

雙重層次轉換型領導與服務績效： 以主管與部屬交換關係差異性為干 擾變項之多層次、多來源的檢視

Delivering Superior Customer Service through Dual-level Transformational Leadership: a Multi-level, Multi-source Test of the Moderating Role of LMX Differentiation

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摘要

本研究指出，雙重層次之轉換型領導，會分別透過不同層次主管與部屬交換關係對不同層次員工服務績效產生影響。為避免共同方法變異，本研究取樣自台中地區一間大型商業銀行，共計回收計 23 間分行，共組成有效的 228 組主管-成員對偶樣本資料。本研究發現，雙重層次之轉換型領導對於不同層次員工服務績效均有顯著性之影響。其中，個人層次之轉換型領導透過主管與部屬交換關係對員工服務績效產生影響。群體層次之轉換型領導透過群體層次主管與部屬交換關係對群體層次員工服務績效產生影響。此外，本研究亦指出，主管與部屬交換關係差異性對兩個層次主管與部屬交換關係以及員工服務績效之間具有顯著負向干擾效果。本研究最後，亦提出理論與實務上之管理意涵以及未來研究方向。

關鍵詞：雙重層次轉換型領導、主管與部屬交換關係、主管與部屬交換關係差異性、線性層級模式分析

Abstract

Conceptualizing superior customer service as behaviors exhibited by people who have direct interactions with customers in the workplace, we proposed a multilevel theoretical model that identified transformational leadership as the primary source, and the quality of leader-member exchange (LMX) as the underlying mechanism through which leadership exerts its positive influence on employee service performance, at both the individual and group levels. We also identified LMX differentiation within the group as a moderator between LMX quality and service performance. Data from 228 leader-member dyads of 23 branches in a large commercial bank revealed that both group-level transformational leadership and group LMX were meaningful group-level

constructs that had significant positive effects on group service performance. More intriguingly, LMX differentiation played the role of a cross-level moderator that mitigated such relationship at the group level. The theoretical and practical implications of our findings are discussed in the service organizational context.

Keywords: Dual-level Transformational Leadership, LMX, LMX Differentiation, Hierarchical Linear Modeling

1. Introduction

Studies of individual- and group-level leadership constitute have long been two influential but separate literatures. However, in recent years, researchers have begun to integrate these two literatures in an attempt to understand the relationship between dual-level leadership and organizational outcomes (Burke et al., 2006; Wu et al., 2010). Previous research has demonstrated group-level leadership that boosts group performance (e.g., Kozlowski et al., 1996). Meta-analyses have also shown that the positive relationship between group-level leadership behavior and group performance outcomes (Bass et al., 2003; Burke et al., 2006). Acknowledging the importance of cross-level effects of group-level leadership, scholars have conducted multilevel studies to examine its influence on both individual- and group-level organizational outcomes (Chen & Bliese, 2002; Chen et al., 2007).

However, these studies have focused mainly on the group level of analysis. With few exceptions (e.g., Chen et al., 2007), researchers have yet to consider the interplay between the individuals within a group and the group as a whole at the same time. Because employees are the key contributors to group performance, we cannot understand group-level leadership if we fail to integrate individual-level processes with group-level processes (Kozlowski & Bell, 2003; Wang & Howell, 2010). To advance this line of research, in the current study we aim to fill this void by investigating the effects of dual-level transformational leadership on individual-

and group-level outcomes, since research points out that transformational leadership is flexible as to level of analysis (Kirkman et al., 2009), comprising effects targeted at both groups and individuals (Kark & Shamir, 2002).

In this study, we identify transformational leadership to be crucial in motivating employees to engage in service, and leader-member exchange (LMX) as the mechanism linking transformational leadership and service performance. Research on transformational leadership has shown that the construct is applicable to both a group as a whole and a particular employee as an individual (Kirkman et al., 2009). Similarly, research on LMX has evolved from conceptualizing it at the individual/dyadic level to viewing it as a viable group-level construct (Liden et al., 2006). Accumulated research has consistently demonstrated the positive effects of transformational leadership on an array of outcome variables such as empowerment, collective efficacy, or performance at the group level (e.g., Chen & Bliese, 2002; Chen et al., 2007; Wu et al., 2010). On the other hand, much empirical research has also shown the positive effects of dyadic LMX on individual job satisfaction or job performance, studies on group LMX and its effects on group/individual performance remained scarce. One purpose is to focus on group LMX and establish its mediating role in the relationship between group-level transformational leadership and group service performance.

Even more scarce is the research of LMX differentiation on employee performance, which is at the core of the LMX theory (Graen & Uhl-Bien, 1995). An exception is Henderson, Wayne, Shore, Bommer, and Tetric's research that examined employees' relative LMX to others on their perception of psychological contract fulfillment and in-role performance (Henderson et al., 2008). When leaders behave differently toward group members by treating some members more favorably than others, LMX differentiation becomes salient. This differentiation will influence how members perceive their relationship with the leader as relative to other members, and ultimately impact their performance. At the group level, LMX differentiation is also likely to interact with group LMX to influence group performance. Therefore, another purpose of this study is to examine the moderating role of differentiation in the LMX-service performance relationship at both levels.

The study contributes to the current literature in three ways. First, it sheds

some light on the study of transformational leadership. Unlike previous studies treating transformational leadership as an single level construct, this research focus on its dual-level effects on both individual and group service performance and the interplay between the two levels. This effort responds to a void that leadership research would be benefited from research that target at the group level (Kozlowski & Bell, 2003). By tracking both individual- and group-level transformational leadership within a work group context (Johns, 2006), we are able to discover new insights that may be missed by examining leadership as separate levels. Second, the current study contributes to the LMX mechanisms through which transformational leadership may influence individual and group performance. Since existing empirical studies have been scarcely examined the group-level effects of LMX on group outcomes, researchers have called for more studies of the mediation process and its effects on work groups (Kirkman et al., 2009). Hence, examining mediating mechanisms is a promising way to advance this line of research. Third, the study also contributes to LMX differentiation research by examining its moderation effects between LMX and service performance at both individual and group levels. The discovery of this mechanism adds value to our current understandings about how LMX differentiation is related to service performance. In addition, our study adds an additional understanding of context as cross-level effects (Johns, 2006) that have evaded the attention of past research on leadership and groups.

We begin developing our theoretical model by establishing transformational leadership as a primary determinant of individual- and group-level service performance. Next, we discuss the role of LMX in linking these two variables, followed by the discussion of the moderating effect of LMX differentiation on the LMX-service performance relationship.

2. Theoretical overview and hypotheses

2.1 Individual- and Group-level Transformational Leadership

Group-level leadership is based on the idea of average leadership style (Dansereau et al., 1984), which implies that leaders treat group members the same as a whole. It influences a whole group rather than individual within the group. All subordinates in a group perceive their leader's behavior to be shared norms within their work unit (Yammarino & Bass, 1990). At least two dimensions of transformational leadership behaviors, charisma leadership and inspirational motivation, are likely to influence a work group as a whole because of shared norms, values, and ideology (Kark & Shamir, 2002). Charisma leadership refers to a leader's values and beliefs. Inspirational motivation refers to a leader's vision and ideology that inspire and motivate followers to reach ambitious goals.

The formation of group-level transformational leadership heavily relies on the creation of norms, values, and beliefs which is collectively shared. This underpins the overall pattern of transformational leadership as it exists in groups (Kitts & Chiang, 2008; Liao & Chuang, 2007). The norms, values, and ideology providing group members with the information and understanding of their group reality are treated as the accepted behavioral standards upon which all group members are subsequently measured (Colman & Carron, 2001). The norms that are formed among group members can be regarded as taken-for-granted organizational routines (Aldrich & Fiol, 1994) and behavior scripts (Nooteboom, 1996). These norms can facilitate both the rapid fulfillment of tasks (Scott, 2001), and the desire for conformity among the members of the group (Tagger & Ellis, 2007).

Transformational leadership theories have long been accused of ignoring the empirical contents of group process (Nielsen & Daniels, 2012), though so some researchers have attempted to conceptualize transformational leadership as a group-level construct (e.g., Liao & Chuang, 2007; Wang & Howell, 2010; Wu et al., 2010). They argued that transformational leadership behaviors are directed at the whole group and, hence, result in a shared value and belief among followers. Thus, group-level transformational leadership has been linked to group variables (e.g., group identification and collective efficacy) and performance variables (Bass et al., 2003; Schaubroeck et al., 2007; Wu et al., 2010). However, two issues pertaining to this stream of research warrant further empirical examination.

First, past transformational leadership studies have typically focused on either

the individual or the group level exclusively (Menges et al., 2011). To clarify this issue, we proposed a multiple-level transformational leadership model that divides transformational leadership into the individual- and the group-level. Liao & Chuang (2007) have argued that individual transformational leadership focus on individual followers' needs and are expected to build strong ties between leader and follower. Group-level transformational leadership refers to the overall pattern of leadership behavior, emphasizing the identity of the group and link the self-concept of followers to the shared values and beliefs of the group (Wu et al., 2010). Through recurring practices that translate formal policies and procedures, transformational leaders help develop shared beliefs and values (Zohar, 2008). Group-level transformational leadership is consistent with a work group context (Johns, 2006) notion since transformational leaders' ambient values are shared by group members as a whole.

Second, Chen & Bliese (2002) showed that the group-level transformational leadership may have a cross-level, top-down effects on individual employee performance. Wu et al. (2010) identified that group-level transformational leadership will influence group-level outcome variables. Therefore, transformational leadership studies needs to consider the joint effects of individual- and group-level factors on organizational outcomes, which is consistent with the context as cross-level effects (Johns, 2006). In this study, we include both levels of transformational leadership as predictors to service performance at different levels.

To answer these calls, in this study, we integrate both individual- and group-level transformational leadership and pay specific attention to examine the extent to which the transformational leadership created at both levels influences individual as well as group service performance through the mechanism of LMX and group LMX.

2.2 Dual-level Transformational Leadership and Service Performance

Transformational leadership refers to a leadership that focuses on changing teams or organizations by creating, communicating, and modeling a vision for the

organization or work unit, and inspiring employees to strive for that vision (Bass, 1985). It is comprised of mainly four behaviors, namely, vision articulation, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1985; Bass & Avolio, 1990; Podsakoff et al., 1996). The self-concept theory (Bandura, 1986) suggests that transformational leaders influence employees through two basic processes: the social and personal identification processes (Shamir et al., 1993).

The inspirational vision about the company serving clients and customers not only conveys the value endorsed by the company, but also instills the meaning about employees' daily work. It is likely to induce employees' identification with the company, being proud of their membership, and feeling a sense of personal identity as being derived from their association with the company (Hogg & Abrams, 1999). Meanwhile, the intellectual stimulation and individualized consideration provided by the leader are likely to encourage employees to challenge themselves and facilitate their pace of personal growth. An emotional bond is likely to be built in this process, and employees will develop a personal identification with the leader.

Through these identification processes, employees internalize the values and beliefs of the leader and develop high commitment to the goals set by the leader (Shamir et al., 1993). When providing excellent customer service is communicated as an important component of the company vision, is strongly advocated by the leader as a goal for the organization, and is depicted as having relational meaning for one's job, organizational members are likely to pursue it with all their effort. Therefore, we hypothesize:

Hypothesis 1a: Individual-level transformational leadership is positively related to subordinate service performance.

In the present study, we also conceptualize leadership as a shared group-level variable that reflects group members' perceptions of the extent to which the leaders of their group provide vision, inspiration, motivation, as well as socio-emotional support to subordinates. Implicit in this definition is the notion that employees working in the same work group are likely to be influenced by similar leadership

behaviors. Zohar (2008) has shown that group leaders help develop shared value and beliefs in teams through recurring practices that translate formal policies and procedures. This conceptualization of group-level transformational leadership is consistent with Shamir, Zakay, Breinin, and Popper's notion (Shamir et al., 1998) that leaders direct ambient behaviors toward groups as a whole, and with Griffin & Mathieu's (1997) and Chen & Bliese's (2002) approach of treating leadership as a group-level climatic variable. Thus, we use the term group-level transformational leadership to refer to ambient leadership behaviors (cf. Hackman, 1992).

Group-level transformational leadership promotes norm formation in the group, provides members with new information of group reality and facilitates conformity among group members (Tagger & Ellis, 2007), through a collective sense making process (Weick, 1995). The shared vision among group leaders and members is developed through interactions, discussions (Tagger & Ellis, 2007), and communications (Luria, 2008). In this process the meaning of confusing cues gets clarified, making the once complicated environments gradually understandable as an organized system (Weick, 1995). It then follows that if the group-level transformational leadership sets a strong norm for excellent customer service in the organization, it is likely to be adopted by all members through the interaction and communication or sense making process. Group-level transformational leadership is therefore likely to have a positive influence on group's service performance.

Hypothesis 1b: Group-level Transformational leadership is positively associated with group service performance.

2.3 LMX: Linking Dual-level Transformational Leadership and Service Performance

The theory of LMX (Graen & Uhl-Bien, 1995; Gerstner & Day, 1997) highlights the importance of leader-member relationship in motivating employee performance. It posits that social exchange is the foundation for the construction and maintenance of relationships (Blau, 1964), and it is significantly different from pure economic exchange. First, social exchange focuses on prospect while economic exchange emphasizes the present--immediate pay or return. Second,

social exchange pays attention to relationships based on loyalty and commitment, whereas economic exchange relies on compulsion through external rewards and authority power (Dienesch & Liden, 1986). Moreover, social exchange often involves non-equivalent give-and-take while economic exchange is quid pro quo and calculation-based. According to social exchange theory, the nature of relationship in leader-member exchange will be different depending on the extent to which social or economic exchange is involved.

Relationship building is a time-consuming process that involves mutual learning and accommodation. Transformational leaders tend to establish a high quality social exchange relationship with their subordinates (Wang et al., 2005) because their vision, inspiration, motivation, and individualized consideration are likely to induce subordinates' endorsement of their values and goals, which are more of social rather than economic in nature. Consequently, a relational contract may be formed between the leader and the subordinate. This relational contract escalates through a reciprocating process such that the better the social exchange relationship, the better the performance the subordinates will exhibit (Liden et al., 1997).

Recent research has also shown that employees not only seek meaningful tasks but also seek meaningful relationships at work (Grant, 2008). In the service sector in which work is defined in terms of relationships, managers are emphasizing the importance of relationships both internally, with a focus on teamwork and collaboration (Osterman, 1994, 2000), and externally, with clients and customers (Cascio, 1995). Transformational leaders tend to invoke the social and personal identification processes in their followers. We further reason that a high quality leader-member exchange will emerge from these processes in which trust and respect are likely developed. When managers develop meaningful relationships with their subordinates, the quality of LMX will improve and high levels of trust and respect will emerge. Employees tend to follow their leader's direction and make a great effort to achieve the goal set up by the leader and imitate their leader's relationship building behavior by establishing meaningful relationships with their customers, and providing superior service. Therefore, we hypothesize:

Hypothesis 2a: The positive relationship between individual-level transformational leadership and employee service performance is mediated by LMX.

Leader-member exchange is often considered as an interpersonal construct (Dansereau, 1995; Schriesheim et al., 1999), however, Liden et al. (2006) note that the effects of higher-level LMX on organizational outcomes are concomitant relations. Graen & Uhl-Bien (1995) also suggest that the group-level LMX can be viewed as the quality of leader relationships among individuals throughout the group. It is different from the interpersonal level LMX in three aspects. First, the structure of the two relationships is different. While the individual-level LMX exists between a supervisor and a subordinate in the form of distinctive dyads (Dansereau, 1995), group-level LMX is a collective of relationships shared by all group members (Schriesheim et al., 1999) or the collectives as aggregation of dyads.

Second, with regard to the scope of relationship, individual-level LMX focuses mainly on individual dyadic linkage that can go beyond the group (Dansereau, 1995). In contrast, the group-level LMX is shared by all group members and its scope exists within the group boundary (Schriesheim et al., 1999). Third, the developmental process of the two relationships is different. Individual-level LMX began with initial dyadic interactions between a supervisor and a subordinate through role assignment by the supervisor. During the interaction process, once the performance of the subordinate is valued by the supervisor, more challenging and important tasks are often followed (Dienesch & Liden, 1986). However, the formation of the overall leader-member relationships goes through the enactment behavior by group members who have already developed certain roles.

In sum, group LMX is a collective of leader-member relationships shared by, and developed through the interactions between the leader, and all group members. Uhl-Bien et al. (2000) posit that good relationships can generate social capital or group capital (Oh et al., 2006) --a set of valuable resources embedded in the collective networks of relationships (Burt, 1992; Nahapiet & Ghoshal, 1998). Such

resources include these that can bring non-instrumental benefits such as mutual trust, emotional support, obligations, and solidarity (Oh et al., 2006). Such resources also include these that can bring instrumental benefits such as gaining access to high quality information (Burt, 1992).

Previous research suggests that both instrumental and non-instrumental resources can help the group attain goals and improve service performance. In a garment industry research, for example, Uzzi (1997) discovered that the transfer of fine-grained information among subcontracted firms helped anticipating customer preferences and improving service. Group-level transformational leadership is beneficial to developing high quality group LMX, which should enhance the value and quality of the group social capital and in turn, group service performance. Thus, we propose:

Hypothesis 2b: The positive relationship between group-level transformational leadership and group service performance will be mediated by the group LMX.

2.4 LMX Differentiation: A Moderator between LMX and Service Performance

Researchers have suggested that LMX processes may operate at the group level of theory, in that variability in LMX quality within a group creates a group-level context that is meaningful to the experience of both managers and subordinates (Liden et al., 2006). In groups with little LMX differentiation, members who have a low quality relationship with their leaders may still experience the same relative advantages that they might if they were in a group with large LMX differentiation (Erdogan & Liden, 2002). On the basis of both theory (Graen & Uhl-Bien, 1995; Erdogan & Liden, 2002) and empirical findings (Cogliser & Schriesheim, 2000; Liden et al., 2006), it is conceivable that LMX processes operate simultaneously at multiple theoretical levels to influence perceptions and behaviors of groups and members.

At the individual level, we argue that higher LMX differentiation is likely to weaken the relationship between LMX and employee service performance. For

those who enjoy a high quality relationship with their leader, the more differentiation there is, the more likely that they will feel special, developing personal identification with the leader (e.g., Kark et al., 2003), experience self-efficacy (Shamir et al., 1993; Wu et al., 2010), and be motivated to perform at a high level. As a result, their service performance will be more superior. Privileged members are given priority in terms of access to information and resources (Chiang & Cheng, 2002). The attainment of membership within the in-group is a crucial factor in gaining advantages that facilitate personal career growth.

Although subordinates may expect differentiated LMX quality with their leaders, any distinctive difference in the quality of the LMX between various organizational members may not be desirable, since higher LMX differentiation would clearly not be beneficial to the organization as a whole. Where there are higher levels of LMX differentiation, as compared to their in-group counterparts, out-group members are likely to feel relatively deprived, particularly in those cases where they feel that they deserve, or are entitled to, a better outcome (Crosby, 1984). Chou (2002) also notes that, differentiated treatment between in-group and out-group members is likely to elicit negative outcomes.

In sum, members who have a low quality relationship with the leader when perceiving a large LMX differentiation, they are likely to feel interactional injustice, experience dissatisfaction and low level of trust (e.g., Dum Dum et al., 2002), and be de-motivated to perform superior service to customers. Therefore, we hypothesize:

Hypothesis 3a: The positive relationship between LMX and employee service performance will be moderated by LMX differentiation such that relationship will be stronger when the differentiation is weaker.

At the group level, LMX differentiation captures the variation of the dyadic exchange among a work group's members and is likely to result in divergence or variation among member perceptions of or experiences with a leader, and to create ingroup-outgroup divide within the group (Sherony & Green, 2002; Ilies et al., 2007). This divide could reduce the cohesiveness of the group, create an "us vs. them" mentality between members within the group, and an "unfair" group climate

in which psychological barrier for members to work together to achieve a common goal will become salient (Naumann & Bennett, 2000).

Therefore, even when group LMX is high, group's service performance may not be superior if the leader treats individual members very differently. On the other hand, a low degree of LMX differentiation should not exert much influence on how group LMX affects its service performance. Therefore, we propose:

Hypothesis 3b: The positive relationship between group LMX and its service performance will be moderated by LMX differentiation such that this relationship will be stronger when the differentiation is weaker.

To summarize, we propose the mediating effects of LMX on the relationship between transformational leadership and service performance, at both the individual and group levels. Moreover, we propose that LMX differentiation augments the positive relationship between LMX and service performance at the individual level, but mitigates such relationship at the group level.

3. Methods

3.1 Participants and Procedures

Participants included 228 banking clerks from 23 branches of a large commercial bank in central Taiwan (Taiwan Cooperative Bank). Traditionally, this bank profited from large corporate loans and the high spread of interest rates. In recent years the bank has undergone significant changes and has shifted their financial services from corporate banking to personal banking and wealth management services. As a result, the bank has put paramount emphasis on customer service quality. For example, it has greatly increased its marketing activities to trace the needs of customers and the patterns of customer consumption. Moreover, it has made great efforts in training its personal financial consultants internally and in strengthening customer relationship management externally. Each

branch was regarded as a separate group because performance evaluation was branch-based in the bank. The research setting matches strong sample relevance (Sackett & Larson, 1990).

In order to avoid the common method bias (Podsakoff et al., 2003), this study followed Scott & Bruce (1994) and divided the questionnaire into two parts: a manager questionnaire in which employee and group service performance were evaluated, and an employee questionnaire, in which their perception of transformational leadership and LMX were measured. Data collection procedure was as follows. First, we contacted branch managers through telephone calls and e-mails, and invited them to distribute questionnaires. We dispatched questionnaires on a one-branch-one-package basis. Each package contained one copy of the manager questionnaire and 12 copies of the employee questionnaire. The manager was asked to evaluate up to 12 subordinates in the branch. A number code was used for each subordinate so that we could match the manager's evaluation data with that of the subordinate. The employees were not made aware that their managers were evaluating them. To ensure anonymity, no names were required in any part of the questionnaire and they were informed that all responses would be kept confidential. Two phone reminders were sent: one after three weeks and the other after four weeks. To encourage participation, every participant was sent a little souvenir as a gesture of appreciation.

Our final sample consisted of 228 respondents from 23 branches of the same commercial bank. The mean age of the participants was 40.64 (SD = 8.12), with approximately 60% of them being female. On average, they had a mean of 75.75 months (SD = 52.35) of job tenure in the bank. The average working experience with the current supervisor was 50.95 months (SD = 47.57). The average number of people working in the same branch was 10 (SD = 2.2), which were more than the criterion of 3 (Carron & Spink, 1995).

3.2 Measures

All scales in our study were measured using a 6-point Likert scale (1=

“strongly disagree”; 6 = “strongly agree”) to avoid the central tendency bias found among Chinese respondents (Yang & Chiu, 1987).

3.2.1 Individual-Level Variables. *Individual-level Transformational leadership.* We applied Bass & Avolio’s (1990) Multifactor Leadership Questionnaire (MLQ) to measure transformational leadership. We adopted the Chinese version of this questionnaire with minor revisions to reflect the service context. MLQ measured four dimensions of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, with a six-item scale for each dimension. Sample items included “Talks to us about his/her most important values and beliefs as serving customers well,” and “Spends time teaching and coaching me to improve my customer service.” Since recent research has shown that a single transformational leadership factor appears to represent the data well (Judge & Bono, 2000), we combined these four dimensions and used the mean to form the index of transformational leadership. The Cronbach’s alpha for this scale was .97.

Leader-member exchange. Leader-member exchange relationship was measured using Graen & Uhl-Bien’s (1995) 7-item LMX scale. Sample items included “How well does your leader understand your job problems and needs?” and “How well does your leader recognize your potential?” The Cronbach’s alpha for this scale was .93.

Employee service performance. Managers were asked to evaluate their subordinate’s individual service performance using Liao & Chuang’s (2004) 7-item scale. Sample items included “Being friendly and helpful to customers” and “Asking good questions and listening to find out what a customer wants.” The Cronbach’s alpha was .92 for this scale.

3.2.2 Group-Level Variables. *Group-level Transformational leadership.* Group-level Transformational leadership is a shared unit construct (Kozlowski & Klein, 2000), or direct consensus model (Chan, 1998). We modified the survey questions to reflect the “referent shift” needed for this measure and replaced “me” with “our branch” in the original MLQ. Sample questions included “Our supervisor talks to us about his/her most important values and beliefs as serving customers well,” and “Our supervisor spends time teaching and coaching us to improve our

branch's customer service." Before aggregating the individual evaluation scores to represent the group-level transformational leadership, we calculated the r_{wg} score and ICC(1) and ICC(2) scores (e.g., James et al., 1984; Cohen, 1988). The r_{wg} score was .86, indicating that it was reasonable to apply cross-level analysis. The ICC(1) score was .40, higher than the range of value summarized in Cohen (1988). The ICC(2) score was .89, also higher than the range of value summarized in Klein & Kozlowski (2000). Therefore, we aggregated individual evaluation scores to form the group-level transformational leadership variable.

Group leader-member exchange. Following the same "referent shift" model, we modified the original LMX items to focus on the group. The sample items included "How well does your supervisor understand your branch's problems and needs?" and "How well does your supervisor recognize the potential of your branch?" The analysis of the measure of agreement among branch member's individual evaluation score yielded a r_{wg} of .74, an ICC(1) of .10, and an ICC(2) of .57. These aggregation statistics were within the acceptable range of values summarized in the literature and comparable with previous multilevel research (e.g., Hofmann & Stetzer, 1996; Liao & Rupp, 2005). Therefore, it is meaningful to include the group LMX in our further analyses.

Group service performance. The aggregation statistics for the individual service performance was $r_{wg} = .85$, $ICC(1) = .33$, and $ICC(2) = .82$, respectively, consistent with prior multilevel studies and justified our aggregation across managers (Hofmann & Stetzer, 1996). So we used the mean score of individual performance within a branch to represent the group service performance.

LMX Differentiation. We used the variance in the individual-level LMX scores within each branch to operationalize the LMX differentiation (Liden et al., 2006).

Control variables. We included age, gender (0 = female; 1 = male), organization tenure (months), and time duration they worked with current supervisor (months) as individual control variables. At the group level, control variables included group mean age, group gender ratio, group seniority, and group affinity. All of the group level statistics were the aggregation scores from individual level statistics.

4. Results

Descriptive statistics, correlations, and measurement reliabilities of all variables are presented in Table 1. Although some of the correlations between group-level variables exceeded .80, majority of the correlations were moderate.

Table 1.
Descriptive Statistics, Reliabilities, and Intercorrelations among Measures

variables	Mean	SD	1	2	3	4	5	6	7
Individual-level variables									
1.Age	40.64	8.12							
2.Seniority	75.75	52.35	.77**						
3.Affinity	50.95	47.57	.46**	.55**					
4.Individual-level LMX	4.71	.80	-.04	-.08	.07				
5.Individual-level TFL	4.38	.83	-.22**	.21**	-.10	.29**			
6.Employee service performance	4.49	.72	-.02	-.02	-.01	.37**	.30**		
Group-level variables									
1.Group agedness	40.68	3.27							
2.Group seniority	74.10	28.43	.79**						
3.Group affinity	50.43	28.74	.51*	.63**					
4.Group size	9.91	2.25	-.06	.28	.08				
5.Group LMX	4.72	.38	-.20	-.05	.17	-.12			
6.Group-level TFL	4.36	.57	-.55**	-.40	-.02	.09	.75**		
7.LMX differentiation	.65	.63	-.11	-.27	-.44*	-.10	-.63**	-.39	
8.Group service performance	4.51	.49	-.15	.04	.20	-.09	.86**	.59**	-.46**

a* $p < .05$, ** $p < .01$ (two-tailed)

Data source: this research

4.1 Confirmatory Factor Analyses

We conducted a set of confirmatory factor analyses (CFAs) to determine if our multi-item variables (i.e., Transformational leadership, LMX, and LMX differentiation) were distinct from each other. The analysis revealed that the proposed three-factor model displayed an acceptable fit ($\chi^2 = 946.9$, $df = 492$, $p < .001$, $RMSEA = .09$, $CFI = .95$, $NNFI = .95$). The fit statistics for the hypothesized model were significantly better than a two-factor model (grouping TFL and LMX) ($\chi^2 = 1240.32$, $df = 494$, $p < .001$, $RMSEA = .14$, $CFI = .92$, $NNFI = .92$, $\Delta\chi^2 = 293.42$, $df = 2$, $p < .001$) or a one-factor model ($\chi^2 = 1263.02$, $df = 495$, $p < .001$, $RMSEA = .14$, $CFI = .92$, $NNFI = .92$, $\Delta\chi^2 = 22.7$, $df = 1$, $p < .001$).

4.2 Hypotheses Testing

We used Hierarchical Linear Modeling (HLM) analysis to test Hypotheses 1a, 2a, and 3a. Before cross-level analysis, we first ran a null model with no predictors but employee service performance as the dependent variable. We found that the amount of variance explained by group-level effects was significant ($\chi^2 = 119.70$, $df = 22$, $p < .001$) and therefore proceeded to test these Hypotheses. The results are presented in Table 3.

Table 2.
Results of OLS Regression Analysis Predicting Group Service Performance

	Group Service Performance				Group LMX
	M1	M2	M3	M4	(M5)
Step 1 Control variables					
Group agedness	-.19	.07	.04	-.13	.03
Group gender ratio	.72***	.59***	.28*	.19*	.33**
Group seniority	.32	.42	.05	.23	.41
Group affinity	.14	-.02	-.15	-.23	-.13
Group Size	-.23	-.27	-.03	-.08	-.32*
Step 2 Independent variables					
Group LMX			.93***	1.09***	
Group-level Transformational Leadership		.57**	-.14	-.19	.76***
LMX Differentiation				-.12	
Step 3 Interaction variables					
Group LMX × LMX Differentiation				-1.25**	
R^2	.54	.71	.80	.91	.78
F	5.34**	10.88***	34.03***	50.39***	14.04***
ΔR^2	.54**	.17***	.09***	.11***	.78***

^a all estimates are standardized regression coefficients.

n=23 at group level

† $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

^b In all models, variables were grand-mean centered, except group gender ratio.

Data source: this research

As Hypotheses 1b, 2b, and 3b concern group-level relationships, we tested them via ordinary least square (OLS) regression. These results are presented in Table 2. It can be seen that in Model 2 of Table 2, group-level transformational leadership was significantly related to group service performance ($\beta = .57$, $p < .01$), supporting Hypothesis 1b. In Model 3 of Table 2, we tested the mediation effect of group LMX between group-level transformational leadership and group service performance. Following Baron & Kenny's (1986) model, we found that group-level transformational leadership was positively associated with group LMX ($\beta = .76$, $p < .001$), and that when both group-level transformational leadership and group LMX were entered in the regression equation simultaneously, only group LMX remained a significant predictor of group service performance ($\beta = .93$, $p < .001$). These results provide strong support for Hypothesis 2b. In

addition, we ran a multicollinearity test (Hair et al., 2006) to ensure that our results were not caused by the high correlations between the variables; the variance inflation factor (VIF) values revealed low degree of multi-collinearity.

Table 3.
Hierarchical Linear Modeling Results for Employee Service Performance

		Service Performance				LMX
		M1	M2	M3	M4	(M5)
Intercept	γ_{00}	4.05***	4.05***	4.07***	4.04***	4.08***
Individual-level control variables						
Age	γ_{10}	.00	.00	.00	.00	.01
Gender	γ_{20}	-.15*	-.15*	-.11	-.16*	-.09
Seniority	γ_{30}	.00	.00	.00	.00	-.00*
Affinity	γ_{40}	-.00*	-.00**	-.00**	-.00**	.00 [†]
Individual-level independent variables						
LMX	γ_{50}			.39**	.41**	
Individual-level Transformational leadership	γ_{60}		.13*	.03	.04	.27**
Group-level control variables						
Group agedness	γ_{01}	-.00	-.02	-.01	-.01	-.03
Group gender ratio	γ_{02}	.78*	.77**	.70**	.71**	.89**
Group seniority	γ_{03}	.00	.00	.00	.00	.00
Group affinity	γ_{04}	-.00	-.00	-.00	-.00	-.00
Group LMX	γ_{05}	.96**	.96**	.67**	.98**	1.00**
Group Size	γ_{06}	-.02	-.02	-.02	-.02	-.07
Group-level Transformational Leadership	γ_{07}	-.13	-.13	-.12	-.05	.55**
LMX Differentiation	γ_{08}	-.00	-.00 [†]	-.00	-.02	-.55*
Cross level interaction variables						
LMX × LMX Differentiation	γ_{61}				-.53*	
$\hat{\sigma}^2$		.33	.33	.28	.28	.52
$\hat{\tau}_{00}$		.00	.00 [†]	.01	.01	.00
$\hat{\tau}_{55}$				.02*	.03*	
$\hat{\tau}_{66}$			.00	.00	.01	.00
Model Deviance		465.78	460.37	435.96	438.13	432.95

^a n=228 at individual level, n=23 at group level.

[†] $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

^bIn all models, level 1 variables were grand-mean centered, except Gender.

^cDeviance is the measurement of model fit. The smaller, the better the model fits.

Data source: this research

We followed HLM to test Hypotheses 1a, 2a, and 3a. As shown in Model 2 of Table 3, individual-level transformational leadership significantly predicted individual service performance ($\gamma = .13, p < .05$), supporting Hypothesis 1a. We further tested the mediation effect of individual-level LMX between individual-level transformational leadership and individual service performance following Baron & Kenny (1986). In step 1, individual-level transformational leadership significantly predicted the service performance as shown in Model 1 of Table 3. In step 2, individual-level transformational leadership was positively related to individual-level LMX ($\gamma = .27, p < .01$) as shown in Model 5 of Table 3. In step 3, we included both individual-level transformational leadership and individual-level LMX in the regression equation simultaneously. As shown in Model 3 of Table 3, the effects of LMX remained significant ($\gamma = .39, p < .01$) whereas the effects of individual-level transformational leadership were no longer significant ($\gamma = .03, n.s.$). These results provide considerable support for Hypothesis 2a.

Some scholars (MacKinnon et al., 2002) suggested the product of coefficients test for indirect effects. This test possesses a good balance of small Type I error and high statistical power, generating an estimate of the magnitude and statistical significance for the indirect effect (Liao et al., 2010). Consequently, we tested Hypotheses 2a and 2b using the Mplus 7.0 software for the product of coefficients test. The test produces asymmetric confidence intervals for the indirect effect using the respective distributions of the two regression coefficients for the ethical leadership-guanxi and guanxi-service performance/service-oriented organizational citizenship behavior relationships, and generate a more accurate estimation of the indirect effect than the Sobel test (Mackinnon et al., 2007). The test results indicated that the indirect effects of transformational leadership on service performance via LMX at both levels were significant. Specifically, for individual-level transformational leadership-service performance relationship, the 95% confidence interval of the indirect effect was [.14, .37], not containing zero; for group-level transformational leadership-service performance relationship, the 95% confidence interval of the indirect effect was [.42, .77], which also not containing zero. Therefore, these results provide additional support to Hypotheses 2a and 2b.

Next, we tested Hypothesis 3b that predicted the moderation effect of LMX

differentiation on the relationship between group LMX and group service performance. The results presented in Model 4 of Table 2 revealed that the interaction effect was significant ($\beta = -1.25, p < .01$). We followed Aiken & West's (1991) procedure to graphically observe the interaction effects, as depicted in Figure 1. These interaction patterns were consistent with our hypothesis and showed that the relationship between group LMX and group service performance was stronger at a lower level of LMX differentiation ($\beta = 2.97, p < .001$) than at a higher level ($\beta = .91, p < .001$). Therefore, Hypothesis 3b was supported.

HLM was also used to test Hypothesis 3a that predicted the moderating effect of LMX differentiation on the relationship between LMX and individual service performance. The results presented in Model 4 of Table 3 revealed that the interaction effect was significant ($\beta = -.53, p < .05$). It can be seen from Figure 2 that the relationship between LMX and individual service performance was significantly stronger when LMX differentiation was weaker ($\beta = 1.47, p < .001$) than when it was stronger ($\beta = .45, p < .001$). These results provide support Hypothesis 3a that greater differentiation enhances the relationship between LMX and service performance. Therefore, Hypothesis 3a was supported.

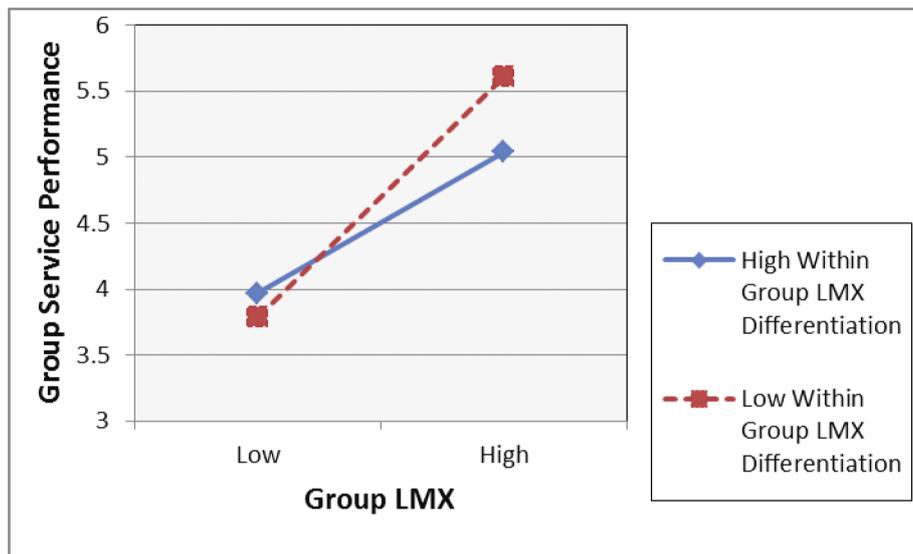


Figure 1
The Interactive Effect of Group LMX and LMX Differentiation on Group Service Performance

Data source: this research

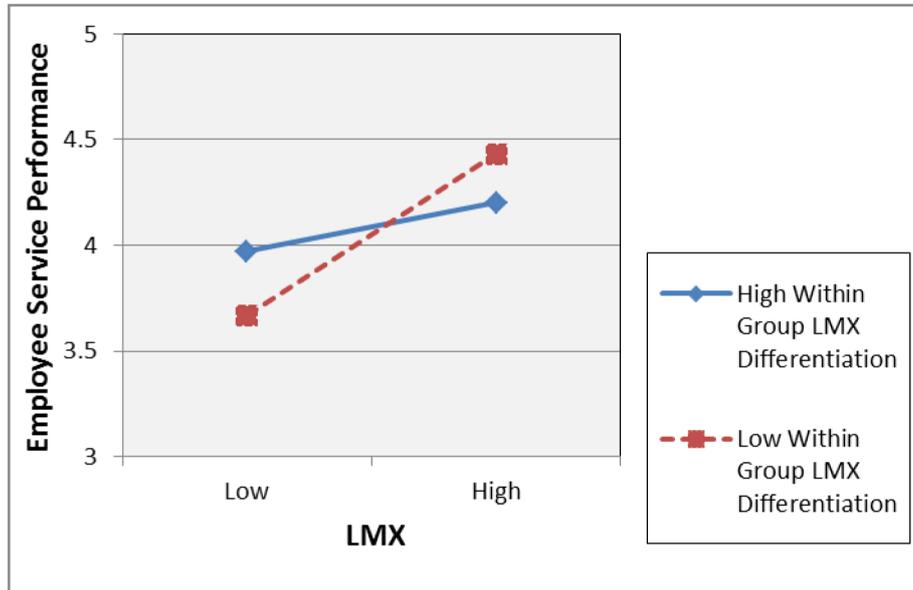


Figure 2

The Interactive Effect of LMX and LMX Differentiation on Employee Service Performance

Data source: this research

5. Discussion and Conclusion

The findings of the present study give rise to three important conclusions, which simultaneously offer novel contributions to the extant literature on transformational leadership. First, extending Wu et al.'s (2010) study, our study answers calls for a multilevel theoretical perspective for transformational leadership (e.g., Kark & Shamir, 2002) by including outcomes at both individual and group levels and explore how dual-level transformational leadership can motivate individuals and works at the same time. Transformational leadership not only has a positive relationship with employee service performance at the individual level; when it forms a group-level transformational leadership, it exerts

positive influence on group service performance as well. Second, the positive relationship between transformational leadership and service performance is mediated by the quality of leader-member exchange, which is evoked /created/inspired by such leadership. At the individual level, it is the dyadic LMX that translates transformational leadership into employee service; and at the group level, it is the collective of the overall LMX that translates group-level transformational leadership into group service performance. Our findings also suggest that the effect of transformational leadership on service performance is based on how each subordinates experiences and interprets these leadership behaviors (Dasborough & Ashkanasy, 2002). Social bonding between leader and follower is important for follower development and LMX to emerge (Dvir et al., 2002). Third, this study attests the moderating role of LMX differentiation in the relationship between LMX and service performance: the LMX- service performance relationship at both individual and group levels were stronger when LMX differentiation was smaller. Next we discuss the theoretical and practical implications of these findings.

5.1 Theoretical Contributions

As discussed earlier, since transformational leadership theories have long been accused of ignoring the empirical contents of group process (Nielsen & Daniels, 2012), this current study examined the effectiveness of both individual- and group-level transformational leadership at both individual and group level. Transformational leadership researchers have called for multilevel effects of leader behaviors on employee outcomes, and there have been some studies that made an effort in examining the group-level leadership on employee attitudes and motivation (Griffin & Mathieu, 1997; Shamir et al., 1998; Chen & Bliese, 2002). Our study extends these previous contributions by showing that group-level transformational leadership and group LMX are not only meaningful constructs that positively affect group service performance; but moreover, group LMX mediate the relationship between group-level transformational leadership and

superior group service performance.

Given the importance of providing superior customer service at the organizational level, showing that a group-level transformational leadership influences the quality of group service is a first step toward developing a more comprehensive model that specifies the underlying mechanisms for such influences. For example, our finding suggests that superior group service can be promoted by group-level transformational leadership, through its effects in creating a positive relationship between the leader and the entire group, which could potentially increase its social capital and facilitate the knowledge sharing and cooperative motivation of group members (e.g., Uhl-Bien et al., 2000).

While previous research has shown a great deal of evidence that transformational leadership inspires employee OCB, our study is among the first that shows its positive effect on employee service performance. Given the increasing importance of superior customer service in organization's survival and competitiveness, showing how such effect occur offers insights to building a process model in understanding the phenomenon. Our study contributes to leadership research by focusing on both the transformational leadership and LMX. Our finding that LMX translates the leadership effect into service performance indicates a transformation-identification-reciprocation process that might have happened when employees are inspired by leader's vision, motivation, and individualized consideration. Our results show that LMX is the primary mechanism by which transformational leadership influences their subordinates. Our results are consistent with Wang et al. (2005)'s theorizing by identifying social exchange theory (Blau, 1964) is the underlying mechanism in translating transformational leadership to employee service performance because LMX is also built on the basis of numerous interactions between supervisors and subordinates, and which involve mutual learning and mutual accommodation.

In addition, we found that LMX differentiation played a significant moderating role in the transformational leadership-service performance relationship. LMX differentiation is at the core of the theory of LMX since its conception (Graen & Uhl-Bien, 1995), but has not received sufficient attention in theorizing or empirical testing. In addition, since organizational researchers have

long advocated a multi-level approach as the means of revealing the richness of organizational behavior across different organizational levels, with leadership research scholars having also called for examination of the multi-level effects of LMX on employee outcomes, we find that the cross-level effects of LMX differentiation provide a more comprehensive picture and understanding of the dynamics of the ways in which individual- and group-level factors interact to influence the organizational outcomes. Our finding that LMX differentiation weakens the relationship between transformational leadership and service performance is consistent with the recent finding by Wu et al. (2010) that differentiation-based transformational leadership negatively relates to follower self-efficacy and group effectiveness. Our finding adds another important piece of information to solve the theoretical puzzle as how transformational leadership influences service performance, and under what circumstances the effects of LMX might be mitigated.

Furthermore, the finding that weaker LMX differentiation strengthened the relationship between leader-member exchange and employee service performance indicates the importance of group contextual factors (Johns, 2006) in the process of focusing the employee's efforts in providing superior customer services. The cross-level effect of LMX differentiation adds complexity to the individual level phenomenon, which provides a more comprehensive picture to understanding the dynamics of how individual and group level factors interact to influence the emergence of important employee outcomes.

5.2 Managerial Implications

The findings of this study have potentially valuable implications for general management practice. First, our study indicates that transformational leaders need to form a set of norms, values, and ideology to motivate performance of group as a whole. The norms, values, and ideology providing group members with the information and understanding of their group reality are treated as the accepted behavioral standards upon which all group members are subsequently measured

(Colman & Carron, 2001). The norms that are formed among group members can be regarded as taken-for-granted organizational routines (Aldrich & Fiol, 1994) and behavior scripts (Nooteboom, 1996). These norms can facilitate both the rapid fulfillment of tasks (Scott, 2001), and the desire for conformity among the members of the group (Tagger & Ellis, 2007). To drive group service performance, transformational leaders need to foster group identity by emphasizing the shared norms and values and the unique characteristics of the group. Transformational leaders should communicate with followers through a compelling vision and build followers' commitment to the vision. At the same time, transformational leaders need to foster cooperation and build trust among group members to ensure that they work effectively.

Second, in addition to showing respect for followers and inspiring them to achieve their full potential, transformational leaders must also be capable of forming good-quality LMX with them. If they are to succeed in building up such relationships, transformational leaders will need to be able to sketch out the core value of organizational vision for their subordinates and to provide them with an effective link with their own conception of self through personalized role assignments. As a result of such work and non-work relationships, followers can obtain their perceived equity within the organization (Dienesch & Liden, 1986), and can then go on to further identify with the vision and values of their transformational leader. Thus, LMX is established, characterized by trust, loyalty and commitment, a form of social currency circulated in these social exchanges, within which subordinates feel some obligation to reciprocate through enhanced performance (Wang et al., 2005).

Third, LMX differentiation plays a significant moderating role in the relationship between LMX and service performance at both levels. LMX differentiation is at the core of the LMX theory (Liden et al., 2006), which argue that leaders develop differentiated relationships among followers. However, LMX differentiation has not received sufficient attention in theorizing or empirical testing (Henderson et al., 2008). Our results suggest forming high-quality LMX relationship with a small portion of members may be disadvantages. Although high-quality LMX is positively related to service performance, leaders may often

find themselves in a situation in which they cannot develop high-quality relationships with all members. Our results have implications for leaders with high LMX differentiation. If leaders realize that their relationships with followers are differentiated such that they are closer to some members, they should be aware that other members' withdrawal behaviors will depend on the levels of LMX differentiation that exists in the group.

Fourth, more training on transformational leadership could be helpful in general. Our results suggest that transformational leadership is not only normatively appropriate but also helpful for group members to increase service performance. Field and laboratory experiments have demonstrated that transformational behaviors are trainable (Dvir et al., 2002; Wang & Howell, 2010). Thus, organizations should cultivate transformational leadership behaviors on leaders and highlight the importance of individual-level versus group-level transformational leadership styles. A development program may be more effective if leaders can learn how to display appropriate transformational behaviors according to the situation that they face.

5.3 Limitations and Future Research

The present research entails several limitations. First, our sample was limited to the branches of a single commercial bank in Taiwan. While such sampling provides control for unwanted environmental factors such as organizational structure and industry (Chen et al., 2007), we strongly encourage future research to examine the generalizability of our findings in other organizational and cultural contexts. With more and more emphasis on treating internal organizational members as clients in today's corporate world, our theoretical model might demonstrate its applicability in non-service industries. Moreover, whereas Taiwan represents a culture that highly values personal relationship (a relational society, Hwang, 1990), similar results may be found in other cultures since need for affiliation (relationship) is universal for all human beings (McClelland, 1985).

Second, we measured individual-level LMX from subordinate's perspective in

this study because it seemed to be more relevant to our theoretical argument. Gerstner & Day (1997) recommended researchers to measure LMX from both leader and subordinates to reflect a more accurate relationship. Further research may examine LMX from both perspectives and examine (a) which perspective predicts employee customer service performance better, and (b) the extent to which these two perspectives provide consistent evaluations would explain the degree of service performance exhibited by the subordinates.

Third, in this study we collected service performance data from managers. Researchers have recommended obtaining service performance directly from customers (Liao & Chuang, 2007) who are recipients of the service. For example, Liao & Chuang (2007) collected data from customers who frequently visited a franchised hair salon in Taiwan. We were not able to obtain responses from the encounter customers in this study. Further research may collect service data directly from customers to corroborate what we found in this study. Finally, although this study collected data from multiple sources to avoid common method variance, it was still a cross-sectional design, which limited the ability to make casual inferences. Future research may adopt a longitudinal design to study the dynamics as how the relationships between transformational leadership, LMX, and LMX differentiation change over time, and trace their causal links.

5.4 Conclusion

The present study contributes to the literature on leadership and employee service performance by examining the mediating role of LMX using multisource, multi-level data in a cross-sectional design. In addition, the study extends the leadership literature both theoretically and empirically by demonstrating the existence of the group-level transformational leadership and group LMX constructs, the moderating role of LMX differentiation on the LMX-service performance relationship, and by proposing and testing a model that supports the integration of social exchange theory and social capital theory.

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Delivering Superior Customer Service through Dual-level Transformational Leadership: a Multi-level, Multi-source Test of the Moderating Role of LMX Differentiation

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