Also, sales figures in the data sets indicated relative sales performance that was adjusted for each team's performance evaluation results. They included negative figures that were for sales groups that failed to achieve their performance goals.

**4.3.8. Control variables.** I controlled for basic demographic variables such as group size and three product categories. To better estimate the effects of LMX differentiation, I included each group's average level of LMX as a control (Harrison & Klein, 2007). Since the present study aimed to go above and beyond previous studies that have largely focused on the roles of justice-related variables in the influence processes of LMX differentiation, I controlled for overall justice climate (Ambrose & Schminke, 2009; Cronbach's alpha = .98). Further, group members' average levels of social desirability (Bordia, Restubog, & Tang, 2008) were controlled because some items for group envy climate could be perceived as sensitive. Lastly, T1 sales performance was controlled in estimating the effects of group coordination on T2 sales performance to examine if it predicts sales performance in T2 above and beyond what sales performance in T1 explains.



#### **4.4. Pilot Study Results**

Before collecting the main data set, I conducted a pilot study in one manufacturing company based in Shenzhen, China from January to February in 2012 because some items for group envy climate contains potentially sensitive content and has not been sufficiently investigated in China. Analyses of data from 10 work groups and 100 group members revealed that the group envy climate items had adequate levels of reliability (i.e., .78) and variability (i.e., mean = 3.86,  $SD = 1.26$ ).

#### **4.5. Discriminant Validity**

Since LMX, group admiration climate, group envy climate, and group coordination were measured by group members in the same survey, I conducted a confirmatory factor analysis (CFA) with LISREL 8.80 to assess the distinctiveness among them. As a result, I found that the hypothesized four factor model fit the data well, Chi-Square (318) = 4,521.73, RMSEA = .07, CFI = .98, and SRMR = .028. This was significantly better than alternative three-factor model combining group admiration climate and envy climate into a single factor,  $\Delta$ Chi-Square (3) = 26,578.11,  $p < .00$ , RMSEA = .26, CFI = .85, and SRMR = .22; one-factor model,  $\Delta$ Chi-Square (6) = 40,818.94,  $p < .00$ , RMSEA = .32, CFI = .78, and SRMR = .19. Therefore, I found support for the distinctive validity of the four variables.

#### **4.6. Analytical Strategy**

To investigate the hypotheses in this study, I conducted a hierarchical regression analysis with PASW 18 because all the study variables were at group-

level. When testing moderated mediation, I examined the indirect effects of LMX differentiation on group coordination via group climates of admiration and envy using a path analytic method using Mplus 7 (Preacher, Zyphur and Zhang, 2010). In doing so, I grand-mean centered all predictors to facilitate interpretations of the findings (Cohen, Cohen, West, & Aiken, 2003).

## Chapter 5: Results

### 5.1. Descriptive Statistics

Descriptive statistics and bivariate correlations for study variables appear in Table 1. First, while LMX differentiation was positively related to group envy climate ( $r = .28, p < .01$ ), it was negatively associated with group admiration climate ( $r = -.22, p < .01$ ). This was not consistent with my expectation given that feelings of admiration tend to arise from differences among individuals (Cuddy et al., 2007). Group admiration and envy climates were positively and negatively related to group coordination, which was consistent with my hypothesis above ( $r = .54, p < .01$  and  $r = -.45, p < .01$ , respectively). Unexpectedly, group coordination was not significantly associated with both T1 and T2 sales performance ( $r = -.01, p > .10$  and  $r = .00, p > .10$ , respectively). However, these are bivariate correlations without any considerations of covariates. Hence, I conducted a series of hierarchical multiple regression analyses to test hypotheses in this study.

### 5.2. Tests of Hypotheses

Table 2 shows the results of hierarchical regression analyses. I first proposed that group leaders' display of LMX differentiation will be positively related to group climates of admiration and envy. As shown in the second-hand columns in Models 1 and 2, LMX differentiation was related to none of the two affective climates ( $B = .44,$

$p > .10$  and  $B = .20, p > .10$ , respectively). Thus, Hypotheses 1a and 1b were not supported.

Hypothesis 2 proposed that the main effects of LMX differentiation will be moderated by types of incentive pay, such that the effects of LMX differentiation on group admiration climate will be more pronounced and those on group envy climate will be weaker under group, as opposed to individual, incentive pay (i.e., Hypotheses 2a and 2b, respectively). The third-hand columns in Models 1 and 2 indicate that group (versus individual) incentive pay moderated the effects of LMX differentiation on group admiration climate at only marginal level ( $B = 1.61, p < .10$ ), and did not moderate those on group envy climate ( $B = .75, p > .10$ ). Therefore, I failed to find support for Hypothesis 2.

Next, I proposed three-way interactions among groups' LMX differentiation, types of incentive pay, and average proportion of incentive pay, such that the effects of LMX differentiation on group admiration climate will be stronger and those on group envy climate will be weaker when groups use group, rather than individual, incentive pay with a larger, rather than smaller, proportion (i.e., Hypotheses 3a and 3b). As shown in the right-hand columns of Models 1 and 2, I found significant three-way interaction effects among LMX differentiation, group incentive, and average proportion of incentive pay on group admiration climate ( $B = .19, p < .05$ ), but not on group envy climate ( $B = .03, p > .10$ ).

To further probe the nature of the three-way interaction, I plotted simple slopes under group versus individual incentive pay conditions at high (+1 *SD*) versus

low (-1 *SD*) levels of average proportion of incentive pay. As shown in Figure 2, the relationship between LMX differentiation and group admiration climate was significantly positive when groups were using group incentive pay with a larger proportion ( $B = 3.37, p < .01$ ). Further, this relationship was significantly stronger than the case using group incentive pay with a smaller proportion ( $B = 2.98, p < .01$ ;  $\Delta B = .39, p < .05$ ), as well as the cases using individual incentive pay with a larger proportion ( $B = .24, p > .10$ ;  $\Delta B = 3.13, p < .01$ ) and with a smaller proportion ( $B = .21, p > .10$ ;  $\Delta B = 3.16, p < .01$ ). Therefore, I found support for Hypothesis 3a.

As auxiliary analyses, I plotted simple slopes under group incentive versus hybrid incentive 1 and hybrid incentive 2 with varying proportions of incentive pay. As shown in Figure 3, the relationship between LMX differentiation and group admiration climate under a larger proportion of group incentive pay was significantly greater than those under hybrid incentive 1 with a larger proportion ( $B = -.29, p > .10$ ;  $\Delta B = 3.66, p < .01$ ) as well as with a smaller proportion ( $B = -.12, p > .10$ ;  $\Delta B = 3.49, p < .01$ ). Likewise, Figure 4 indicates that the relationship between LMX differentiation and group admiration climate under a larger proportion of group incentive pay was significantly greater than those under hybrid incentive 2 with a larger proportion ( $B = .43, p > .10$ ;  $\Delta B = 2.94, p < .01$ ) as well as with a smaller proportion ( $B = .41, p > .10$ ;  $\Delta B = 2.96, p < .01$ ).

As for Hypothesis 3b, the effects of LMX differentiation on group envy climate were not significant under group incentive pay with a larger ratio of its use ( $B = 1.23, p < .10$ ), which was not significantly weaker than the case under group

incentive pay with a lesser ratio of its use ( $B = 1.14, p < .10; \Delta B = .09, p > .10$ ); as well as the cases under individual incentive pay with a larger ratio of its use ( $B = .18, p > .10; \Delta B = 1.05, p > .10$ ) and with a lesser extent of its use ( $B = .14, p > .10; \Delta B = 1.09, p > .10$ ). Hence, Hypothesis 3b was not supported.

Hypothesis 4 posited positive and negative effects of group admiration climate and envy climate on group coordination, respectively. The second-hand column of Model 3 in Table 2 shows that group admiration climate was positively related to group coordination ( $B = .19, p < .001$ ) whereas group envy climate was negatively associated with it ( $B = -.14, p < .001$ ). Therefore, Hypothesis 4 was supported.

Next, I posited that the positive effects of group admiration climate on group coordination will be more pronounced under group as opposed to individual incentive pay (Hypothesis 5a), while the negative effects of group envy climate on group coordination will be alleviated under group as opposed to individual incentive pay (Hypothesis 5b). The third-hand column of Model 3 shows that group (versus individual) incentive pay did not moderate the effects of group admiration climate ( $B = .10, p > .10$ ), failing to support Hypothesis 5a. However, it significantly moderated the effects of group envy climate on group coordination in a hypothesized direction ( $B = .28, p < .05$ ).

To further examine the nature of group envy climate  $\times$  group (versus individual) incentive pay interaction, I plotted the effects of group envy climate on group coordination at group versus individual pay conditions. As shown in Figure 5, group envy climate was not negatively related to group coordination under group

incentive pay ( $B = .16, p > .10$ ), while it had a significantly negative relationship with group coordination under individual incentive pay ( $B = -.12, p < .01$ ). The difference between the two relationships was significant as well ( $\Delta B = .28, p < .05$ ). Therefore, Hypothesis 5b was supported.

Next, I proposed three-way interactions among group climates of admiration and envy, group (versus individual) incentive pay, and average proportion of incentive pay, such that the positive effects of group admiration climate on group coordination will be more pronounced when using group as opposed to individual incentive with a greater proportion (Hypothesis 6a), while the negative effects of group envy climate on group coordination will be alleviated when using group rather than individual incentive with a greater extent (Hypothesis 6b). As shown in the right-hand column of Model 3, I failed to find support for the three-way interaction effects on group coordination of group admiration climate  $\times$  group incentive  $\times$  average proportion of incentive pay ( $B = .00, p > .10$ ) and group envy climate  $\times$  group incentive  $\times$  average proportion of incentive pay ( $B = .01, p > .10$ ). Thus, Hypothesis 6 was not supported.

Hypothesis 7 proposed moderated mediation effects in which the indirect effects of LMX differentiation on group coordination via group admiration climate is strengthened when groups use group rather than individual incentive pay with a larger proportion, while the indirect effects of LMX differentiation on group coordination via group envy climate is weakened when groups use group rather than individual incentive pay with a larger proportion. As Table 3 indicates, the indirect effect via

group admiration climate when using group incentive pay with a greater proportion was .99 ( $p < .05$ , 95% confidence interval [.24, 1.74]). This was significantly greater than those (1) when using group incentive pay with a smaller proportion ( $B = .87$ ,  $p < .05$ ;  $\Delta B = .12$ ,  $p < .05$ , 95% confidence interval [.02, .22]); (2) when using individual incentive pay with a greater proportion ( $B = .05$ ,  $p > .10$ ;  $\Delta B = .94$ ,  $p < .05$ , 95% confidence interval [.17, 1.72]); and (3) when using individual incentive pay with a lesser proportion ( $B = .04$ ,  $p > .10$ ,  $\Delta B = .95$ ,  $p < .05$ , 95% confidence interval [.18, 1.72]). As such, Hypothesis 7a was supported. However, as shown in Table 4, the indirect effects of LMX differentiation on group coordination via group envy climate were not statistically significant for all conditions of incentive pay and average proportion of incentive pay. Further, the differences among the indirect effects were not significant as well. Thus, Hypothesis 7b was not supported.

As supplementary analyses, I compared the indirect effects of LMX differentiation on group coordination via group admiration climate under hybrid incentive conditions at varying proportions of incentive pay. As a result, I found that indirect effects under group incentive pay with a higher ratio of the incentive pay were significantly greater than any combinations of hybrid incentive pay practices and high and low ratio of incentive pay. These findings further corroborate the role of the extent of group incentive as a key boundary condition for the effects of LMX differentiation on group coordination through the inducement of group admiration climate.



Lastly, I proposed that group coordination will be positively related to groups' lagged sales performance. As shown in the right-hand column of Model 4 in Table 2, group coordination positively predicted T2 sales performance above and beyond all the study and control variables including T1 sales performance ( $B = 2,898.76, p < .05$ ). Therefore, I found support for Hypothesis 8.

## **Chapter 6: Discussion and Conclusion**

### **6.1. Summary of Key Findings**

The purpose of this study was to resolve the puzzle over the divergent perspectives and mixed findings on the effects of LMX differentiation by examining the joint effects of LMX differentiation and incentive pay practices on group affective climates, coordination, and ultimately performance. Analyses of data on 828 sales groups in a major home appliance retailer in China revealed that LMX differentiation led to group admiration climate when groups received a larger portion of their pay based on group, rather than individual or hybrid performance (i.e., individual and group performance or individual, group, and store performance). Group admiration climate, in turn, enabled effective coordination regardless of types and average proportion of incentive pay, while the negative impact of group envy climate on group coordination was buffered by the use of group rather than individual or hybrid incentive pay. Together, when groups used group incentive pay with a higher proportion (with a lower proportion as well though to a lesser extent), LMX differentiation was indirectly related to effectiveness of group coordination via group admiration climate. Lastly, group coordination positively predicted groups' six-month lagged sales performance above and beyond prior sales performance. These findings provide several important implications for research and practice.

## **6.2. Theoretical Implications**

First, the findings in this study contribute to the leadership literature by uniquely incorporating emotion theories (Cuddy et al., 2007; Smith, 2000) to unveil groups' admiration climate as a novel mediator for the effects of LMX differentiation on group coordination when the LMX differentiation is accompanied by group incentive pay. This suggests that when a leader differentiates among group members, group incentive pay needs to integrate the members by rewarding equally based on collective performance rather than further differentiate among them by rewarding differently based on individual performance. Put differently, since effective coordination requires positive coworker relationships (Kozlowski & Bell, 2003), leader's engaging in LMX differentiation that has a potential to disrupt coworker relations (Hooper & Martin, 2008; Sherony & Green, 2002) needs to be complemented by integrative incentive pay, i.e., group incentive pay, to foster the positive relations among members in the form of mutual admiring and then the effectiveness of group coordination. Moreover, this finding on the moderating roles of incentive pay helps address the mixed effects of LMX differentiation on group outcomes by identifying groups' incentive pay practices as an important boundary condition for the effects of LMX differentiation.

Second, the findings in this study contribute to the compensation literature by revealing the effects of incentive pay practices on the emergence and impact of groups' affective climate. Despite the wealth of theories and research on incentive pay, little is known about its roles in relation to organizations' emotional phenomena

(see for review Gerhart et al., 2009). This research suggests that group incentive pay may facilitate the occurrence of groups' admiration climate and buffer the negative consequence of their envy climate. This is important because groups' emotional state is a crucial factor affecting other important group processes and ultimately performance (Barsade, 2002; Collins, Lawrence, Troth, & Jordan, 2013; Sy et al., 2005). Further, extant incentive pay research has not paid sufficient attention to the effects of incentive pay in small group contexts as in my study (Gerhart et al., 2009). Therefore, my findings extend the compensation literature by shedding light on unexplored roles of incentive pay practices in enhancing effectiveness of group processes and group performance.

Relatedly, my findings demonstrate that leadership and incentive pay practices may go hand in hand in affecting group functioning. Prior research on leadership and pay has been developed in isolation from each other and thus has added little to our understanding on possible complementary relationships between them. My findings show that when a leader differentiates among group members, such differentiated treatment needs to be complemented by group incentive pay that can integrate the members; otherwise, LMX differentiation may not affect group coordination and performance in intended ways. More generally, I suggest that leadership and HR practices including incentive pay need to be studied jointly in the future research as they constitute two primary managerial practices and their influence processes may be connected as shown in my study. I believe that the current study can serve as a

seminal endeavor linking leadership and HR practices as they influence individual and group outcomes.

Lastly, this study uniquely conceptualizes admiration and envy which have been predominantly studied at individual-level as group-level climate constructs, and suggests that group admiration and envy climate may serve as important mediating mechanisms linking leadership and incentive pay practices to work group outcomes. This adds to the limited but emerging body of research on affective climates in work groups (e.g., Ashkanasy, & Nicholson, 2003; Tse et al., 2008) by demonstrating the presence of affective climates in terms of two social comparison-based emotions, i.e., admiration and envy, and their effects on group coordination and performance. Social comparison-based emotions cannot be shared entirely by group members as in group emotional contagion (e.g., Barsade, 2002) and group affective tone (e.g., Sy et al., 2005) because some group members should be targets of the emotions (e.g., group members admired or envied by other members). However, such emotions can still play important roles in group processes by shaping group affective climates, which then affect coordination and performance of the groups. As such, this study provides further support and promise for conceptualizing group-level emotions as group affective climates by unveiling their presence and impact.

### **6.3. Alternative Explanations for Unexpected Findings**

Although many of the key hypotheses were supported, I also had a few unexpected findings. First, LMX differentiation was not related to group envy climate

regardless of types and proportions of incentive pay. One possible explanation may be that it is not LMX differentiation *per se*, but the perceived fairness of the LMX differentiation that brings about group envy climate. This is based on the results of supplementary analysis where LMX differentiation was negatively related to groups' overall justice climate, which then was negatively associated with group envy climate. In other words, it is possible that the relationship between LMX differentiation and group envy climate is indirect such that it is fully mediated by groups' justice climate. Because groups' justice climate was controlled in all tests of hypotheses, the effects of LMX differentiation on group envy climate may have become insignificant. However, the supplementary analysis results suggest that to the extent that LMX differentiation undermines groups' justice climate, it may indirectly strengthen group envy climate.

Second, I did not find support for the 2<sup>nd</sup> stage moderating effects of group (versus individual) incentive pay on the relationship between group admiration climate and coordination. No matter what types and proportions of incentive pay groups were using, the relationship between them was consistently positive. This may be because even when group members were rewarded on the basis of individual performance, they did not withdraw from collaborating with admired coworkers to learn and benefit from them. In other words, even if group members were motivated to pursue their individual performance due to individual incentive pay, they might have sufficient reasons to maintain positive work relationships with admired coworkers with superior qualities because they could obtain useful information,

advice, and support from the admired coworkers, which in turn could be used to enhance their individual performance (Algoe & Haidt, 2009). In this way, the nature of incentive pay may not have moderated the relationship between group admiration climate and coordination.

Lastly, the moderating effects of group (versus individual) incentive pay on the relationship between group envy climate on group coordination were significant regardless of proportions of group incentive pay. In other words, even when groups received only small portion of their pay contingent upon group performance, group incentive pay could still alleviate the negative effects of envy climate on group coordination. This suggests that it is not an intensity of group incentive so much as its presence that determines envious group members' decision about whether or not to engage in groups' coordinative activities. However, given the lack of research on the relationship between envy, incentive, and coordination, any explanations for this unexpected finding should be speculative at this point. I call for future research to further examine this issue by identifying specific mechanisms by which groups' envy climate affects their coordination and performance under different kinds of incentive conditions.

#### **6.4. Practical Implications**

The current study provides several managerial implications. First, it suggests that organizations may need to pay more attention to work groups' emotional states. As shown in my findings, groups' affective climates characterized by admiration and

envy had a significant impact on their effective coordination. As such, managers may need to regularly monitor, evaluate, and proactively manage groups' emotional states to better ensure effective group coordination and strengthen performance of the groups.

Second, the findings in this study offer implications regarding the choice of effective leadership styles in work groups. Specifically, they suggest that group managers need to differentiate among group members particularly when incentive pay practices are *not* differentiating. If not, group leader's engaging in LMX differentiation may not only fail to foster group admiration climate and resultant effective coordination, but also may impair group coordination by failing to alleviate the negative consequences of potential group envy climate.

Lastly, this research also provides implications about the choice of incentive pay schemes in work groups. Specifically, it suggests that HR managers may need to implement group incentive pay that can integrate group members when group managers are differentially treating their followers and/or group members are experiencing relational problems (e.g., envying each other). By contrast, individual incentive pay that can differentiate among group members may be more useful when group managers are unable to differentiate among them.

## **6.5. Limitations and Future Research**

Despite the above theoretical and practical implications, this study has a few limitations. First, although I focused on group climates of admiration and envy due to



my focus on upward social comparison situations (Cuddy et al., 2007; Smith, 2000), there might be some other types of group affective climates that could be engendered by LMX differentiation. For example, as far as LMX differentiation triggers downward social comparisons in work groups, it is possible that LMX differentiation may lead to group climates of empathy and contempt (e.g., Tse, Lam, Lawrence, & Huang, 2013). Therefore, future research may want to examine more diverse types of group affective climates as possible mediating mechanisms for the effects of LMX differentiation.

Second, although I collected data from China due to the importance of leader-member relations at Chinese workplace (e.g., Chen & Tjosvold, 2007), it is possible that my findings may not generalize to other cultural contexts. Although the theories behind the current study are not culturally bound, I call for future research to replicate the findings in the present study.

Lastly, because all the data were collected at the same time point except for sales performance, the causal order among study variables may be ambiguous. For example, it may be that well-coordinated groups may less likely experience group envy climate. However, this is at odds with the significantly negative correlation between group envy climate and coordination. At any rate, a longitudinal or field experimental research design will be needed to better tease out the causal relationships among study variables.

## **6.6. Conclusion**

This study aims to resolve a puzzle about the effects of LMX differentiation on group functioning by examining groups' admiration and envy climates as possible mediating mechanisms and incentive pay practices as a moderating condition. Analyses of data on 828 sales groups in a major Chinese retailer revealed that LMX differentiation induced groups' climate of admiration rather than envy when accompanied by the use of group, rather than individual, incentive pay with a high proportion in total pay. Group admiration climate in turn significantly related to the effectiveness of group coordination that then affected sales performance of the groups. Also, group, rather than individual, incentive pay could reduce the negative impact of envy climate on group coordination. These findings extend leadership, compensation, and emotions literatures and provide several practical implications regarding the importance of managing emotions and choices of effective leadership styles and pay practices in work groups. I lastly call for future research to replicate the findings of this study in different cultural contexts and investigate the occurrence and effects of different kinds of group affective climates using a longitudinal or field experimental research design.

## **Appendix A: Copy of University of Maryland IRB Approval Letter**

### INSTITUTIONAL REVIEW BOARD

DATE: January 13, 2014

TO: Joo Hun Han

FROM: University of Maryland College Park (UMCP) IRB

PROJECT TITLE: [373300-3] Admiration and Envy as an Impetus: Joint Effects of LMX  
Differentiation and Incentive Pay on Group Emotions, Coordination, and Performance

REFERENCE #:

SUBMISSION TYPE: Continuing Review/Progress Report

ACTION: APPROVED

APPROVAL DATE: January 13, 2014

EXPIRATION DATE: January 12, 2015

REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 8 (a) (c)

Thank you for your submission of Continuing Review/Progress Report materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each

participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure which are found on the IRBNet Forms and Templates Page.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of January 12, 2015.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact the IRB Office at 301-405-4212 or [irb@umd.edu](mailto:irb@umd.edu). Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Maryland College Park (UMCP) IRB's records.

## **Appendix B: English Version of Survey Questionnaires**

### ***Group Member Survey***

I. Please provide the following demographic information about yourself.

1. How old are you? ( ) years old.
2. What is your gender? (1) Male (2) Female
3. Are you married? (1) Yes (2) No
4. Please indicate your highest educational level attained.
  - (1) Some college – no degree
  - (2) Two-year college degree (Associates)
  - (3) Four-year college degree (Bachelors)
  - (4) Post graduate degree – Master’s Degree
  - (5) Advanced degree – Ph.D., JD, etc.

**II. Please provide the following information about your employer and sales team.**

1. Who is your employer? ( )
2. What is your rank in your employing organization? ( )
3. How long have you been in your employing organization? ( ) months
4. What product does your sales group sell? ( )
5. What is your rank in this sales group? ( )
6. How long have you been in your current sales group? ( ) months
7. How long have you worked with your current sales group leader? ( ) months

**III. Please respond to the following questions about your group leader and fellow group members.**

1. Do you know where you stand with your group leader  
Rarely / Occasionally / Sometimes / Fairly Often / Very Often

2. Do you usually know how satisfied your leader is with what you do?  
Rarely / Occasionally / Sometimes / Fairly Often / Very Often
3. How well does your group leader understand your job problems and needs?  
Not a Bit / A Little / A Fair Amount / Quite a Bit / A Great Deal
4. How well does your group leader recognize your potential?  
Not at All / A Little / Moderately / Mostly / Fully
5. Regardless of how much formal authority he/she has built into his/her position, what are the chances that your group leader would use his/her power to help you solve problems in your work?  
None / Small / Moderate / High / Very High
6. Again, regardless of the amount of formal authority your group leader has, what are the chances that he/she would “bail you out,” at his/her expense?  
None / Small / Moderate / High / Very High
7. I have enough confidence in my group leader that I would defend and justify his/her decision if he/she were not present to do so?  
Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree
8. How would you characterize your working relationship with your group leader?  
Extremely Ineffective / Worse Than Average / Average / Better Than Average / Extremely Effective

To what extent does your group leader differentially treat group members based on ...

9. Group members' job performance
10. Group members' contribution to the sales group
11. Group members' value to the sales group
12. Group leader's personal liking of the group members
13. Group leader's personal tie with the group members
14. Group leader's personal favor of the group members

In a typical week, to what extent do you agree to the following items that describe *your general emotions toward other group members at work?*

1 = strongly disagree, 5 = strongly agree

15. I feel envy toward other members in my sales group.
16. The bitter truth is that I generally feel inferior to other group members at work.
17. Feelings of envy constantly torment me at work.
18. It is so frustrating to see some people in my sales group succeed so easily at work.
19. No matter what I do, envy always plagues me in my sales group.
20. I am troubled by feelings of inadequacy as compared to other group members at work.
21. It somehow doesn't seem fair that some group members seem to have all the talent.
22. Frankly, the success of my coworkers at work makes me resent them.

In a typical week, to what extent do you *generally feel the following emotions toward other group members at work?*

1 = not at all, 5 = extremely

23. Admiring
24. Respectful
25. Inspired
26. Proud
27. Fond
28. Awesome
29. sympathetic
30. pity
31. compassionate
32. scornful

- 33. contemptuous
- 34. disgust
- 35. disdainful
- 36. angry
- 37. irritated
- 38. hostile

1 = strongly disagree, 7 = strongly agree

- 39. Overall, my group members are treated fairly by group leader.
- 40. In general, my group members can count on group leader to be fair.
- 41. In general, the treatment my group members receive from group leader is fair.
- 42. Usually, the ways things work with my group leader are fair.
- 43. For the most part, my group leader treats his/her group members fairly.
- 44. Most of the group members would say they are treated fairly by my group leader.

True or False

- 45. I'm always willing to admit it when I make a mistake.
- 46. I always try to practice what I preach.
- 47. I never resent being asked to return a favor.
- 48. I have never been irked when people expressed ideas very different from my own.
- 49. I have never deliberately said something that hurt someone's feelings.
- 50. I like to gossip at times.
- 51. There have been occasions when I took advantage of someone.
- 52. I sometimes try to get even rather than forgive and forget.
- 53. At times I have really insisted on having things my own way.
- 54. There have been occasions when I felt like smashing things.



**IV. Please respond to the following questions about the characteristics of your sales group.**

In a typical week, to what extent do the following items accurately describe *your group members' general emotions toward each other at work?*

1 = not characteristic at all, 9 = extremely characteristic

- 55. Some hatred toward each other
- 56. They have a grudge (resentment, bitterness) against each other
- 57. Rancor (resentment, ill will) toward each other
- 58. Bitter toward each other
- 59. Gall (irritated, annoyed) toward each other
- 60. A desire to have what others in the sales group have
- 61. Feeling lacking some of the things others in the sales group have
- 62. Others in the sales group have things going better than they do
- 63. Envious of each other

In a typical week, to what extent do your group members *generally feel the following emotions toward each other at work?*

1 = not at all, 5 = extremely

- 64. Admiring
- 65. Respectful
- 66. Inspired
- 67. Proud
- 68. Fond
- 69. Awesome
- 70. sympathetic
- 71. pity
- 72. compassionate
- 73. scornful

74. contemptuous

75. disgust

76. disdainful

77. angry

78. irritated

79. hostile

80. Please indicate the proportion of incentive pay based on your individual performance in your total pay. (            )%

81. Please indicate the proportion of incentive pay based on your group performance in your total pay. (            )%

1 = to a very small extent, to 7 = to a very large extent

82. Group members receive incentives based on their individual performance.

83. Group members' incentive plans are based primarily on individual performance.

84. Group members' compensation is contingent on individual performance.

85. Group members' pay is closely tied to individual performance.

1 = to a very small extent, to 7 = to a very large extent

86. Group members receive incentives based on their group performance.

87. Group members' incentive plans are based primarily on group performance.

88. Group members' compensation is contingent on group performance.

89. Group members' pay is closely tied to group performance.

1 = strongly disagree, to 7 = strongly agree

90. Our sales group works together in a well-coordinated fashion.

91. Our sales group has very few misunderstandings about what to do.

92. Our sales group does not need to backtrack and start over a lot.

93. We integrate our efforts smoothly and effectively.

94. There is little confusion about how we would accomplish our group task.

1 = strongly disagree, 5 = strongly agree

My group members and I:

95. Always find support from the sales group

96. Volunteer help to each other, even when not asked

97. Cover for each other in times of need

98. Know what the sales group expects from each one of us

99. Feel comfortable asking for support from one another

100. Work toward the sales group's goals, even if it might negatively affect  
personal goals

101. Willingly stay late to help each other

102. Celebrate career milestones of one another

103. Provide feedback to members who fall short of the sales group's  
expectations

1 = never, 7 = all the time

How often have your group members intentionally...

104. Criticized each other in front of other members?

105. Ignored each other?

106. Talked down to each other?

107. Went back on their word?

108. Gave each other the silent treatment?

109. Belittled each other or each other's ideas?

110. Did not listen to each other?

1 = strongly disagree, 5 = strongly agree

111. When we work together in our sales group, we cannot complete the exercise

unless everyone contributes.

112. When we work together in our sales group, everyone's ideas are needed if we are going to be successful.

## **Appendix B: English Version of Survey Questionnaires (continued)**

### *Group Director Survey*

#### **I. Please provide the following demographic information about yourself.**

1. How old are you? ( ) years old.
2. What is your gender? (1) Male (2) Female
3. Are you married? (1) Yes (2) No
4. Please indicate your highest educational level attained.
  - (1) Some college – no degree
  - (2) Two-year college degree (Associates)
  - (3) Four-year college degree (Bachelors)
  - (4) Post graduate degree – Master’s Degree
  - (5) Advanced degree – Ph.D., JD, etc.
5. What is your rank in this organization?
6. How long have you been in your sales group? ( ) months
7. How long have you been in your current organization? ( ) months
8. How many members (except you) does your sales group have? ( )

#### **II. Please respond to the following questions about each of your members in your sales group.**

1. Do you let this employee know where s/he stand with you ... do you usually let this employee know how satisfied you are with what s/he does?  
(1 = rarely, 2 = occasionally, 3 = sometimes, 4 = fairly often, 5 = very often)
2. How well do you understand this employee’s job problems and needs?  
(1 = not a bit, 2 = a little, 3 = a fair amount, 4 = quite a bit, 5 = a great deal)
3. How well do you recognize this employees’ potential?

(1 = not at all; 2 = a little; 3 = moderately; 4 = mostly; 5 = fully)

4. Regardless of how much formal authority you have built into your position, what are the chances that you would use your power to help this employee solve problems in his/her work?

(1 = none, 2 = small, 3 = moderate, 4 = high, 5 = very high)

5. Again, regardless of the amount of formal authority you have, what are the chances that you would “bail this employee out,” at your expense?

(1 = none, 2 = small, 3 = moderate, 4 = high, 5 = very high)

6. I have enough confidence in this employee that I would defend and justify his/her decision if he/she were not present to do so?

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

7. How would you characterize your working relationship with this employee?

(1 = extremely ineffective; 2 = worse than average; 3 = average; 4 = better than average; 5 = extremely effective)

**III. Please respond to the following questions about the characteristics of your sales group.**

8. Please indicate the proportion of incentive pay based on group members' individual performance in their total pay. (     )%

9. Please indicate the proportion of incentive pay based on your sales group's performance in individual group members' total pay. (     )%

1 = to a very small extent, to 7 = to a very large extent

10. Group members receive incentives based on their individual performance.

11. Group members' incentive plans are based primarily on individual performance.

12. Group members' compensation is contingent on individual performance.

13. Group members' pay is closely tied to individual performance.

1 = to a very small extent, to 7 = to a very large extent

14. Group members receive incentives based on the performance of our sales group.
15. Group members' incentive plans are based primarily on the performance of our sales group.
16. Group members' compensation is contingent on the performance of our sales group.
17. Group members' pay is closely tied to the performance of our sales group.

**TABLE 1**

**Descriptive Statistics and Correlations**

	Mean	<i>SD</i>	1	2	3	4	5	6	7
1. Group size	9.71	7.42							
2. Traditional product category	0.43	0.50	.07						
3. Life product category	0.31	0.46	.18**	-.58**					
4. Group mean LMX	5.58	0.60	-.01	-.01	.03				
5. Overall justice climate	5.63	0.65	-.01	-.04	.06	.88**	.98		
6. Social desirability	0.69	0.10	-.06	-.06	.05	-.12**	-.12**		
7. LMX differentiation	0.12	0.11	.04	-.01	.03	-.59**	-.55**	.09*	
8. Individual incentive	0.32	0.47	.06	-.02	.04	.02	-.01	-.01	-.05
9. Group incentive	0.06	0.25	.08*	.00	-.02	.00	.01	-.04	.01
10. Hybrid incentive 1	0.15	0.35	-.08*	-.07	.07*	.00	.01	.02	.02
11. Hybrid incentive 2	0.45	0.50	-.04	.06	-.08*	-.02	.00	.00	.02
12. Fixed salary	0.02	0.12	-.02	.05	-.02	-.01	.02	.04	.01
13. Average proportion of incentive pay	25.75	18.51	.04	.06	-.01	.10**	.05	.00	-.10**
14. Group admiration climate	4.60	0.96	.06	.06	.02	.42**	.41**	-.15**	-.22**
15. Group envy climate	1.85	0.68	.01	-.06	.03	-.43**	-.42**	.14**	.28**
16. Group coordination	5.46	0.68	.01	.02	.04	.71**	.71**	-.14**	-.40**
17. T1 sales performance	18,848.94	20,322.70	.53**	.37**	-.02	-.01	.00	.02	.05
18. T2 sales performance	23,208.54	25,337.91	.48**	.50**	-.15**	-.03	-.04	-.03	.06

*Note.*  $N = 828$ . PASW 18 was used. Hybrid incentive 1 refers to group and individual performance-based incentive pay; hybrid incentive 2 refers to group, individual, and store performance-based incentive pay. Cronbach's alpha values appear in italics on the diagonal.

\*  $p < .05$

\*\*  $p < .01$

Two tailed test.



**TABLE 1 (continued)**

**Descriptive Statistics and Correlations**

	8	9	10	11	12	13	14	15	16	17
1. Group size										
2. Traditional product category										
3. Life product category										
4. Group mean LMX										
5. Justice climate										
6. Social desirability										
7. LMX differentiation										
8. Individual incentive										
9. Group incentive	-.18**									
10. Hybrid incentive 1	-.29**	-.11**								
11. Hybrid incentive 2	-.63**	-.24**	-.37**							
12. Fixed salary	-.09*	-.03	-.05	-.11**						
13. Average proportion of incentive pay	.04	.06	-.02	-.06	-.03					
14. Group admiration climate	.05	-.06	-.02	.00	.03	.04	.95			
15. Group envy climate	-.03	-.03	.01	.03	.01	-.05	-.28**	.96		
16. Group coordination	-.03	.01	.01	.02	-.02	.06	.54**	-.45**	.97	
17. T1 sales performance	.04	.09**	-.05	-.03	-.05	.08*	.06	.02	-.01	
18. T2 sales performance	.05	.08*	-.06	-.04	-.01	.07	.05	.03	.00	.80**

*Note.*  $N = 828$ . PASW 18 was used. Hybrid incentive 1 refers to group and individual performance-based incentive pay; hybrid incentive 2 refers to group, individual, and store performance-based incentive pay. Cronbach's alpha values appear in italics on the diagonal.

\*  $p < .05$

\*\*  $p < .01$

Two tailed test.

**TABLE 2**  
**Hierarchical Regression Results**

		Model 1 DV = Group admiration climate				Model 2 DV = Group envy climate				
<i>Control variables</i>		Intercept	4.62***	4.63***	4.64***	4.64***	1.83***	1.81***	1.81***	1.81***
	Group size	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Traditional product category	-.06	-.06	-.06	-.06	.03	.03	.03	.03	.04
	Life product category	.04	.04	.04	.04	-.03	-.03	-.03	-.03	-.03
	Group mean LMX	.42***	.45***	.44***	.46***	-.31***	-.28***	-.28***	-.28***	-.29***
	Justice climate	.27**	.28**	.29**	.27**	-.19**	-.19**	-.19**	-.19**	-.18*
	Social desirability	-.06	-.05	.00	.01	-.24	-.23	-.21	-.21	-.24
	T1 sales	.00	.00	.00	.00	.00	.00	.00	.00	.00
<i>Predictors</i>										
	Group incentive	-.31*	-.32*	-.30*	-.25		-.04	-.04	-.04	-.03
	Hybrid incentive 1	-.08	-.09	-.08	-.11		.04	.04	.04	.05
	Hybrid incentive 2	-.05	-.05	-.06	-.06		.04	.04	.04	.04
	Fixed salary	-.31	-.32	-.33	-.33		.09	.00	.00	.01
	Average proportion of incentive pay	.00	.00	.00	.00		.00	.00	.00	.00
	LMX differentiation		.45	.22	.21		.20	.13	.13	.15
<i>1<sup>st</sup> stage two-way interaction</i>										
	LMX differentiation × Group incentive			1.61	2.91*			.75	.75	1.01
	LMX differentiation × Hybrid incentive 1			-.36	-.44			-.47	-.47	-.45
	LMX differentiation × Hybrid incentive 2			.21	.21			.06	.06	-.06
	LMX differentiation × Fixed salary			-2.05	-2.05			4.77*	4.77*	4.48*

LMX differentiation × Average proportion of incentive pay				.00	.02			.01	.02
Group incentive × Average proportion of incentive pay				.00	.01			.00	.00
Hybrid incentive 1 × Average proportion of incentive pay				.01	.00			.00	.00
Hybrid incentive 2 × Average proportion of incentive pay				.01	.01			.00	.00
Fixed salary × Average proportion of incentive pay				.01	.01			.01	.01
<i>1<sup>st</sup> stage three-way interaction</i>									
LMX differentiation × Group incentive × Average proportion of incentive pay								.19*	.03
LMX differentiation × Hybrid incentive 1 × Average proportion of incentive pay								-.11	.03
LMX differentiation × Hybrid incentive 2 × Average proportion of incentive pay								-.01	-.04
LMX differentiation × Fixed salary × Average proportion of incentive pay								-.01	.03
R <sup>2</sup>	.20***	.20***	.21***	.22***		.20***	.20***	.21***	.21***
ΔR <sup>2</sup>		.00	.01	.01*			.00	.01	.01

Note.  $N = 828$ . PASW 18 was used. Unstandardized coefficients are reported.

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

Two tailed test.

**TABLE 2 (continued)**

**Hierarchical Regression Results**

	Model 3 DV = Group coordination				Model 4 DV = T2 sales performance		
	Intercept	5.45***	4.83***	4.77***	4.78***	4,436.70	-9,426.24
<i>Control variables</i>							
	Group size	.00	.00	.00	.00	278.62***	271.99***
	Traditional product category	-.02	.00	.00	.00	-1,215.95	-1,212.67
	Life product category	.00	-.02	-.02	-.02	452.32	498.23
	Group mean LMX	.44***	.31**	.31***	.30***	382.81	-493.38
	Justice climate	.41***	.34**	.34***	.34***	-1,837.08	-2,836.99
	Social desirability	.10	.06	.08	.06	9,551.43	9,374.11
	T1 sales performance	.00	.00	.00	.00	.93***	.94***
<i>Predictors</i>							
	Group incentive	.05	.09	.12	.13	-1,282.99	-1,653.63
	Hybrid incentive 1	.05	.07	.08	.08	-1,949.73	-2,181.08
	Hybrid incentive 2	.04	.06	.06	.06	-1,199.09	-1,369.04
	Fixed salary	-.04	.02	.00	.04	1,884.52	1,764.34
	Average proportion of incentive pay	.00	.00	.00	.00	80.38	85.84
	LMX differentiation	.19	.17	.18	.15	720.58	292.09
	Group admiration climate		.19***	.19***	.19***	394.35	-167.71
	Group envy climate		-.14***	-.12**	-.12**	240.55	602.61
	Group coordination						2,898.76*
<i>1<sup>st</sup> stage two-way interaction</i>							

LMX differentiation × Group incentive	.89	.48	-.39	-.46	-1,631.99	-300.86
LMX differentiation × Hybrid incentive 1	-.01	.01	.20	.11	12,466.57	12,144.41
LMX differentiation × Hybrid incentive 2	.10	.05	.02	.01	1,311.03	1,276.23
LMX differentiation × Fixed salary	-1.93	-.94	-1.91	-1.18	-38,003.74	-34,581.01
LMX differentiation × Average proportion of incentive pay	.01	.01	.01	.01	1,791.12**	1,766.22
Group incentive × Average proportion of incentive pay	.01	.00	.00	.01	64.89	47.87
Hybrid incentive 1 × Average proportion of incentive pay	.01*	.01*	.01*	.01*	-85.71	-106.67
Hybrid incentive 2 × Average proportion of incentive pay	.00	.00	.00	.00	-94.28	-101.95
Fixed salary × Average proportion of incentive pay	.00	.00	.00	.00	-51.41	-60.12
<b><i>1<sup>st</sup> stage three-way interaction</i></b>						
LMX differentiation × Group incentive × Average proportion of incentive pay	.02	-.01	-.04	-.08	-2,491.22	-2,250.49
LMX differentiation × Hybrid incentive 1 × Average proportion of incentive pay	.01	.03	.04	.03	-264.05	-350.43
LMX differentiation × Hybrid incentive 2 × Average proportion of incentive pay	-.01	-.01	-.01	-.01	-1,393.32	-1,369.56
LMX differentiation × Fixed salary × Average proportion of incentive pay	.07	.07	.07	.09	-3,032.67	-3,279.93
<b><i>2<sup>nd</sup> stage two-way interaction</i></b>						
Group admiration climate × Group incentive			.10	.10	-3,570.02	-3,853.45
Group admiration climate × Hybrid incentive 1			.02	.02	2,258.52	2,205.02
Group admiration climate × Hybrid incentive 2			-.04	-.04	29.96	153.03
Group admiration climate × Fixed salary			-.10	-.07	-4,862.81	-4,667.65
Group admiration climate × Average proportion of incentive pay				.00	105.74	103.94

Group envy climate × Group incentive	.28*	.26*		1,774.80	1,008.88
Group envy climate × Hybrid incentive 1	-.10	-.09		-312.41	-62.86
Group envy climate × Hybrid incentive 2	-.02	-.03		-287.46	-192.74
Group envy climate × Fixed salary	.09	.04		-1,500.47	-1,630.79
Group envy climate × Average proportion of incentive pay		.00		-100.31	-106.57
<b>2<sup>nd</sup> stage three-way interaction</b>					
Group admiration climate × Group incentive × Average proportion of incentive pay		.00		-19.66	-20.42
Group admiration climate × Hybrid incentive 1 × Average proportion of incentive pay		.00		3.01	8.22
Group admiration climate × Hybrid incentive 2 × Average proportion of incentive pay		.00		-122.97	-121.64
Group admiration climate × Fixed salary × Average proportion of incentive pay		-.01		225.24	250.29
Group envy climate × Group incentive × Average proportion of incentive pay		.01		272.92	243.94
Group envy climate × Hybrid incentive 1 × Average proportion of incentive pay		.00		150.00	147.58
Group envy climate × Hybrid incentive 2 × Average proportion of incentive pay		.00		49.91	64.24
Group envy climate × Fixed salary × Average proportion of incentive pay		-.01		460.70	494.47
R <sup>2</sup>	.55***	.62***	.63***	.63***	.65***
ΔR <sup>2</sup>		.07***	.01*	.00	.01*

Note.  $N = 828$ . PASW 18 was used. Unstandardized coefficients are reported. Two tailed test.

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

**TABLE 3**

**Results of Moderated Mediation Tests for Group Admiration Climate**

Conditions	LMX differentiation → group admiration climate	Group admiration climate → group coordination	Indirect effects via group admiration climate	95% confidence intervals
(1) Group incentive pay × high average proportion of incentive pay	3.37**	.29***	.99*	[.24, 1.74]
(2) Group incentive pay × low average proportion of incentive pay	2.98**	.29***	.87*	[.18, 1.56]
(3) Individual incentive pay × high average proportion of incentive pay	.24	.19***	.05	[-.17, .26]
(4) Individual incentive pay × low average proportion of incentive pay	.21	.19***	.04	[-.17, .25]
(5) Hybrid incentive pay 1 × high average proportion of incentive pay	-.29	.21***	-.06	[-.37, .25]
(6) Hybrid incentive pay 1 × low average proportion of incentive pay	-.12	.21***	-.03	[-.34, .28]
(7) Hybrid incentive pay 2 × high average proportion of incentive pay	.43	.15***	.06	[-.07, .20]
(8) Hybrid incentive pay 2 × low average proportion of incentive pay	.41	.15***	.06	[-.07, .20]
<b>Difference tests</b>				
(1) – (2)	.39*	.00	.12*	[.02, .22]
(1) – (3)	3.13**	.10	.94*	[.17, 1.72]
(1) – (4)	3.16**	.10	.95*	[.18, 1.72]
(1) – (5)	3.66**	.08	1.05*	[.25, 1.85]
(1) – (6)	3.49**	.08	1.02*	[.22, 1.82]
(1) – (7)	2.94**	.14	.93*	[.17, 1.68]
(1) – (8)	2.96**	.14	.93*	[.18, 1.69]

*Note.*  $N = 828$ . Unstandardized coefficients are reported. Mplus 7 was used. Hybrid incentive pay 1 refers to an incentive pay based on individual and group performance. Hybrid incentive pay 2 refers to an incentive pay based on individual, group, and store performance.

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

Two tailed test.



**TABLE 4**

**Results of Moderated Mediation Tests for Group Envy Climate**

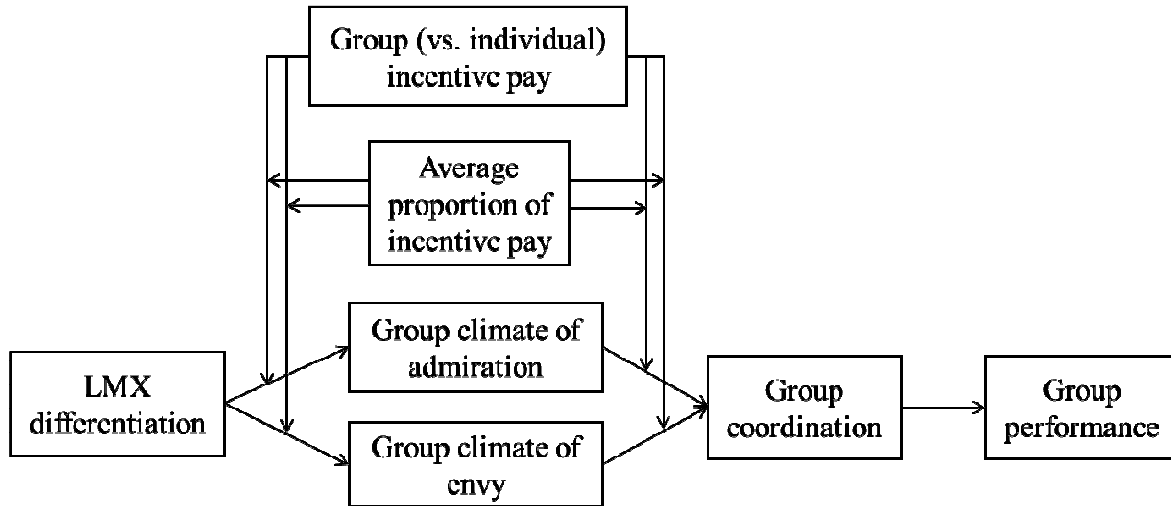
Conditions	LMX differentiation → group envy climate	Group envy climate → group coordination	Indirect effects via group envy climate	95% confidence intervals
(1) Group incentive pay × high average proportion of incentive pay	1.23	.14	.18	[-.15, .50]
(2) Group incentive pay × low average proportion of incentive pay	1.14	.12	.14	[-.15, .42]
(3) Individual incentive pay × high average proportion of incentive pay	.18	-.12**	-.02	[-.12, .08]
(4) Individual incentive pay × low average proportion of incentive pay	.14	-.13**	-.02	[-.12, .08]
(5) Hybrid incentive pay 1 × high average proportion of incentive pay	-.24	-.22**	.05	[-.17, .28]
(6) Hybrid incentive pay 1 × low average proportion of incentive pay	-.35	-.22**	.08	[-.15, .31]
(7) Hybrid incentive pay 2 × high average proportion of incentive pay	.08	-.16**	-.01	[-.11, .09]
(8) Hybrid incentive pay 2 × low average proportion of incentive pay	.11	-.15**	-.02	[-.11, .08]
<b>Difference tests</b>				
(1) – (2)	.09	.02	.04	[-.03, .10]
(1) – (3)	1.05	.26*	.20	[-.14, .54]
(1) – (4)	1.09	.27*	.20	[-.15, .53]
(1) – (5)	1.47	.36**	.13	[-.27, .52]
(1) – (6)	1.58	.36**	.10	[-.30, .50]
(1) – (7)	1.15	.30**	.19	[-.16, .53]
(1) – (8)	1.12	.29**	.20	[-.15, .53]

*Note.*  $N = 828$ . Unstandardized coefficients are reported. Mplus 7 were used. Hybrid incentive pay 1 refers to an incentive pay based on individual and group performance. Hybrid incentive pay 2 refers to an incentive pay based on individual, group, and store performance.

\*  $p < .05$   
\*\*  $p < .01$   
\*\*\*  $p < .001$   
Two tailed test.

**FIGURE 1**

**Theoretical Framework of the Present Study**

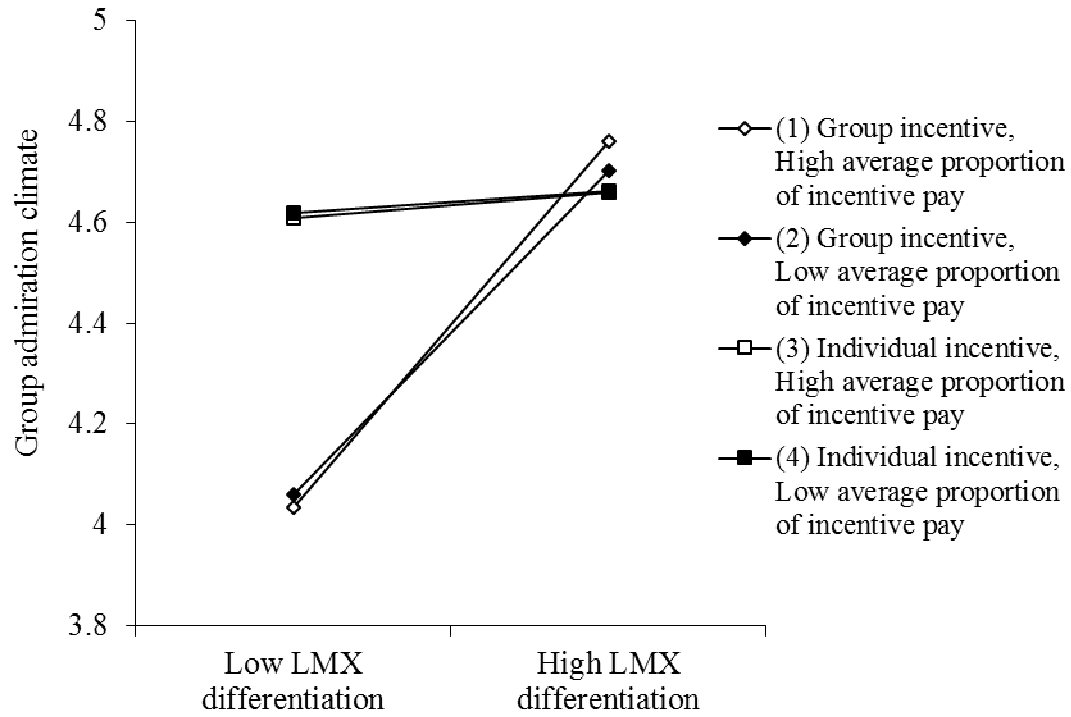


*Note.* All the variables are conceptualized at group-level.

**FIGURE 2**

**Three-way Interaction Effects of LMX Differentiation × Group (versus Individual)**

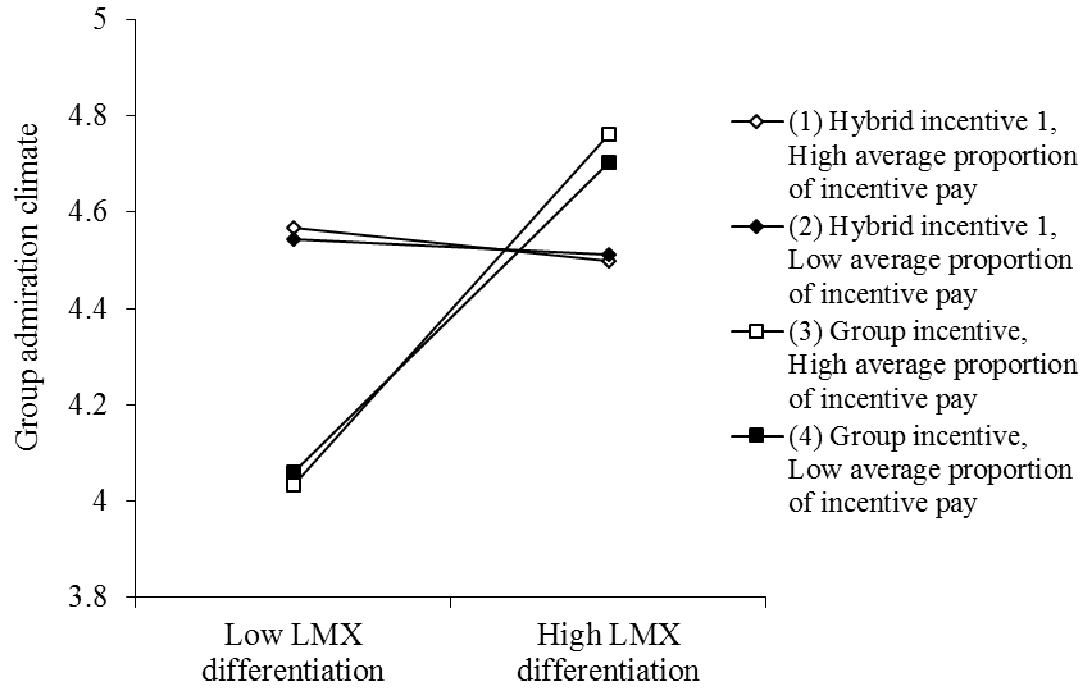
**Incentive × Average Proportion of Incentive Pay on Group Admiration Climate**



**FIGURE 3**

**Three-way Interaction Effects of LMX Differentiation × Group (versus Hybrid 1) Incentive**

**Pay × Average Proportion of Incentive Pay on Group Admiration Climate**

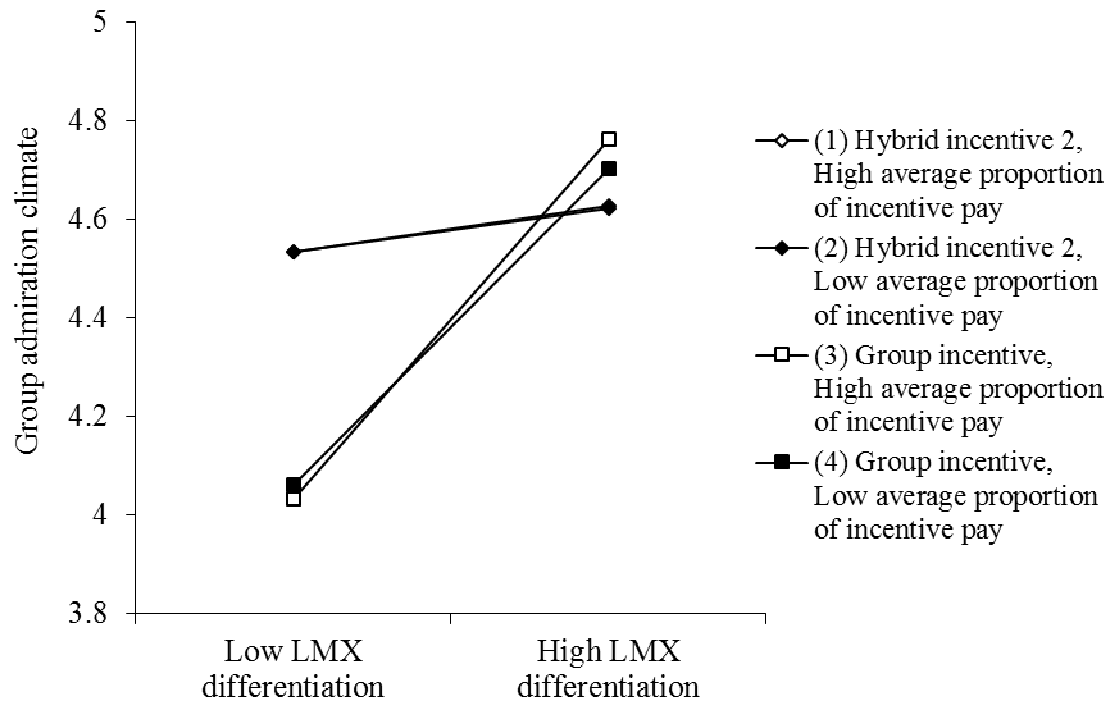


*Note.* Hybrid incentive 1 refers to incentive pay based on individual and group performance.

**FIGURE 4**

**Three-way Interaction Effects of LMX Differentiation × Group (versus Hybrid 2) Incentive**

**Pay × Average Proportion of Incentive Pay on Group Admiration Climate**

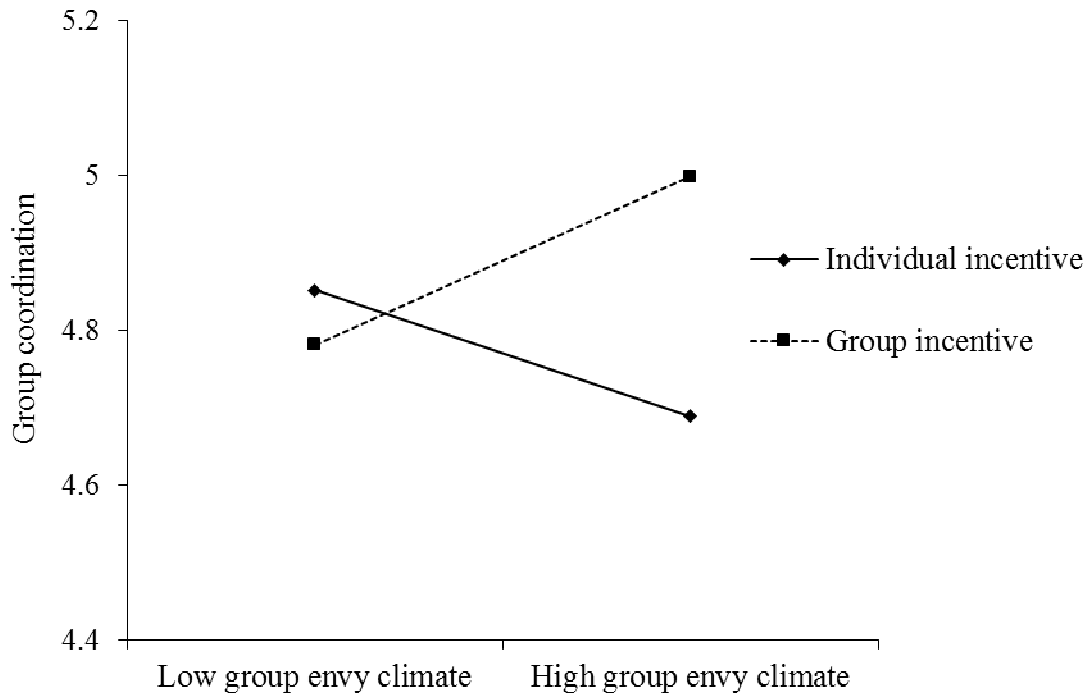


*Note.* Hybrid incentive 2 refers to incentive pay based on individual, group, and store performance.

**FIGURE 5**

**Two-way Interaction Effects of Group Envy Climate × Group (versus Individual) Incentive**

**Pay on Group Coordination**



## References

- Algoe, S. B., & Haidt, J. 2009. Witnessing excellence in action: The 'other-praising' emotions of elevation, gratitude, and admiration. *The Journal of Positive Psychology*, 4(2): 105-127.
- Ambrose, M. L., & Schminke, M. 2009. The role of overall justice judgments in organizational justice research: A test of mediation. *Journal of Applied Psychology*, 94(2): 491-500.
- Anand, S., Vidyarthi, P. R., Liden, R. C., & Rousseau, D. M. 2010. Good citizens in poor-quality relationships: Idiosyncratic deals as a substitute for relationship quality. *Academy of Management Journal*, 53(5): 970-988.
- Ashkanasy, N. M., & Nicholson, G. J. 2003. Climate of fear in organisational settings: Construct definition, measurement and a test of theory. *Australian Journal of Psychology*, 55(1): 24-29.
- Barsade, S. G. 2002. The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly*, 47: 644-675.
- Bartel, C., & Saavedra, R. 2000. The collective construction of work group moods. *Administrative Science Quarterly*, 45(2): 197-231.
- Bergeron, D. M. 2007. The potential paradox of organizational citizenship behavior: Good citizens at what cost? *Academy of Management Review*, 32(4): 1078-1095.
- Bliese, P. D. 2002. Using multilevel random coefficient modeling in organizational research. In F. Drasgow & N. Schmitt (Eds.), *Advances In Measurement And Data Analysis*: 401-445. San Francisco: Jossey-Bass.
- Boies, K., & Howell, J. M. 2006. Leader-member exchange in teams: An examination of the interaction between relationship differentiation and mean LMX in explaining team-level outcomes. *The Leadership Quarterly*, 17: 246-257.
- Bordia, P., Restubog, S. L. D., & Tang, R. L. 2008. When employees strike back: investigating mediating mechanisms between psychological contract breach and workplace deviance. *Journal of Applied Psychology*, 93(5): 1104-1117.
- Brislin, R. W. 1990. Applied cross-cultural psychology: An introduction. In R. W. Brislin (Ed.), *Applied Cross-Cultural Psychology* (pp. 9-33). Newbury Park, CA: Sage.



- Chen, N. Y. F., & Tjosvold, D. 2007. Guanxi and leader member relationships between American managers and Chinese employees: Open-minded dialogue as mediator. *Asia Pacific Journal of Management*, 24(2): 171-189.
- Cohen-Charash, Y., & Mueller, J. S. 2007. Does perceived unfairness exacerbate or mitigate interpersonal counterproductive work behaviors related to envy? *Journal of Applied Psychology*, 92(3): 666.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. 2003. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (3rd ed.). Mahwah: Lawrence Erlbaum Associates, Inc.
- Collins, A. L., Lawrence, S. A., Troth, A. C., & Jordan, P. J. 2013. Group affective tone: A review and future research directions. *Journal of Organizational Behavior*, 34: S43-S62.
- Cuddy, A. J., Fiske, S. T., & Glick, P. 2007. The BIAS map: behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, 92(4): 631-648.
- Dienesch, R. M., & Liden, R. C. 1986. Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11: 618-634.
- Duffy, M. K., Scott, K. L., Shaw, J. D., Tepper, B. J., & Aquino, K. 2012. A social context model of envy and social undermining. *Academy of Management Journal*, 55(3): 643-666.
- Duffy, M. K., & Shaw, J. D. 2000. The Salieri syndrome: Consequences on envy in groups. *Small Group Research*, 31: 3-23.
- Elfenbein, H. A. 2007. Emotion in organizations: A review and theoretical integration. *Academy of Management Annals*, 1: 315-386.
- Erdogan, B., & Bauer, T. N. 2010. Differentiated leader-member exchanges: The buffering role of justice climate. *Journal of Applied Psychology*, 6: 1104-1120.
- Frijda, N. H., Kuipers, P., & ter Schure, E. 1989. Relations among emotion, appraisal, and emotional action readiness. *Journal of Personality and Social Psychology*, 57: 212-228.
- Fiske, S. T., Cuddy, A. J. C., Glick, P. S., & Xu, J. 2002. A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82: 878-902.
- George, J. M. 1990. Personality, affect, and behavior in groups. *Journal of Applied Psychology*, 75: 107-116.

- Gerhart, B., & Rynes, S. L. 2003. *Compensation: Theory, Evidence, and Strategic Implications*. Sage Publications.
- Gerhart, B., Rynes, S. L., & Fulmer, I. S. 2009. 6 Pay and Performance: Individuals, Groups, and Executives. *Academy of Management Annals*, 3(1): 251-315.
- Graen, G. B., & Scandura, T. A. 1987. Toward a psychology of dyadic organizing. In L. L. Cummings & B. Staw (Eds.). *Research in organizational behavior*, 9: 175-208: Greenwich, CT: JAI Press.
- Graen, G. B., & Uhl-Bien, M. 1995. Relationship-based approach to leadership: Development of leader–member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, 6: 219-247.
- Harrison, D. D., & Klein, K. J. 2007. What’s the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, 32: 1-30.
- Henderson, D. J., Liden, R. C., Glibkowski, B. C., & Chaudhry, A. 2009. LMX differentiation: A multilevel review and examination of its antecedents and outcomes. *The Leadership Quarterly*, 20(4): 517-534.
- Henderson, D. J., Wayne, S. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. 2008. Leader-member exchange, differentiation, and psychological contract fulfillment: a multilevel examination. *Journal of Applied Psychology*, 93(6): 1208-1219.
- Hooper, D. T., & Martin, R. 2008. Beyond personal leader–member exchange (LMX) quality: The effects of perceived LMX variability on employee reactions. *The Leadership Quarterly*, 19: 20-30.
- Kelly, J., & Barsade, S. 2001. Mood and emotions in small groups and work teams. *Organizational Behavior and Human Decision Processes*, 86 (1): 99-130.
- Kwaadsteniet, E. W. D., & Dijk, E. V. 2010. Social status as a cue for tacit coordination. *Journal of Experimental Social Psychology*, 46(3): 515-524.
- Kozlowski, S. W. J. & Bell, B. S. 2003. Work groups and teams in organizations. In W. Borman, D. Ilgen, & R. Klimoski, (Eds.), *Comprehensive Handbook Of Psychology: Industrial and Organizational Psychology*, 12: 333-375. New York: Wiley.
- Le Blanc, P. M., & González-Romá, V. 2012. A team level investigation of the relationship between Leader–Member Exchange (LMX) differentiation, and commitment and performance. *The Leadership Quarterly*, 23(3): 534-544.

- LeBreton, J. M., & Senter, J. L. 2008. Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, 11: 815-852.
- Lewis, K. 2003. Measuring transactive memory systems in the field: scale development and validation. *Journal of Applied Psychology*, 88(4): 587.
- Liden R. C, Sparrowe R. T., & Wayne, S. J. 1997. Leader-member exchange theory. The past and potential for the future. *Research in Personnel and Human Resources Management*, 15: 47-119.
- Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. 2006. Leader–member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior*, 27: 723-746.
- Magee, J. C., & Galinsky, A. D. 2008. 8 Social Hierarchy: The Self-Reinforcing Nature of Power and Status. *Academy of Management Annals*, 2(1): 351-398.
- Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. 2001. A temporally based framework and taxonomy of team processes. *Academy of Management Review*, 26: 356-376.
- Mitchell, G., Tetlock, P. E., Mellers, B. A., & Ordonez, L. D. 1993. Judgments of social justice: Compromises between equality and efficiency. *Journal of Personality and Social Psychology*, 65(4): 629-639.
- Nahrgang, J. D., Morgeson, F. P., & Ilies, R. 2009. The development of leader–member exchanges: Exploring how personality and performance influence leader and member relationships over time. *Organizational Behavior and Human Decision Processes*, 108(2): 256-266.
- Okhuysen, G. A., & Bechky, B. A. 2009. 10 Coordination in Organizations: An Integrative Perspective. *Academy of Management Annals*, 3(1): 463-502.
- Pearsall, M. J., Christian, M. S., & Ellis, A. P. 2010. Motivating interdependent teams: individual rewards, shared rewards, or something in between? *Journal of Applied Psychology*, 95(1): 183-191.
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. 2010. A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, 15(3): 209-233.
- Reichers, A. E., & Schneider, B. 1990. Climate and culture: An evolution of constructs. *Organizational Climate and Culture*, 1: 5-39.

- Rico, R., Sánchez-Manzanares, M., Gil, F., & Gibson, C. 2008. Team implicit coordination processes: A team knowledge-based approach. *Academy of Management Review*, 33: 163-184.
- Roseman, I. J., Spindel, M. S., & Jose, P. E. 1990. Appraisals of emotion-eliciting events: Testing a theory of discrete emotions. *Journal of Personality and Social Psychology*, 59(5): 899-915.
- Rynes, S. L., Gerhart, B., & Parks, L. 2005. Personnel Psychology: Performance Evaluation and Pay for Performance. *Annual Review of Psychology*, 56: 571-600.
- Schaubroeck, J., & Lam, S. S. K. 2004. Comparing lots before and after: Promotion rejectees' invidious reactions to promotees. *Organizational Behavior and Human Decision Processes*, 94: 33-47.
- Schneider, B., White, S. S., & Paul, M. C. 1998. Linking service climate and customer perceptions of service quality: Tests of a causal model. *Journal of Applied Psychology*, 83: 150-163.
- Sherony, K. M., & Green, S. G. 2002. Coworker exchange: Relationships between coworkers, leader-member exchange, and work attitudes. *Journal of Applied Psychology*, 87: 542-548.
- Sias, P. M., & Jablin, F. M. 1995. Differential superior-subordinate relations, perceptions of fairness, and coworker communication. *Human Communication Research*, 22(1): 5-38.
- Smith, R. H. 2000. Assimilative and contrastive emotional reactions to upward and downward social comparisons. In J. Suls & L. Wheeler (Eds.), *Handbook of social comparison: Theory and research* (pp. 173-200). New York: Kluwer Academic/Plenum Publishers.
- Smith, R. H., & Kim, S. H. 2007. Comprehending envy. *Psychological Bulletin*, 133: 46-64.
- Smith, R. H., Parrott, W. G., Ozer, D., & Moniz, A. 1994. Subjective injustice and inferiority as predictors of hostile and depressive feelings of envy. *Personality and Social Psychology Bulletin*, 20: 705-711.
- Sparrowe, R. T., & Liden, R. C. 2005. Two routes to influence: Integrating leader-member exchange and networks perspectives. *Administrative Science Quarterly*, 50: 505-535.
- Steiner, I. D. 1972. *Group process and productivity*. New York: Academic Press.

- Stewart, M. M., & Johnson, O. E. 2009. Leader–member exchange as a moderator of the relationship between work group diversity and team performance. *Group & Organization Management*, 34: 507–535.
- Sy, T., Côté, S., & Saavedra, R. 2005. The contagious leader: impact of the leader's mood on the mood of group members, group affective tone, and group processes. *Journal of applied psychology*, 90(2): 295-305.
- Tai, K., Narayanan, J., & McAllister, D. J. 2012. Envy As Pain: Rethinking the Nature of Envy and Its Implications for Employees and Organizations. *Academy of Management Review*, 37(1): 107-129.
- Tse, H. H., Ashkanasy, N. M., & Dasborough, M. T. 2012. Relative leader–member exchange, negative affectivity and social identification: A moderated-mediation examination. *The Leadership Quarterly*, 23(3): 354-366.
- Tse, H. H., Dasborough, M. T., & Ashkanasy, N. M. 2008. A multi-level analysis of team climate and interpersonal exchange relationships at work. *The Leadership Quarterly*, 19(2): 195-211.
- Tse, H. H., Lam, C. K., Lawrence, S. A., & Huang, X. 2013. When my supervisor dislikes you more than me: The effect of dissimilarity in leader–member exchange on coworkers' interpersonal emotion and perceived help. *Journal of Applied Psychology*, 98(6): 974-988.
- Van Breukelen, W., Van Der Leeden, R., Wesselius, W., & Hoes, M. 2012. Differential treatment within sports teams, leader–member (coach–player) exchange quality, team atmosphere, and team performance. *Journal of Organizational Behavior*, 33: 43-63.
- Van de Ven, N., Zeelenberg, M., & Pieters, R. 2011. Why envy outperforms admiration. *Personality and Social Psychology Bulletin*, 37(6): 784-795.
- Vecchio, R. 2005. Explorations in employee envy: Feeling envious and feeling envied. *Cognition & Emotion*, 19(1): 69-81.
- Vidyarathi, P. R., Liden, R. C., Anand, S., Erdogan, B., & Ghosh, S. 2010. Where do I stand? Examining the effects of leader–member exchange social comparison on employee work behaviors. *Journal of Applied Psychology*, 95(5): 849-861.
- Wageman, R. 1995. Interdependence and group effectiveness. *Administrative Science Quarterly*, 40(1): 145-180.

- Wageman, R. 2001. The meaning of interdependence. M. E. Turner, ed. *Groups at Work: Theory and Research*. Lawrence Erlbaum, Mahwah, NJ, 197-218.
- Wageman, R., & Baker, G. 1997. Incentives and cooperation: The joint effects of task and reward interdependence on group performance. *Journal of organizational behavior*, 18(2): 139-158.
- Wilson, K. S., Sin, H. P., & Conlon, D. E. 2010. What about the leader in leader-member exchange? The impact of resource exchanges and substitutability on the leader. *Academy of Management Review*, 35(3): 358-372.
- Wright, P. M. 1989. Test of the mediating role of goals in the incentive-performance relationship. *Journal of Applied Psychology*, 74(5): 699-705.
- Zenger, T. R., & Marshall, C. R. 2000. Determinants of incentive intensity in group-based rewards. *Academy of Management Journal*, 43(2): 149-163.
- Zhang, Z., Waldman, D. A., & Wang, Z. 2012. A multilevel investigation of leader-member exchange, informal leader emergence, and individual and team performance. *Personnel Psychology*, 65(1): 49-78.
- Zohar, D. 2000. A group-level model of safety climate: testing the effect of group climate on microaccidents in manufacturing jobs. *Journal of Applied Psychology*, 85(4): 587-596.
- Zohar, D., & Luria, G. 2005. A multilevel model of safety climate: cross-level relationships between organization and group-level climates. *Journal of Applied Psychology*, 90: 616-628.