

Currencies of exchange and global LMX: How they affect employee task performance and extra-role performance

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Abstract Two studies are presented in this research to integrate the unidimensional and multidimensional perspective of leader-member exchange (LMX). We posit that the dimensions of multidimensional LMX (LMX-MDM) are the exchange currencies of global LMX and investigate their joint effects on task performance and extra-role behaviors of employees. The results from Study One indicate that the affect, loyalty, contribution, and professional respect dimension of LMX-MDM influence overall level of leader-member relationship quality, and global LMX is positively related to task performance as well as organizational citizenship behaviors (OCB). Study Two partially replicates the results in Study One and demonstrates that global LMX is also associated with contextual performance of employees. Limitations and future research on LMX are discussed.

Keywords Leader-member exchange · In-role performance · Ex-role performance

Research on leader-member exchange (LMX) has shown that different types of relationships within work units are developed between leaders and their subordinates (Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975) and that these

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relationships relate to important employee outcome variables such as employees' job performance (Gerstner & Day, 1997; Liden, Wayne, & Stilwell, 1993), overall satisfaction (Graen, Novak, & Sommerkamp, 1982), organizational commitment (Nystrom, 1990), organizational citizenship behavior (OCB) (Anderson & Williams, 1996; Ilies, Nahrgang, & Morgeson, 2007; Setton, Bennett, & Liden, 1996; Wayne, Shore, & Liden, 1997), and employee withdrawal behavior (Ferris, 1985; Graen, Liden, & Hoel, 1982). Research on LMX has remained active since its initial publication in the 1970s. For example, Wang, Law, Hackett, Wang, and Chen (2005) have integrated LMX with transformational leadership in a framework to explain employee performance. Erdogan, Liden, and Kraimer (2006) investigated the relationship between justice and LMX in the context of different organizational cultures. However, there have been some controversies over how LMX should be conceptualized and measured (e.g., Liden & Maslyn, 1998; Maslyn & Uhl-Bien, 2001). Theoretical conclusions will be dubious without sound measurement, and sound measurement is impossible without clear conceptualization (Nunnally, 1978). We believe that there is a need to clarify the conceptualization and measurement of LMX to further advance research in this area, especially in the Chinese context where traditional firms are experiencing major corporate transformations (Tsui & Lau, 2002) and values and norms of employees are different from their counterparts in the West (Yang, 1993).

LMX was initially conceptualized in terms of a role-making process (Graen, 1976) and the quality of LMX was conceptualized in terms of various elements such as mutual trust, respect, and obligation (Graen & Uhl-Bien, 1995). The role-making process is a descriptive process that details the series of exchanges between leaders and followers and does not suggest the dimensionality of the leader-member relationship. Mutual trust, respect, and obligation are highly correlated dimensions and have not been distinguished sufficiently in LMX measures. Thus, LMX has been conceptualized as a global construct and measured with a unidimensional measure (e.g., LMX-7, Scandura & Graen, 1984). Yet other researchers have argued that LMX may be better conceptualized and measured as a multidimensional construct (Dienesch & Liden, 1986; Vecchio & Gobdel, 1984). For example, early work on the dimensionality of LMX by Dienesch and Liden (1986) suggests that LMX should be conceptualized and measured in terms of contribution, loyalty, and affect. We attempt to resolve these controversies by integrating the dimensionalities of LMX and the global LMX in the role-making perspective suggested by Graen (1976). One major problem of LMX research in the past was that while the name of the construct implied that LMX involved exchanges between the leader and follower, the content of the exchange was never specified. We argue in this paper that the dimensions of multidimensional LMX (LMX-MDM) could actually be viewed as proxies of currencies of exchange between leader and subordinates.

Our main argument in the current study is that the multi-dimensions of LMX proposed by Liden and Maslyn (1998) are by nature currencies of exchange and as such, would determine global LMX, which is the overall quality of the exchange relationship. This argument essentially integrates the research on dimensionality of LMX and global LMX in a role-making framework by conceptualizing the dimensionality of LMX as antecedents to global LMX. This framework echoes arguments from Liden and Maslyn, who proposed "researcher[s] could use each of

the four dimensions [of the multidimensional LMX measure] as indicators of global LMX” (1998: 64). They did not, however, provide any theoretical argument or empirical support that multidimensional and global LMX could be integrated. We further argue that the structural relationship was especially true in the Chinese context where holistic concern was of primary importance. We examined the relationship between currencies of exchange and global LMX on employee performance in two studies from China. In the first study we examined the relationship between currencies of exchanges and global LMX and employee’s task performance and extra-role performance in terms of organizational citizenship behavior (Organ, 1988) using a sample of bank tellers and their supervisors. To further establish the validity of our findings, we conducted a second study to examine the joint effects of currencies of exchange and global LMX on employee’s performance using a different operationalization of employee extra-role performance as well as a different sample. Specifically, we operationalized employee extra-role performance in terms of contextual performance and used a sample of supervisors and their subordinates across a number of different organizations and industries.

Theory and hypotheses

LMX and role-making

According to Graen and Uhl-Bien (1995), LMX denotes effective work relationships and hence can be distinguished from social relationships such as personal relationship or friendship. To conceptualize how an effective work relationship can be developed, Graen and his colleagues suggested a role-taking, role-making, and role-routinization process (Graen, 1976; Graen & Scandura, 1987). Leader-member relationship is developed through a series of steps that begin with the initial interaction between the members of the dyad. This is followed by a sequence of exchanges in which one part of the dyad examines the other part to determine whether they can build the high quality relationship. During the process, interaction behaviors of the dyad play critical roles to enhance the quality of LMX. If the exchange based on their interaction is positive and satisfies the dyadic members, leader and members will continue to exchange, otherwise, there are no opportunities to develop high quality of leader-member relationship. Because Graen (1976) was interested in explaining the overall effectiveness of work relationships by conceptualizing the development of these relationships in terms of a process that involves only work-related commodities, LMX has been conceptualized as a global construct and measured as a unidimensional construct. The majority of studies also showed good consensus on the nature of the LMX as being the quality of the exchange relationship between leader and member (Schriesheim, Castro, & Coglisier, 1999) and hence it is of no surprise that LMX has been measured mostly as a unidimensional construct.

This role-making process has contributed significantly to our understanding of the importance of exchanges between dyadic members to the development of LMX. It does not, however, offer a systematic analysis of what was being exchanged. In other words, despite the fact that dyadic members will, through a series of exchange

episodes, find out whether they can continue to develop an effective work relationship, precisely what was being exchanged has much to be studied. Graen and Scandura (1987) suggested that two higher order dimensions of LMX, quality and coupling, can characterize the exchanges between dyadic members. The coupling dimension is more behaviorally oriented (addressing influence, delegation, latitude, and innovativeness), while the quality dimension addresses the attitudes present in the exchange relationship. Thus, to develop an effective work relationship, dyadic members need to exchange both behaviors and attitudes that contribute to the relationship. But what is the theoretical foundation for the behaviors and attitudes to be exchanged? We argue that Liden and Maslyn's (1998) multidimensional conceptualization of LMX provides an answer to this important question.

According to Graen and Scandura (1987), the *quality* dimensions is the:

“quality of the dyadic interaction... The quality helix has been measured by the various empirical indicators including leader-member exchange, superior leader-member exchange, dyadic loyalty, dyadic support, and dyadic trust, among others... *coupling* refers to the interlocking of manager and member behaviors. This dimension is a reciprocal influence system through which the behaviors of the members of the dyad become interdependent” (191–192).

As the *quality* of the relationship between the leader and the member increases, the leader is willing to delegate and allow more decision influence by the follower, i.e., less coupling. Following this logic, we argue that multidimensional LMX reflects the *quality* dimension of the leader-member exchange, whereas unidimensional LMX reflects the degree of coupling between the dyad. This is well justified if we looked at the items used to measure unidimensional LMX. The most common scale used to measure unidimensional LMX, the LMX-7 (Scandura and Graen, 1984), has items such as “the chances that your leader would ‘bail you out’ at his/her expense,” “I have enough confidence in my leader that I would defend and justify his/her decision if s/he would not present,” and “how well does your leader understand your job problems and needs.” These items clearly measure the degree the leader and followers are coupled together. In contrast, multidimensional LMX reflects the quality of the relationship, as well as what is being exchanged in order to come up with such a quality. We will explain why this is the case in the next section.

Multidimensional LMX and currencies of exchange

Dienesch and Liden (1986) argued that roles involve multiple dimensions and hence conceptualizing and measuring LMX as a multidimensional construct will provide theoretical clarity and precision in research. Based on role theory, social exchange theory, and attribution theory, Liden and Maslyn (1998) proposed that LMX development involves different “currencies of exchange” and reported the development of a multidimensional measure of LMX based on these currencies. These currencies include: (1) *Affect*, which refers to the mutual affection of the dyad members for each other based primarily on interpersonal attraction rather than work or professional values; (2) *Loyalty*, which refers to the expression of public support for the goals and personal character of the other member of the LMX dyad; (3) *Contribution*, which refers to the perception of the amount, direction, and quality of

work-oriented activity each member puts forth toward the mutual goals (explicit or implicit); and (4) *Professional respect*, which refers to the perception of the degree to which each member of the dyad has built a reputation, within or outside the organization, for excelling in his or her line of work.

Maslyn and Uhl-Bien (2001) further proposed that affect, loyalty, and professional respect dimensions are social currencies that focus on social exchange between leader and member, whereas contribution dimension is a work-related currency and that both types of currencies are important to the development of LMX.

Currencies of exchange and global LMX

If affect, loyalty, contribution, and professional respect are indeed exchange currencies, they characterize what is being exchanged in the role-making process between dyadic members. Thus, the research on multidimensional LMX and global LMX can be effectively integrated by understanding how the currencies of exchange will relate to the overall effectiveness of the work relationship. In general terms, when good currencies are exchanged, the resulting global LMX should be high in quality, and vice versa. This framework is consistent with Graen and Uhl-Bien's (1995) recommendation that a global (unidimensional) measure of LMX (i.e., LMX-7) may be more appropriate when there was interest only in measuring the overall quality of the LMX relationship. However, a multidimensional measure of LMX may be more meaningful when researchers' interest is in capturing what is being exchanged in dyadic relationships.

As discussed above, Graen (1976) has suggested the importance of work-related commodities, or work-related currencies in the terminology we adopted from Liden and Maslyn (1998) and Maslyn and Uhl-Bien (2001). Contribution is a work-related dimension of the multidimensional LMX measure (Liden & Maslyn, 1998). These work-oriented behaviors and/or performances are an important clue for the dyad to develop high quality relationship. Higher quality between the dyad refers to greater exchange of valuable resources between leader and member (Bass, 1990). Members who performed well impress the leader and receive resources and support. The high level of contribution to the dyad makes members engage in tasks and duties that extend beyond what is required from the formal employment contract and develop high quality LMX with their supervisors.

We argue that besides work-related currencies, social currencies are also important in building effective work relationships. It is not likely to build an effective work relationship without work-related currencies of exchange. It is also not likely to build an effective work relationship, however, without some social currencies of exchange. In the social psychological literature, degree of mutual liking has been established as a critical variable in the study of interpersonal interaction (Day & Crain, 1992). Management researchers also showed that liking influences relationships that develop between leaders and their followers (Deluga & Perry, 1994). In fact, much of the early theoretical work on LMX proposed that exchange quality is determined in the early stage of dyadic relationship and remains relatively stable over time (Deluga, 1994). During the early stage of role making, affect plays a very important role. Deluga (1998) argued that interpersonal attraction (affect) fostered leader member compatibility, and that the resulting rapport encouraged

accurate perception of supervisor performance expectation and would, therefore, improve subordinate performance. Therefore, social currency in the form of affect will influence the quality of exchange between leaders and members.

Social currency in the form of loyalty will also influence the quality of exchange between leaders and members. Loyalty involves a sense of faithfulness to the target that is stable and generally consistent across different situations. In other words, high quality of mutual trust can only be developed when at least one member of the dyad express loyalty to the other. Liden and Graen (1980) tested this argument with empirical data. Specifically, they showed that leaders were more likely to ask loyal members to take on tasks that required independent judgment and responsibility. Therefore, loyalty plays a critical role in the development and maintenance of LMX.

Social currency in the form of professional respect will also influence quality of exchange between leaders and members. Professional respect is related to global LMX because whether one excels in his/her line of work is a core criterion of building high LMX relationships (Dienesch & Liden, 1986). Research results showed that leaders and members might develop perceptions of professional respect even before working with or meeting the other dyadic member (Liden & Maslyn, 1998). Based on the argument above, we hypothesize that the exchange currencies manifested by four dimensions of LMX-MDM—affect, loyalty, contribution, and professional respect—would predict the level of global LMX. The dyad members could build high quality of relationship through mutual liking, expressing loyalty, contributing to the dyad goal, and displaying professional respect to the other partner.

It should be noted that we are *not* arguing that one measure of a construct is the antecedent of another measure of the same construct. Hypothesizing a relationship between dimensional and global LMX may be a dubious attempt if these two scales capture an overlapping construct. As discussed above, we suggest that dimensional LMX measures the currencies of exchange whereas global LMX measures the overall effectiveness of the work relationship. The elements or dimensions in LMX-MDM can, therefore, be interpreted as conditions leading to the global LMX measure (or unidimensional LMX). Thus, theoretically they are distinct constructs. Empirically, unidimensional and multidimensional operationalizations of LMX are usually highly correlated (e.g., Maslyn & Uhl-Bien, 2001). They do not, however, show the same pattern of relationships with other variables (Wang, Law, Wang, & Chen, 2001). This is especially true when both measures are used in the same study. For example, LMX-MDM and LMX-7 are both used to explore the relationship between effort and LMX quality in Maslyn and Uhl-Bien (2001). The composite LMX-MDM did not consistently show the same pattern of results as LMX-7. Specifically, effort by the dyad partner was a critical factor associated with higher quality of LMX measured by LMX-7. However, when LMX was operationalized by LMX-MDM, subordinates' reports on effort by the manager (i.e., effort by the dyad partner) were positively related to the dimension of loyalty and professional respect but were not significantly related to the contribution and affect dimension of LMX. Similarly, managers' reports on subordinate effort were not related to the contribution dimension of LMX. In Wang et al. (2001), LMX took a mediating role between transformational leadership and subordinate's performance and OCB only when LMX was measured by LMX-MDM. Thus, empirically, unidimensional and multidimensional measures of LMX are also distinguishable from each other.

Currencies of exchange in Chinese context

We further argue that the positive relationship between currencies of exchange and global LMX will be enhanced in the Chinese context where the person-oriented nature of Chinese society (Westwood, 1997) and the importance of *guanxi* (Hui & Graen, 1997) make interpersonal interaction and exchange very important during the role-taking, role-making, and role-routinization process. When discussing the determinations of high quality *guanxi*, Chen and Chen (2004) argue that *qing* (feeling) is a very important factor and *qing* is composed of obligation and affection. If two persons have *ganqing* (affect) manifested as sharing their feelings of happiness and fears, it means that the persons have a high quality of relationship. Therefore, affect could be a kind of exchange currency which may lead to high quality of relationship between supervisor and subordinates. In addition, Chinese are characterized as collectivist with respect to their own group. Chinese should be loyal and committed to the in-group members. For example, in Chinese organizations, loyalty and reliability are more highly valued than other attributes of employees (Hui & Graen, 1997). Therefore, a person who shows loyalty to her/his supervisor could be a manifestation of in-group members. With regard to professional respect, China is a society with high level of power distance (Hofstede, 1980). The five fundamental relationships (*wu lun*): emperor-subject, father-son, husband-wife, elder-younger siblings, and friend-friend required that persons at lower levels should respect the persons at higher levels. Therefore, the behavior of professional respect from a person should be considered as the role behavior of a subordinate and favored by her/his supervisor. Lastly, the work-related currency of contribution is also related to the global LMX in the Chinese context. As argued by Chen and Chen (2004), *guanxi* is a very important element of Chinese society. And reciprocity of favor exchange is the most pervasive rule and behavior guiding Chinese social and economic interactions. During the dyadic relationship developing, the reciprocal consequence of contribution is the high level of global LMX.

In sum, the arguments above may lead us to hypothesize that exchange currencies manifested as affect, loyalty, contribution, and professional respect will be related to the exchange quality of supervisor and subordinate, especially in the Chinese context.

Hypothesis 1 The currencies of exchange manifested by the affect, loyalty, contribution, and professional respect dimension of LMX-MDM are positively related to global LMX.

LMX, task performance, and OCB

Consistent with the role making perspective of LMX (e.g., Graen, 1976), supervisors develop different relationships with subordinates through the role-making process. If a supervisor develops a high-quality relationship with a subordinate, the subordinate will be treated as an in-group member of the supervisor; otherwise, the subordinate will have a low-quality relationship with the supervisor and be categorized as an out-group member. In low-quality exchanges, the leader exercises formal authority, allocating standard benefits in return for fairly standard job performance. As very

little affective/personal “bonding” occurs, a predominantly economic exchange sustains the relationship. In a high-quality relationship, however, a personal bond is established and social exchange is moved to a high level, nourished by *mutual trust*, *respect*, and *obligation* (Graen & Uhl-Bien, 1995). In return for exemplar supervisor-enhancing work performance (e.g., consistently volunteering to work extra hours to meet project deadlines), followers receive special privileges (e.g., access to key personnel or information), career-enhancing opportunities (e.g., special work assignments), and increasing levels of discretion in doing their jobs. High-level social exchange relationships engender stronger feelings of personal obligation, gratitude, and trust than do predominately quid pro quo economic exchanges. Thus, high quality global LMX is expected to be associated with in-role performance of employees. Some empirical studies provided evidence that LMX was positively related to job performance (see, e.g., Duarte, Goodson, & Klich, 1994; Vecchio & Gobdel, 1984). Gerstner and Day (1997), in their meta-analytic review of the LMX literature, reported that LMX correlated .31 with supervisory ratings of employee performance, and .11 with objective measures of employee performance.

However, in high quality LMX relationships, obligations are often diffuse and unspecified due to lack of clear standards of which gifts, favors, or contributions can be measured (Blau, 1964). Members are expected to reciprocate in more than fulfilling just formal job requirements in areas that are beyond formal job requirements but nonetheless are important for the effectiveness of the work relationship. Extra-role performance denotes this kind of requirements and has been commonly operationalized as organizational citizenship behavior (Organ, 1988). A positive association between LMX and OCB is expected. Empirical support for this relationship is provided by Podsakoff, Mackenzie, Paine, and Bachrach (2000), who reported a meta-analytic mean correlation of .30 between LMX and OCB, leading them to conclude that OCBs play a key role in the reciprocal social exchange process of LMX.

Hypothesis 2 The global LMX is positively related to both task performance and extra-role performance in terms of OCB.

According to Hypothesis 1 and Hypothesis 2, exchange currencies as operationalized by the multidimensional conceptualization of LMX affects global LMX, and that global LMX relates positively to both task performance and extra-role performance. We further suggest that global LMX will mediate the relationship between leader-member exchange currencies and employee performance. When leaders and members engage in an effective exchange of both work-related and social currencies, it is likely that members will perceive the overall work relationship to be effective and hence reciprocate with both task and extra-role performance. When the exchange of currencies is not effective, members are less likely to perceive an overall effective work relationship. They will be less motivated to reciprocate with job performance. Furthermore, the perception of an overall effective work relationship may be crucial to whether members are willing to make a more holistic contribution in terms of both task and extra-role performance. Even though there may be an exchange of currencies, members will not be likely to reciprocate with good performance if they do not believe that they have an effective work

relationship with their leader. As discussed above, reciprocation in role-making is predicated on each party's willingness to continue the relationship. The member's continuation and further development of the relationship with their supervisor is possible only if the member concludes that s/he has a meaningful relationship with his/her supervisor. Thus, without a global judgment of an effective work relationships, members will be less willing to reciprocate with both task and extra-role performance.

The above argument is even more valid in the Chinese culture. It is well known that the Chinese culture is highly holistic (Ji, Peng, & Nisbett, 2000). Chinese managers deal with conflicts in a holistic way (Ding, 1996) and treat their subordinates holistically (Lindsay & Dempsey, 1985). In a holistic culture, people will tend "to have a metaphysical commitment to the notion that the whole context is relevant for a causal assessment of outcomes" (Nisbett, Peng, Choi, & Norenzayan, 2001: 296). As a result, Chinese employees reciprocate for a *holistic* relationship with their supervisors, more than for particular reasons such as affect, loyalty or respect. A Chinese employee, who "lives in a complex, interdependent social world with many role prescriptions, need[s] to attend to relationships *and* to the context" (Nisbett & Miyamoto, 2005: 469, italics added). It is therefore clear that for Chinese employees, global LMX is a much more important antecedent of job performance. Affect, loyalty, contribution, and professional respect affect employee performance through the operation of this holistic global LMX perception.

Hypothesis 3 The global LMX mediates the relationship between exchange currencies and job performance and extra-role performance in terms of OCB for Chinese employees.

Study one

Sample

A total of 87 supervisors of bank tellers in a bank located in a southeast city of the People's Republic of China participated in this study. Each supervisor was asked to evaluate the task performance and OCB of their subordinates. The subordinates were asked to fill out another questionnaire measuring LMX-MDM and LMX-7. To ensure confidentiality of the responses, respondents (both superiors and subordinates) were asked to seal the completed questionnaires into provided envelopes and return the sealed envelopes to the authors directly. After deleting six unmatched questionnaires, a total of 168 supervisor-subordinate dyads constituted the sample of this study.

The subordinates in the sample had an average age of 30. They had an average of three years of post-secondary education and 9 years of organizational tenure. Their average year of services with their immediate supervisor was 4 years. The supervisors in the sample had an average age of 33, and four years of post-secondary education. Their average organizational tenure was 11 years. Fifty-four supervisors (62.5%) were male.

Measures

LMX All items used in the present study were measured by a 5-point Likert-type scale (“1”=Strongly Disagree; “5”=Strongly Agree). For the unidimensional measure of LMX, the Scandura and Graen (1984) version of LMX-7 was used for two reasons. First, it had been widely accepted (Gerstner & Day, 1997). Second, it had previously been translated into Chinese and used in the Chinese organizations (Hui, Law, & Chen, 1999). We used Hui et al.’s (1999) translation without adjustment. Coefficient α of the 7-item measure of unidimensional LMX was .86.

Currencies of exchange LMX-MDM was taken as the proxies of exchange currencies and measured by a scale modified by Wang et al. (2001) based on Liden and Maslyn’s (1998) measure. The scale consists of the twelve items originally derived by Liden and Maslyn (1998) and four additional items added through the study of Wang et al. (2001). Confirmatory Factor Analysis (CFA) of the 16-item LMX-MDM had a model Chi-square of 218.53 ($p < .01$) with 98 degree of freedom. The CFI was .92; TLI was .90; and the standardized RMR was .046. All factor loadings for the measurement model were significant. These results suggested that the 4-dimensional model of LMX fit the data very well. Coefficient α s were .87, .82, .87, and .88 for the dimension of affect, loyalty, contribution, and professional respect, respectively.

Task performance Task performance is, by definition, specific to the tasks performed by the incumbent for the particular position of interest. We, therefore, developed a scale for task performance specifically for this sample, namely, the core tasks of bank tellers in a bank. We first interviewed the human resource managers of the bank to understand the procedure and content of their performance appraisal process. After the interview, a focus group was conducted to generate items measuring different aspects of bank teller performance in this bank. The participants of the focus group included the human resource manager, the bank tellers and their supervisors. Based on these procedures, we developed a scale that was specially designed to evaluate the task performance of bank tellers. This scale has seven items, including (1) provides first-class services to the customers; (2) satisfies all customers’ needs; (3) does his/her best to avoid errors; (4) provides realistic suggestions for work improvements; (5) possesses the capability to adapt to different types of work; (6) fulfills the requirements of the position; and (7) tries to use different ways to solve problems during the work. Coefficient α of this task performance scale was .87.

OCB A Chinese version of the OCB scale developed by Podsakoff, MacKenzie, Moorman and Fetter (1990) was used (Lam, Hui, & Law, 1999). The scale measures the five OCB dimensions of altruism (5 items; $\alpha = .91$), conscientiousness (4 items; $\alpha = .88$), sportsmanship (5 items; $\alpha = .91$), civic virtue (4 items; $\alpha = .79$), and courtesy (5 items; $\alpha = .86$). The overall Coefficient α for the OCB measure is .89. Since the task performance measure is developed in the study, we conducted a CFA analysis on both the task performance and OCB. The structure model with five-factor of OCB plus one factor of task performance showed a very good fit to our data ($\chi^2 = 770.96$, d.f. = 390; RMSEA = .077; CFI = .97; TLI = .97) compared to the model that had all the items loaded on one factor ($\chi^2 = 1655.51$, d.f. = 405; RMSEA = .14; CFI = .92; TLI = .92).

Table 1 Means, SDs, reliabilities and intercorrelations of LMX-MDM, LMX-7, task performance, and OCB in Sample One ($N=168$).

Variables	Mean	SD	1	2	3	4	5	6	7
LMX									
1. LMX-MDM (Affect)	3.81	.74	(.88)						
2. LMX-MDM (Loyalty)	3.37	.75	.45**	(.82)					
3. LMX-MDM (Contribution)	3.43	.80	.64**	.51**	(.87)				
4. LMX-MDM (Professional respect)	3.72	.71	.74**	.45**	.64**	(.88)			
5. LMX-7	3.49	.59	.61**	.54**	.66**	.61**	(.86)		
Performance									
6. Task performance	3.65	.74	.33**	.19**	.26**	.27**	.35**	(.87)	
7. OCB	3.52	.63	.27**	.18*	.27**	.17*	.25**	.76**	(.89)

Reliability coefficients for scales are listed in parentheses along the diagonal.

* $p < .05$; ** $p < 0.01$.

Results

Descriptive statistics

Table 1 shows the Pearson correlations among the variables in this study. An examination of the zero-order correlations of the variables demonstrated that correlations between the dimensions of LMX-MDM and LMX-7 were significant. These correlations were in the range of .54 to .66. LMX-7 was also significantly related to both task performance and OCB.

Hypothesis testing

Due to the construct overlapping between LMX-MDM and LMX-7, we conducted a series of CFAs and compared the results of several possible models. Table 2 shows the results of these analyses. In Table 2, model 1 is the null model (independent model). Model 2 is the model in which all the unidimensional and multidimensional items were loaded on one factor. Model 3 had 16 items of LMX-MDM loaded on four factors and 7 items of LMX-7 loaded on one factor. We compared the Chi-squares and goodness of fit indices of all the three models and found that model 3 fit the data best. The difference of the Chi-square between model 2 and model 3 was

Table 2 Comparison of LISREL model results on unidimensional and multidimensional LMX.

Models	χ^2	df	RMSEA	CFI	TLI
Model 1 (null)	2256.45	253			
Model 2 (one factor)	827.37	230	.14	.76	.73
Model 3 (five factors)	453.64	220	.088	.89	.87

very significant ($\chi^2=373.73$, $p<.001$). As a result, we confirmed the four-dimensional nature of LMX-MDM and that these four dimensions were structurally distinct from unidimensional LMX (LMX-7).

Results of path analyses are presented in Fig. 1. Figure 1 shows the estimated path coefficients related to the hypotheses. In addition to the hypotheses, we also specified a path from OCB to task performance. According to other research (Allen & Rush, 1998; Werner, 1994), OCB appears to have a significant influence on the in-role performance of employees, especially managers' ratings of employee performance. Individuals performing OCB tend also to show altruism, organizational commitment, conscientiousness (LePine, Erez, & Johnson, 2002), and other variables that are positively related to task performance. It is reasonable to expect a positive correlation between OCB and task performance. Following the approach similar to that of Wayne, Shore, Bommer, and Tetrick (2002) and Wang et al. (2005), we added a path from OCB to task performance to our model.

The overall Chi-square of the model was 12.57 with 8 degree of freedom ($p=.13$). CFI was .99, TLI was .98, IFI was .99, and the RMSEA was .06. These results indicated that the data fit the hypothesized model very well, that is, the four dimensions of LMX have significant effects on global LMX, and through the latter, lead to higher level of task performance and OCB of employees. Specifically, the affect, loyalty, contribution, and professional respect dimension of LMX-MDM was positively related to global LMX ($\beta=.12$, $p<.10$; $\beta=.17$, $p<.01$; $\beta=.24$, $p<.01$; $\beta=.16$, $p<.05$, respectively). Hypothesis 1 was supported. The relationships between global LMX and task performance as well as OCB were also significant ($\beta=.21$, $p<.01$ and $\beta=.27$, $p<.01$, respectively). Therefore, Hypothesis 2 was also supported. It was also demonstrated that OCB is significantly related to task performance of employees. We also compared the current model to other alternative models in which the four dimensions of LMX were specified directly to task performance or OCB,

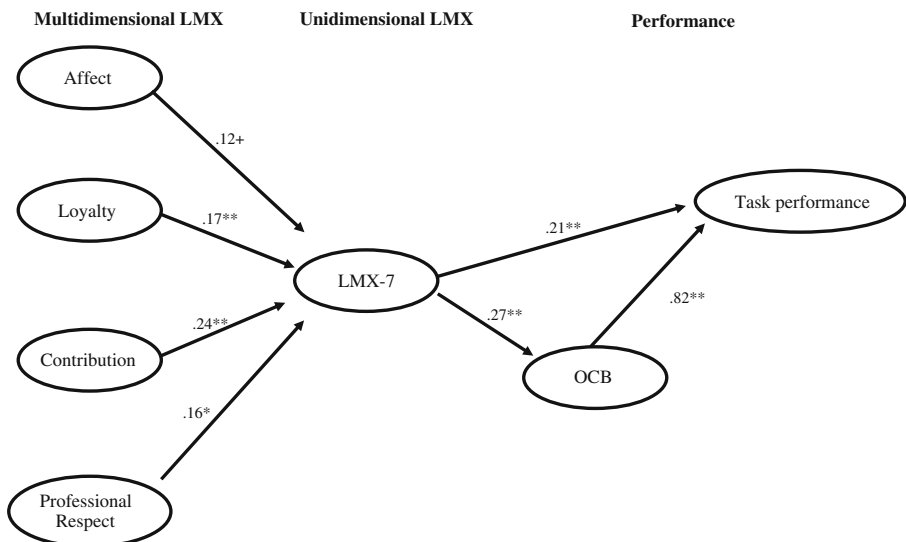


Figure 1 Estimated path coefficients of the structural equation modeling with Sample One

that is, the partially mediated model. The results indicated that the two alternative models did not improve the model fit significantly. When the four dimensions of LMX were specified to task performance, the Chi-square change was 5.60 ($p > .05$), and when the four dimensions of LMX were specified to OCB, the Chi-square change was 6.81 ($p > .05$). Therefore, Hypothesis 3 was fully supported.

Study two

In Study One, we had a very specific task performance measure because the items were specifically developed for bank tellers. While this had enhanced validity of the performance measure, generalizability of the results might be questioned. In Study Two, we re-tested our integrated LMX model with another sample which consisted of subjects from a variety of contexts. We have the same argument in Study One that affect, loyalty, contribution, and professional respect are positively related to global LMX. However, there are at least two aspects in Study Two that are different from Study One. First, we tested joint effects of LMX-MDM and unidimensional LMX with a larger and more diverse sample. Second, for the dependent variables, we tried to further enhance the generalizability of the results by operationalizing extra-role performance as contextual performance instead of OCB. This is to follow the general trend in the literature to define extra-role performance in a much broader context by contrasting task performance with contextual performance (Borman & Motowidlo, 1993). According to Borman and Motowidlo (1993), employees are required to interact and coordinate with others and perform activities that go beyond their job descriptions in order to fulfill job-specific tasks. Such contextual behaviors serve to facilitate communication, lubricate social communication, and reduce tension and/or disruptive emotional responses, which are essential to the organization's survival and success (Arvey & Murphy, 1998; Borman, 1978; Katz & Kahn, 1978).

Although OCB seems to have conceptual overlap with contextual performance, one core difference is that Organ (1997) defined OCB as employee behaviors that were discretionary and not formally rewarded by the organization. In contrast, the definition of contextual performance does not concern whether employee behaviors are rewarded or not. Neither is volitional nature a concern in distinguishing task and contextual performance. Contextual performance refers to activities that promote the well-being of overall organizational effectiveness instead of task accomplishment of individual jobs. In their recent meta-analytic review, Ilies and his colleagues reported significant, positive relationships between LMX quality and contextual performance (Ilies et al., 2007). In Study Two, we used this broader definition of extra-role behaviors and investigated the joint effects of LMX-MDM and unidimensional LMX on both task performance and contextual performance. Similar to Study One, we hypothesize that,

Hypothesis 4 The affect, loyalty, contribution, and professional respect dimension of LMX-MDM are positively related to global LMX.

Hypothesis 5 The global LMX is positively related to both task performance and contextual performance.

Hypothesis 6 The global LMX mediates the relationship between exchange currencies and employee task performance and contextual performance.

Sample

The second sample consisted of managers who were taking MBA classes in a city located in northeastern China. A total of 119 managers participated in this study. Each manager was asked to evaluate the task performance and contextual performance of two subordinates. As a result, the maximum sample size is 238 leader-follower dyads. Each of the two subordinates filled out the subordinate questionnaires on LMX. As in Study One, respondents were asked to return the completed surveys in the sealed envelopes to the authors. After deleting unmatched data, a total of 203 leader-follower dyads constituted the sample of this study ($N=203$).

For the followers, 101 respondents (49.8%) were male, with an average of 4 years of post-secondary education. Their average age was 33, and they had an average of 8 years tenure with the organization. They had known their immediate supervisor for an average of 4 years. For the leaders, 86 respondents (72.3%) were male, with an average of 5 years of post-secondary education, and average age of 36 years. Their average organizational tenure was 10 years.

Measures

All the measures of LMX-MDM and LMX in the Study Two are the same as that in Study One.

Task performance Task performance assessed by the supervisors in Study Two was adopted from Tsui, Pearce, Porter, and Tripoli (1997) due to the variety of business and industry of the sample. There are a total of seven items in the scale to measure the core task performance of followers. A sample item in the scale is “the quality of her/his performance is above the average level among my subordinates.” Coefficient α of these seven items was .89.

Contextual performance Contextual performance was measured by the scale developed by Van Scotter and Motowidlo (1996). We used the standard procedure of translation and back-translation (Brislin, 1980) to ensure that the Chinese version of the scale had equivalent meaning with the English version. The scale includes 15 items, which captured two dimensions of contextual performance—interpersonal facilitation and job dedication. Similar to the LMX-MDM, we conducted a CFA analysis on all the items of task performance and contextual performance to validate their factor structures. Our CFA with one task performance factor and two contextual performance factors had a model Chi-square of 379.99 (d.f.=186). The model fit indices were in the acceptable ranges (CFI=.90; TLI=.89; RSMEA=.073). Coefficient α for the two contextual performance dimensions of interpersonal facilitation and job dedication were .81 and .90, respectively.

Table 3 Means, SDs, reliabilities and intercorrelations of LMX-MDM, LMX-7, task performance, and contextual performance in Sample Two ($N=203$).

Variables	Mean	SD	1	2	3	4	5	6	7	8
LMX										
1. LMX-MDM (Affect)	3.99	.67	(.87)							
2. LMX-MDM (Loyalty)	3.74	.53	.50***	(.67)						
3. LMX-MDM (Contribution)	3.57	.78	.66***	.51***	(.89)					
4. LMX-MDM (Professional respect)	4.07	.68	.69***	.49***	.58***	(.86)				
5. LMX-7	3.72	.62	.64***	.50***	.57***	.59***	(.86)			
Performance										
6. Task performance	3.60	.81	.28***	.33***	.27***	.24***	.22**	(.89)		
7. Interpersonal facilitation	3.60	.59	.12*	.16**	.20***	.13***	.06	.51***	(.81)	
8. Job dedication	3.49	.79	.24***	.28***	.21***	.24***	.17**	.76***	.64***	(.90)

Reliability coefficients for scales are listed in parentheses along the diagonal.

* $p < .10$; ** $p < .05$; *** $p < 0.01$.

Descriptive statistics

The means, standard deviations, reliability coefficients, and correlations of all the variables used in the present study are presented in Table 3. Results in Table 3 indicate that the reliability coefficients for all scales were above .80. The only exception was the loyalty dimension of LMX-MDM ($\alpha = .67$). An examination of the zero-order correlations of the variables demonstrated that correlations between the dimensions of LMX-MDM and LMX-7 were highly significant with a range of .50 to .69. The correlations between LMX-7 and task performance as well as job dedication dimension of contextual performance were also significant.

Tests of hypotheses

Figure 2 shows the estimated path coefficients related to the hypotheses. Similar to that in Study One, we specified a path from contextual performance to in-role performance. The overall Chi-square of the model was 31.07 with 12 degree of freedom ($p < .01$). CFI was .97, TLI was .94, IFI was .97, and the RMSEA was .09. These results indicated that the data fit the hypothesized model well. Specifically, the affect, loyalty, contribution, and professional respect dimension of LMX-MDM was positively and significantly related to global LMX ($\beta = .28, p < .01$; $\beta = .19, p < .01$; $\beta = .13, p < .05$; $\beta = .18, p < .01$, respectively). Hypothesis 4 was supported. The relationships between global LMX and task performance was significant ($\beta = .13, p < .05$). Global LMX was significantly related to job dedication dimension of contextual performance ($\beta = .21, p < .05$) but not the interpersonal facilitation dimension of contextual performance. Hypothesis 5 was partially supported.

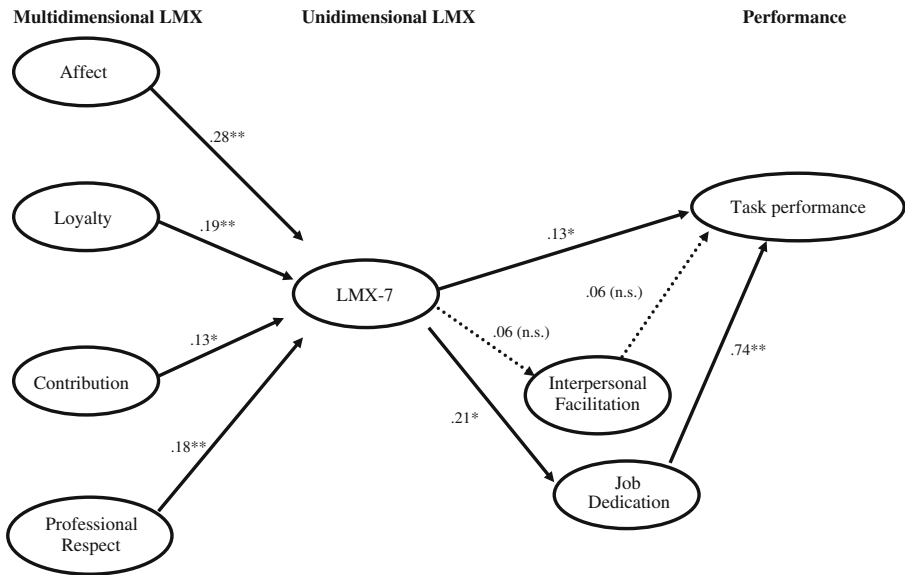


Figure 2 Estimated path coefficients of the structural equation modeling with Sample Two

As for Hypothesis 6, the univariate correlation between the LMX-MDM dimensions and task/contextual performance were all significant. All four paths from the four LMX-MDM dimensions to global LMX were significant. The paths from global LMX to job dedication and task performance were significant. Unfortunately, the effect of global LMX on interpersonal facilitation dimension of contextual performance was not significant. When all these evidence were interpreted together, we concluded that Hypothesis 6 was partially supported. As in Study One, we added in paths from the four dimensions of LMX-MDM to the performance variables and tested whether the partially mediated model provided a better fit to the model. The results showed that when we specified paths from the four dimensions of LMX-MDM to task performance, the model fit did not improve significantly. However, when we specified paths from the four dimensions of LMX-MDM to interpersonal facilitation and job dedication, the model fit improved significantly. The Chi-square change is 26.03 with 8 degree of freedom ($p < .01$). The results showed that the four dimensions of LMX-MDM had direct effects on contextual performance while they had effects on global LMX.

General discussion

The present study integrates the unidimensional and multidimensional perspective of LMX by specifying dimensions of LMX-MDM as currencies of exchange of global LMX and investigates their joint effects on task performance and extra-role behaviors of employees in the Chinese context. The results from Study One indicated that affect, loyalty, contribution, and professional respect dimension positively related to overall level of leader-member relationship quality significantly.

Furthermore, global LMX was positively related to task performance as well as OCB. Study Two basically replicated the results in Study One and generalized the conclusions to a broader context.

The findings support our argument that unidimensional LMX captures the overall relationship quality between leader and members within work units. This is the original meaning of LMX suggested by the pioneer researchers in this research line (e.g., Graen, Dansereau, & Minami, 1972; Graen, 1976; Graen & Scandura, 1987; Liden & Graen, 1980). As Graen and Uhl-Bien (1995) argued, “LMX construct has multiple dimensions, but these dimensions are so highly correlated they can be tapped into with the single measure of LMX” (1995: 237). In Liden and Maslyn’s (1998) study, they also argue that “when using structural equations modeling, researchers could use each of the four dimensions as indicators of global LMX” (1998: 64).

Some dimensions of LMX-MDM, especially the social currency related dimensions of affect, loyalty, contribution, and professional respect may go beyond the construct domain of LMX. These exchange behaviors are very close or important to high quality relationship building, especially in the Chinese context. These variables could predict the overall level of LMX between Chinese leader and members. If the dyad members have mutual liking, express public support for the dyad goals or personal character, contribute amount and quality of work-related activities to dyad goals, and build a reputation for his/her line of work, they would more likely develop a higher quality exchange relationship in Chinese organizations.

We posit that unidimensional LMX is the reflection of overall level of relationship quality, while multidimensional LMX is the exchange currencies of developing and maintaining LMX. It seems interesting that research on organizational justice perceptions may experience the same phenomenon as we see in this research. Many researchers would argue that distributive justice, procedural justice, and interactive justice are specific dimensions of organizational justice perceptions. However, one could also argue that these justice dimensions are, in fact, the antecedents of overall justice perception. Only in organizations that are fair on the process and results of resource distribution would employees perceive the whole organizations as fair and just. We argue that this is a theoretical issue related to many multidimensional constructs in organizational behaviors, and call for more theory arguments and empirical examinations on them.

The findings of this study enrich the research on LMX by involving OCB and contextual performance. LMX influence the performance rating of supervisors not only on work related behaviors, but also on other work-related social and psychological activities. Members who have developed higher level of LMX will display more OCBs and job dedication behaviors. Another contribution of the study is to investigate the developing and maintaining process of high level quality between supervisor and subordinate in the Chinese context since there are very few studies so far focusing on the topic. The different culture values of China (Hofstede, 1980) should generate different ways for employees to couple with each other comparing to their counterparts in the West. The results of the study are helpful to understand the phenomena of LMX in the Chinese organizations.

Limitations and future research

Although we used two different samples to test the similar hypotheses, there are still at least two limitations with this paper. First, we used cross-sectional research design on both studies. We could not identify the causality of dimensions of LMX-MDM and global LMX although we argue the LMX-MDM may be the antecedents of unidimensional LMX. While one can argue that global LMX may influence the dimensions of LMX-MDM, then task performance and extra-role behaviors of employees, we find that an argument of reverse influence is neither logically justified nor empirically sustained. Global LMX is the evaluation of the relationship quality between leader and members, while LMX-MDM reflects the relationship characteristics of leader and member interaction. Global LMX is the result of the interaction between leadership and members who demonstrate the behaviors of affect, loyalty, contribution, and professional respect. Therefore, global LMX is a more static construct than LMX-MDM. In fact, we actually re-ran our path analysis, modeling global LMX as antecedent to LMX-MDM, and then their joint effects on performance. The results in both studies indicated that the data fit the models poorly. Since these two models are not nested in the nature, we could not compare the changes of Chi-square. Therefore, we used the AIC (Akaike Information Criterion) (Akaike, 1987) to compare the goodness fit. The model with smaller AIC value is considered better fitting model (Jöreskog & Sörbom, 2001). In Study One, AIC is 52.57 when LMX-MDM was specified as the antecedent of global LMX, while AIC is 182.66 when global LMX was specified as antecedents of LMX-MDM. The overall Chi-square of the second model was 128.04 with 8 degree of freedom ($p < .01$). CFI was .84, TLI was .59, IFI was .85, and the RMSEA was .32. In Study Two, AIC is 79.07 when LMX-MDM was specified as the antecedent of global LMX, while AIC is 231.52 when global LMX was specified as antecedents of LMX-MDM. The overall Chi-square of the second model was 147.97 with 9 degree of freedom ($p < .01$). CFI was .87, TLI was .58, IFI was .87, and the RMSEA was .31. These empirical results, taken together with our logical arguments, suggest that global LMX is more proximal to follower task performance and OCB/contextual performance.

However, as Gerstner and Day (1997) argued, longitudinal study is a better way to understand the full range of LMX, and possibly isolate LMX antecedents. Since LMX relationship is a result of negotiation between the two parties of dyads (Graen, 1976), a careful examination with longitudinal design will provide robust evidence related to the impact of dispositional characteristics of the dyad members, interactive behaviors, and situational factors on LMX relationship. For example, dyads who have built a reputation of their work before they meet together, like each other during the early stage of their interaction, contribute more to their dyad goals, and express support for each other during work will be likely to develop higher quality of LMX relationships.

The second limitation of our study is that both unidimensional and multidimensional LMX were rated by subordinates. Common method bias may explain the empirical association between LMX-MDM and LMX-7. Although we noticed the limitation before conducting the study, this issue could not be dealt with using ratings from different sources. The main reason is the low agreement of reported

LMX between leader and member. According to the meta-analysis of Gerstner and Day (1997), the mean sample-weighted correlation between leader and member ratings of LMX was .29. The lower level of the correlation engenders the suspecting on the difference of construct domain evaluating from the aspects of leader and member. A further discussion of the low agreement goes beyond the limitation of the present study. In order to avoid the complexity, we simply used the ratings of LMX-MDM and LMX-7 from the same sources. The advantage of this operationalization is that it allows us to focus on the integration of unidimensional and multidimensional LMX.

However, this possible limitation of common method variances should not be over-emphasized. Our main research question is whether LMX-MDM is an antecedent of unidimensional LMX. Based on the results of both studies, we have shown that unidimensional LMX is closer to (more highly correlated with) task and extra-role performance than LMX-MDM. There is no question that unidimensional LMX is highly correlated with LMX-MDM. Whether unidimensional LMX mediates the LMX-MDM and performance relationship is of prior interest to us. As a result, even if the correlation between unidimensional LMX and LMX-MDM were exaggerated due to common method variance, the exaggeration will not affect our conclusion seriously because what we really want to test in this study is whether unidimensional LMX actually mediate the LMX-MDM and performance relationship.

Conclusion

This is the first study to integrate unidimensional and multidimensional LMX to investigate the effects of exchange currencies measured by multidimensional LMX dimensions on global LMX quality. There is a call for more research to generalize the findings of the current study both in China and Western societies. This line of research would provide greater insights on dimensionality and theories of LMX. Although this study suggests implications to understand both unidimensional and multidimensional LMX and their joint effects on task performance and extra-role behaviors, future research needs to explore the issue with longitudinal design.

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