

SUPPORTIVE SUPERVISOR COMMUNICATION AS A MEDIATOR OF THE LEADER-MEMBER EXCHANGE AND SUBORDINATE PERFORMANCE RELATIONSHIP

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The focus of this research is on the relationships between leader-member exchange (LMX), supportive supervisor communication (SSC), and subordinate job performance. It was predicted that the relationship between subordinate ratings of LMX quality and supervisor ratings of subordinate performance would be mediated by subordinate ratings of SSC. Specifically, it was hypothesized that LMX would directly influence SSC, and SSC would directly influence two facets of contextual performance: interpersonal facilitation and job dedication. It was also hypothesized that job dedication would directly influence task performance, thus mediating the relationship between SSC and task performance. Thus, SSC was expected to mediate the relationship between LMX and contextual and task performance. Structural equation modeling results based on 243 supervisor-subordinate dyads from the banking industry provided substantial support for the proposed model.

Over four decades of research has increased our understanding of the relationship between leader-member-exchange (LMX), and employee performance, attitudes, and work behaviors. Specifically, high-quality LMX has been shown to have a positive relationship with subordinate task performance (e.g., Campbell & Swift, 2006; Chen, Lam, & Zhong, 2007; Lam, Huang, & Snape, 2007; Lee, Park, Lee, & Lee 2007; Michael, Harris, Giles, & Feild, 2005, 2009; Michael & Harris, 2010; Michael, 2011; Vecchio & Brazil, 2007; Wakabayashi, Chen, & Graen, 2005), satisfaction with supervisors (e.g., Greguras & Ford, 2006; Liden & Maslyn, 1998), and organizational citizenship behaviors (e.g., Ilies, Nahrgang, & Morgeson, 2007; Lapierre & Hackett, 2007; Wang, Law, Hackett, Wang, & Chen, 2005).

However, the definition and measures of LMX have changed over time, thus, making it difficult to draw any definite conclusions (Schriesheim, Castro, & Cogliser, 1999). In fact, what was once considered a unidimensional construct has now begun to be viewed as a multidimensional construct, and is frequently assessed using Liden and Maslyn's 1998 multidimensional LMX scale (LMX-MDM). Furthermore, of the 82 empirical and theoretical works published during the 1990s, the majority of the studies were in agreement regarding the

nature of the construct as being the quality of the exchange relationship between leader and subordinate at the dyad level of analysis (Liden & Maslyn, 1998). The present study follows this approach and examines LMX at the dyad level between supervisor and subordinate utilizing Liden & Maslyn's LMX-MDM scale.

Drawing from social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960), LMX focuses on the quality of the dyadic relationship between the leader (supervisor) and follower (subordinate) (e.g., Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997). Furthermore, supervisors have been shown to confer favorable treatment upon subordinates with whom they have high-quality LMX relationships. In return, subordinates have been shown to reciprocate favorable treatment by engaging in extra-role, pro-social behaviors, and extra task effort (e.g., Greguras & Ford, 2006; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Organ & Ryan, 1995; Settoon, Bennett, and Liden, 1996). While much of the LMX literature has primarily focused on subordinate reciprocation efforts, the present study suggests that, in addition to favorable reciprocation efforts by subordinates, high-quality LMX relationships may also promote favorable supervisor reciprocation efforts toward their favored subordinates. Specifically, supervisors may communicate more supportively with subordinates with whom they have high-quality LMX relationships, than with subordinates with whom they have low-quality LMX relationships.

Importance of Managerial Communication

The vital role that managerial communication plays in organizational functioning has received considerable attention in the organizational behavior and communication literature (e.g., Mayfield, Mayfield, and Kopf (1995), and has been referred to as the foundation upon which all organizational activity is based... "the very stuff of organizing... it is fundamental to the very constitution of, and essentially gives birth to organizing" (Cooren, 2000; Mumby & Ashcraft, 2006, p. 72). It's through communication that organizations come into existence and function (Cooren, 2006). Researchers have found managerial communication to have a positive relationship with subordinate job performance (e.g., Andrews & Kacmar, 2001; Goris, Vaught, & Pettit, 2000; e.g., Andrews & Kacmar, 2001; Goris, Vaught, & Pettit, 2000; Michael, Harris, Giles, & Feild, 2005, 2009; Michael & Harris, 2010; Michael, 2011), job satisfaction (e.g., Andrews & Kacmar, 2001; Goris, Vaught, & Pettit, 2000; Michael, 2011), organizational commitment (Putti, Aryee, & Phua, 1990), organizational climate (Muchinsky, 1977), and a negative relationship with turnover intentions (Gregson, 1990; Michael, 2011). Effective managerial communication has also been depicted as a source of strategic competitive advantage (Tucker, Meyer, & Westerman, 1996). Surprisingly, in a study concerning the skills most often the focus of management development programs, communication was found to be the most important management skill, but it also had the largest gap between perceived importance and the actual level of competency (Delahoussaye, 2001a, 2001b).

Research examining the relationship between managerial communication and subordinate performance has generally focused on task-related communication such as performance feedback and direction-giving communication (Andrews & Kacmar, 2001; Goris, Vaught, & Pettit, 2000). The present research, however, examines the LMX relationship between supervisor-subordinate, and the supervisor's supportive communications with subordinates, and the relationship between supportive supervisor communications and subordinates' contextual and task performance.

This study makes several significant contributions to organizational research. First, it addresses Mueller and Lee's (2002) petition for more research on variables central to communication and communication satisfaction in organizations. Second, it addresses Cooren's (2006) entreaty for more communication research focusing on how organizational interaction actually functions. Third, it responds to Graen and Uhl-Bien's (1995) appeal for more research across the three domains of leadership: leader, follower, and relationship. Fourth, by focusing on supervisor supportiveness in the exchange process, it addresses a topic on which "evidence is sparse" (Cropanzano & Mitchell, 2005, p. 885). Finally, this study provides a better understanding of the multidimensional nature of supervisor support and how it is demonstrated through communication exchange, and how it relates to employee contextual and task performance.

While supportive communication has been described as discourse that builds relationships (Bass, 1990; Whetton & Cameron, 1995) and demonstrates sensitivity to others, in the present research, it is also proposed that high quality LMX relationships promote supportive supervisor communication exchange between supervisor and subordinate. Specifically, supervisors are more likely to communicate supportively with subordinates with whom they have high quality relationships. Thus, there may be a reciprocal relationship between SSC and LMX. However, in the present research, the focus will be on the direct relationship between LMX and SSC.

Supervisors may engage in supportive communication with their subordinates in a number of ways, such as providing praise and encouragement for their job performance and work efforts; discussing ways to increase their job satisfaction; encouraging their professional development; indicating concern for their feelings; actively listening to their opinions; expressing empathy and sensitivity to their needs. Furthermore, supportive communication may be the most important, direct, and immediate way that the supervisor may demonstrate support for subordinates on a daily basis. Perceived supervisor support (PSS) has been shown to relate to desirable employee attitudes and behaviors (e.g., Rhodes & Eisenberger, 2002). While not investigated in this study, SSC may be a potential dimension of PSS. In fact, SSC has been shown to have relationships with similar desirable employee attitudes and behaviors (e.g., Michael, 2011). While Graen and Uhl-Bien have departed from the traditional LMX assumption that a leader treats each of his/her subordinates differently within the workgroup (Schriesheim, et al., 1999), the present research is predicated upon this traditional assumption.

Theoretical Model and Research Hypotheses

Building off previous studies (e.g., Michael, Harris, Giles, & Feild, 2009), a model is tested in which SSC mediates the relationship between LMX and two facets of contextual performance: interpersonal facilitation and job dedication, and job dedication mediates the relationship between SSC and task performance. Thus, this study focuses on the relationship between high-quality LMX relationships and SSC, and how these dynamics in turn influence employee contextual and task performance.

LMX and SSC

LMX research suggests that supervisors have high-quality relationships with some subordinates (the in-group) that are characterized by the exchange of quality resources such as

information, support, trust, rewards, and effort (e.g., Liden, et al., 1997), and may have low-quality relationships with other subordinates (the out-group) characterized by the absence of quality resource exchanges (e.g., Dienesch & Liden, 1986). While much of the LMX literature has focused on the reciprocation efforts of employees, in the research reported here, it is proposed that supervisors may treat subordinates in high-quality LMXs more favorably than those in low-quality LMXs by more frequently communicating with them in a supportive manner. In fact, previous research suggests that high-quality LMX relationships leads to greater levels of SSC (Michael, Harris, Giles, & Feild, 2005, 2009; Michael & Harris, 2010; Michael, 2011). High-quality LMX relationships lead to supervisor-subordinate communication relationships characterized by greater degrees of openness, trust, and empathy (Mueller & Lee, 2002). High-quality LMX relationships can be considered “mature partnerships” that result in behavioral and emotional exchanges of loyalty and support (Graen & Uhl-Bien, 1995).

Using qualitative discourse analysis, Fairhurst (1993) examined the presence of 12 discourse patterns in dyads with varying degrees of LMX quality. Support and coaching discourse patterns were demonstrated more in medium to high-quality LMX dyads. In contrast, in low-quality LMX dyads, antagonistic and adversarial discourse was more evident. Clearly, supportive communication represents a prime strategy that supervisors can use to demonstrate support and reciprocate in high-quality LMX relationships.

Hypothesis 1: LMX is positively related to SSC.

LMX and Performance

Mature, high-quality LMX relationships are associated with a willingness by subordinates to engage in extra-role, pro-organizational behaviors (Graen & Uhl-Bien, 1995). In contrast, in low-quality LMXs, employee performance tends to be based on the official employment contract (Liden & Maslyn, 1998) and reflect authority-obedience relationships (e.g., Graen & Scandura, 1987). Consistent with the norm of reciprocity and social exchange theory, research suggests that high-quality LMXs are positively related to favorable employee outcomes, including higher performance appraisals, more challenging work assignments, higher levels of empowerment, greater compensation, and greater career progress (e.g., Dienesch & Liden, 1986; Duarte, Goodson, & Klich, 1994). Such outcomes are consistent with efforts to effectively and efficiently perform assigned job tasks (i.e., task performance) and engage in extra-role behaviors (i.e., contextual performance).

Contextual performance. Contextual performance (similar to organizational citizenship behavior) involves behavior that contributes to the maintenance, enhancement (Organ, 1997), and support of the broader organizational, social, and psychological context in which task performance and the technical core must function (Borman & Motowidlo, 1993). In Hackett, Farh, Song, and Lapierre’s (2003) meta-analytic study, they report a mean correlation of .32 between LMX and OCB. If contextual performance and OCB are similar constructs, then LMX should be positively related to contextual performance. Furthermore, the proposition that LMX encourages contextual performance is consistent with Graen and Uhl-Bien’s (1995) observation that high-quality LMX partnerships are characterized by a shift away from self-interest toward mutual interests. As such, contextual performance provides one way for employees to reciprocate high-quality LMX relationships. Finally, research has shown LMX to have a positive relationship with contextual performance (Michael, 2005).

Interpersonal facilitation. Interpersonal facilitation is one of two forms of contextual performance (Van Scotter, 2000; Van Scotter & Motowidlo, 1996) and refers to cooperative, considerate, and helpful behaviors that facilitate coworkers' performance (Van Scotter, Motowidlo, & Cross, 2000). Compared to subordinates in low-quality LMXs, subordinates in high-quality LMX relationships should be more likely to engage in cooperative, considerate, and helpful behaviors that benefit others (co-workers and supervisor). In fact, research has shown a carryover effect from positive LMXs to relationships with peers. Specifically, supervisors' differential treatment of subordinates has been found to positively affect coworker communication (Sias & Jablin, 1995), and employees in higher quality LMXs developed collegial and special communication relationships with their peers (Kramer, 1995). Moreover, subordinates in higher quality LMXs have been found to engage in greater information exchange, self-disclosure, and emotional support with their peers (Kram & Isabella, 1985). Finally, Lee's (1997) study, employees in high-quality LMXs perceived greater cooperative communication with peers.

Job dedication. Job dedication is the second form of contextual performance and involves self-discipline, initiative, effort, and persistence (e.g., working harder than necessary and asking for more challenging work; Van Scotter et al., 2000). It is expected employees in high-quality LMX relationships to be more dedicated than those in low-quality LMXs. Graen and Scandura (1987) proposed that in high-quality LMX relationships, supervisors get subordinates to help them on various tasks by offering desirable inducements such as influence and support. These inducements create obligations on the part of subordinates to reciprocate by working harder to satisfy supervisor requests or by engaging in extra-role behaviors beneficial to the supervisor, such as offering to help a supervisor complete an important project on time, or helping coworkers without being asked (Wayne & Green, 1993). Thus, LMX is expected to have a positive relationship with interpersonal facilitation and job dedication.

Hypothesis 2: LMX is positively related to employee interpersonal facilitation and job dedication.

Task performance. Since the positive relationship between LMX and task performance has been well established in the literature (e.g., Campbell & Swift, 2006; Chen, Lam, & Zhong, 2007; Lam, Huang, & Snape, 2007; Lee, Park, Lee, & Lee 2007; Vecchio & Brazil, 2007; Wakabayashi, Chen, & Graen, 2005; Michael, Harris, Giles, & Feild, 2005, 2009), a formal hypothesis regarding this relationship will not be explicitly stated, but will be included in the model. However, Wang et al. (2005) found in their study of supervisor-subordinate dyads in China, that more than two-thirds of the variance in task performance explained by LMX was mediated through organizational citizenship behavior (OCB). If contextual performance and OCB are similar constructs, then it is expected that the positive influence of LMX on task performance will be mediated through high levels of effort as a result of high levels of job dedication. Thus, employees in high-quality LMXs will be encouraged to put forth greater effort in carrying out their assigned tasks. In fact, research has shown contextual performance to be positively related to supervisory ratings of employees' overall effectiveness (e.g., Piercy, Cravens, Lane, & Vorhies, 2006; Van Scotter & Motowidlo, 1996; Whiting, Podsakoff, & Pierce, 2008).

Hypothesis 3: Employee job dedication is positively related to employee task performance.

SSC and Employee Performance

Motivating language theory (Sullivan, 1988) suggests that differences in key employee outcomes such as motivation, job performance, communication satisfaction, and job satisfaction, are influenced by how supportive managers are in their communications with employees. In a study of coworker relationships, Settoon and Mossholder (2002) found that the relationships of coworker trust with perspective taking and interpersonal citizenship behaviors were mediated by coworker empathic concern. Since empathic concern is consistent with supportive communication, and interpersonal citizenship behaviors are consistent with contextual performance, it is proposed that SSC should also encourage contextual performance. Thus, SSC is expected to positively relate to employee reciprocated pro-organization, -supervisor, and -coworker behaviors. It is expected that high-quality LMX relationships encourage supervisor support through the exchange of supportive supervisor-subordinate communication. Furthermore, it is expected that SSC will have a more proximal, direct relationship with employee contextual performance than LMX. Thus, it is proposed that SSC will mediate the positive relationship between LMX and employee contextual performance.

Hypothesis 4: SSC is positively related to interpersonal facilitation, job dedication, and employee task performance.

Hypothesis 5: SSC mediates the positive relationship between LMX and contextual performance (i.e., interpersonal facilitation and job dedication).

Hypothesis 6: Job dedication mediates the positive relationship between SSC and task performance.

Method

Participants and Procedure

Supervisors and subordinates in 448 dyads, from 33 branches of six banks and credit unions in the southeastern United States, were invited to participate in this study. To encourage participation, all participants were given verbal and written assurances that their individual responses would be kept anonymous. Code numbers were used throughout the data collection process to facilitate the pairing of dyad members and to ensure that individual responses remained anonymous.

Supervisors were provided ample time during their work schedule to complete the questionnaires assessing their subordinates' task and contextual performance (interpersonal facilitation and job dedication). Once completed, they mailed the questionnaires back to the researchers. Supervisors evaluated an average (mean) of 4.91 ($SD = 4.17$) subordinates. Subordinates completed questionnaires regarding their perceptions of LMX quality and their supervisor's use of supportive communication. Questionnaires were administered in small group

sessions at each of the branches. Subordinates who missed the scheduled administration were delivered the surveys by a branch contact from the Human Resources department, and were given instructions to mail the completed surveys directly to the researchers.

To lessen the possibility of confounding, subordinates with dual roles of both supervisor and subordinate were omitted from the data set. Excluding these dyads reduced the number of population dyads across the organizations to 359 ($M = 59.83$; $SD = 68.91$). Of the remaining 359 dyads, 309 employees (86%) responded to the survey, and 78 of the supervisors (88%) answered 284 surveys (79%) assessing their employees' performance. Of the 309 employees who responded, 82% were female, 48% had 1 to 5 years tenure with the organization, 59% had 1 to 5 years job tenure in their current position, and 32% had 3 or more years of dyad tenure with the same supervisor. Of the 78 supervisors who completed the survey, 56 (72%) were female. Completed surveys yielded 243 dyad matches for a dyad-based response rate of 68%.

Measures

Scales assessing "extent" had a seven-point response format ranging from 1 (Never) to 7 (Very Great Extent). All other scales employed a seven-point response format ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Cronbach alpha reliability is reported for each scale.

Leader-member exchange (LMX). Graen and Scandura (1987) suggest that when LMX is assessed only once, subordinate assessments of LMX should be used because managers are more likely to provide socially desirable answers about their relationships with subordinates (i.e., that everyone is treated the same). Thus, employee assessments of LMX quality were used in this study. Liden and Maslyn's (1998) 12-item Leader-Member Exchange-Multidimensional scale (LMX-MDM) was used to assess employees' perception of LMX quality in terms of four dimensions representing contribution (subordinates willingness to contribute), loyalty (perceived supervisor loyalty to subordinate), affect (how much the subordinate likes the supervisor), and professional respect (how much the subordinate respects the supervisor's professional development). Sample items include "My supervisor is the kind of person one would like to have as a friend," and "My supervisor would come to my defense if I were 'attacked' by others." Following Liden and Maslyn (1998) suggestion the scale items combined to form a global measure of LMX. Thus, the items for each of the four subscales were averaged and these four subscales were used as multiple manifest indicators of a general leader-member exchange factor ($\alpha = .91$).

Supportive supervisor communication. Employees completed eleven items assessing the extent to which their supervisors communicated with them in a supportive manner. This scale consisted of six slightly modified items from Wiemann's (1977) Communicative Competence Scale, and five slightly modified items assessing "empathic language" from Mayfield, Mayfield, and Kopf's (1995) Motivating Language Scale. These items were used because they closely corresponded to our depiction of SSC, and the high reliability and validity previously reported with their use (e.g., Douglas, 1991; McLaughlin & Cody, 1982; Street, Mulac, & Wiemann, 1988; Wiemann, 1977). The three items from the Motivating Language Scale were slightly modified to more clearly describe various ways that supervisors might communicate with employees. Specifically, we replaced "shows me" with "expresses" and "provides." The modified items were "My supervisor" ... "provides encouragement for my work efforts," "expresses concern about my job satisfaction," and "expresses trust in me." The original items

from the Communicative Competence Scale (Wiemann, 1977) stated how the subject (supervisor) communicated in general, or with others. These items were changed to specify the employee (participant) as the referent. The original statements were: "S..." "ignores other people's feelings," "listens to what people say to him/her," "S likes to be close and personal with people," "People can go to S with their problems," "S is sensitive to others' needs of the moment," and "S is supportive of others." The modified statements were: "My supervisor..." "expresses concern for my feelings," "really listens to my opinions," "works to build a relationship with me," "is willing to discuss my personal concerns with me," "expresses sensitivity to my needs," and "communicates with me in a supportive way." The survey instructions developed specifically for this study stated the following: "The statements below show different ways that your supervisor might communicate with you. Using the scale on the left, indicate the current extent to which your supervisor communicates that way with you" ($\alpha = .96$).

Contextual performance. Supervisors in each dyad completed Van Scotter et al.'s (2000) 15-item scale to assess their employees' contextual performance in terms of interpersonal facilitation (7 items) and job dedication (8 items). Sample items for the interpersonal facilitation scale include "This employee praises coworkers when they are successful," and "This employee helps someone without being asked." Sample items for the job dedication scale are "This employee persists in overcoming obstacles to complete a task" and "This employee puts in extra hours to get work done on time." Cronbach alpha reliabilities for interpersonal facilitation and job dedication were .89 and .88, respectively.

Task performance. Supervisors assessed employee task performance using Williams and Anderson's (1991) 7-item scale. Sample items include "This employee performs tasks that are expected of him or her," and "This employee meets the formal performance requirements of the job" ($\alpha = .85$).

Control variables. According to convention (Tsui & O'Reilly, 1989; Howell & Hall-Merenda, 1999; Kacmar, Witt, Zivnuska, & Gully, 2003), job and dyad tenure were initially included in our analyses to control for their potential effects on subordinate performance. However, results did not show significant relationships between these variables so we excluded them from the final analyses.

Analyses

EQS 6.1 (Bentler, 2010) statistical software, with robust maximum likelihood estimators (ML) was used to conduct confirmatory factor analyses (CFA) and structural equation modeling (SEM) to test the measurement and structural models, respectively. To minimize the potential for interpretational confounding, Anderson and Gerbing's (1988) two-step procedure was used to estimate the measurement model prior to simultaneously estimating the measurement and structural sub-models. James and Brett's (1984) approach was used to test for mediation, by comparing the hypothesized, fully mediated model with two alternative, nested models: a partially mediated model (hypothesized model with additional direct paths from LMX to interpersonal facilitation, job dedication, and task performance), and a non-mediated model (direct relationships between LMX and the three performance variables: interpersonal facilitation, job dedication, and task performance, and SSC was excluded from the model).

Results

Measurement models

The convergent validity of the construct measures was assessed by comparing the hypothesized measurement model in which the relations of the manifest variables (indicators) were specified, a priori to their posited underlying latent variables (factors), to four alternative models, described in detail in Table 2 (Anderson & Gerbing, 1988). Convergent validity was further assessed by examining the factor loadings of the individual measures on their a priori defined factors (Brown & Cudek, 1993). Finally, discriminant validity was assessed in terms of both traits (theoretical model factors) and methods (i.e., supervisor ratings and employee ratings).

The measurement model was constructed using multiple-indicators (Anderson & Gerbing, 1982; Hunter & Gerbing, 1982) to provide the most unambiguous assignment of meaning to the estimated constructs (Anderson & Gerbing, 1988). To reduce the total number of manifest indicators and parameters to be estimated relative to sample size (Hayduk, 1987), item parcels were created by taking the mean of several randomly selected items measuring the same construct (e.g., Marsh, Antill, & Cunningham, 1989; Bagozzi & Heatherton, 1994). Thus, the total number of items to be estimated was reduced to a manageable level, and produced indicators with higher reliability than could be achieved using the individual items (MacCallum, Roznowski, & Necowitz, 1992). LMX had four indicators representing the four dimensions of the LMX-MDM scale (i.e., affect, loyalty, contribution, and professional respect). SSC had four indicators, and task performance, interpersonal facilitation, and job dedication each had three composite indicators.

Structural Model

A series of Satorra-Bentler chi-square ($SB-\chi^2$) difference tests (Anderson & Gerbing, 1988) were conducted to assess the soundness of our structural model, and test our study hypotheses. The multivariate delta method was used to test for mediation; a multivariate extension of the product-of-coefficients strategy (Preacher & Hayes, 2008). While there are many methods for estimating indirect effects in multi-mediation models, the preferred method is the multivariate delta method (Bishop, Fienberg, & Holland, 1975; Sobel, 1982, 1986) used in EQS 6.1 (Bentler, 2010) and other statistical software packages. This method has been shown to produce standard errors with the least amount of bias among several formulas for the standard error of the indirect effect (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; MacKinnon, Warsi, & Dwyer, 1995), but must be used under conditions of multivariate normality. Specifically, the individual indirect effect paths, as well as the sampling distributions of the total and specific indirect effects, must follow a multivariate normal distribution. Thus, the extent of multivariate normality was examined.

Estimation and fit. Mardia's (1970, 1974) multivariate kurtosis coefficient indicated multivariate non-normality of the data ($g_{2,p} = 68.70, z = 21.07$), which is a common occurrence in many fields of research (e.g., Micceri, 1989). When this occurs, the chi-square statistic does not follow the expected chi-square distribution, but can be rescaled to approximate the referenced chi-square distribution using Satorra-Bentler's (1988, 1994) scaled chi-square test

statistic ($SB-\chi^2$), which has been shown to be the best performing test statistic under a wide array of circumstances (Chou, Bentler, & Satorra, 1991; Hu, Bentler, & Kano, 1992). In fact, the $SB-\chi^2$ statistic has been shown to more closely approximate the chi-square distribution than its non-scaled counterparts across a wide array of distribution types, and to perform extremely well under a wide range of non-normal and normal conditions (Chou & Bentler, 1996; Chow et al. 1991; Curran, West, & Finch, 1996; Hu et al., 1992). While this procedure corrects for multivariate non-normality, and produces correct “robust” standard errors (Bentler & Dijkstra, 1985), the value of the $SB-\chi^2$ and other commonly used chi-square based measures of fit are directly dependent upon sample size (Anderson & Gerbing, 1988). Thus, in addition to evaluating the model using the $SB-\chi^2$ statistic and the comparative fit index (CFI; Hu & Bentler, 1998, 1999), also used were the robust comparative fit index (RCFI), which is not dependent upon sample size, the root mean square error of approximation (RMSEA), and the corresponding 90% confidence intervals.

Table 1 presents descriptive statistics, reliability coefficients, and the correlations among the study variables. These results provide preliminary support for our study hypotheses. Specifically, LMX was positively related to SSC ($r = .87, p < .001$), employee interpersonal facilitation ($r = .39, p < .001$) and job dedication ($r = .36, p < .001$). Employee job dedication was positively related to employee task performance ($r = .80, p < .001$), and SSC was positively related to interpersonal facilitation ($r = .46, p < .001$), job dedication ($r = .37, p < .001$), and employee task performance ($r = .18, p \leq .01$).

Table 1
Descriptive Statistics, Correlations, and Reliabilities

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. LMX	5.82	.98	.91				
2. SSC	5.05	1.44	.87***	.96			
3. Interpersonal facilitation	5.14	1.00	.39***	.46***	.89		
4. Job dedication	5.16	1.01	.36***	.37***	.71***	.88	
5. Task performance	5.71	.87	.25***	.18**	.45***	.80***	.85

Note. $N = 243$ supervisor-subordinate dyads; reliability coefficients appear in bold. SSC = supportive supervisor communication; LMX = leader-member exchange.

** $p \leq .01$. *** $p < .001$. One-tailed tests.

Convergent Validity

Table 2 presents the results of the measurement and structural model comparisons. The factorial (convergent) validity of the measures was assessed by comparing the hypothesized measurement model (model 1) to four, more parsimonious models made up of combined factors. Specifically, model 2 had four factors consisting of task performance, interpersonal facilitation,

and job dedication, and a single composite factor made up of SSC and LMX. Model 3 had three factors consisting of LMX and SSC, and a single composite factor containing task performance, interpersonal facilitation, and job dedication. Model 4 was made up of one composite factor made up of SSC and LMX, and a second composite factor made up of task performance, interpersonal facilitation, and job dedication. Model 5 was a one-factor model in which all five factors were combined into one factor representing general response (common method) bias (Barger & Grandey, 2006). Results show that the hypothesized five-factor measurement model not only fit the data well, it had a better fit than the competing models [$SB-\chi^2 = 163.95$; ($df = 109, p < .01$); RCFI = .97; CFI = .97; RMSEA = .05; 90% CI = .03, .06]. The one-factor model had the worst fit with the data ($\Delta SB-\chi^2 = 881.06$; ($\Delta df = 10, p < .001$); RCFI = .54; CFI = .57; RMSEA = .18) suggesting that common method bias did not explain the observed relationships, and thus was not a major concern in our study (Erdogan, Liden, & Kraimer, 2006; Podsakoff & Organ, 1986). Convergent validity was further assessed by examining the factor loadings of the individual measures on their a priori defined factors (Brown & Cudek, 1993). The loadings for the four LMX dimensions ranged from .58 to .89. The factor loadings for SSC ranged from .78 to .96, and those of task performance ranged from .72 to .90. The loadings for interpersonal facilitation and job dedication ranged from .79 to .86, and .65 to .87, respectively. Taken together, these results provide strong evidence of convergent validity for these measures.

Table 2

Measurement and Structural Model Comparisons

Model	Factors	$\frac{SB-\chi^2}{\Delta SB-\chi^2}$	$\frac{df}{\Delta df}$	$\frac{RCFI}{CFI}$	RMSEA	90% CI
1. Five factors: Baseline measurement model		163.95	109	.97	.05	.03, .06
				.97	.06	.04, .07
2. Four factors: Baseline measurement model with LMX and SSC merged into one factor.		227.56	113	.94	.06	.05, .08
		63.62	4	.95	.08	.06, .09
3. Three factors: Baseline measurement model with task performance, job dedication, and interpersonal facilitation merged into one factor.		407.88	116	.85	.10	.09, .11
		243.93	7	.86	.12	.11, .13
4. Two factor measurement model: LMX and SSC make up one factor, and task performance, interpersonal facilitation, and job dedication make up the second factor		460.84	118	.83	.11	.10, .12
		296.89	9	.84	.13	.12, .14
5. One factor measurement model: All factors merged into one factor.		1252.31	120	.43	.20	.19, .21
		1088.36	11	.47	.23	.22, .24

6. Theoretical structural model	246.12	115	.93 .94	.07 .08	.06, .08 .07, .09
7. Fully mediated structural model shown in Figure 1 (revised theoretical)	175.49 70.63	114 1	.97 .97	.05 .06	.03, .06 .04, .07
8. Partially mediated structural model: Model 7 plus direct paths from LMX to IF, JD, and TP	393.54 147.42	112 2	.86 .88	.05 .06	.03, .06 .04, .07
9. Non-mediated structural model: Direct paths from LMX to IF, JD, and TP. SSC was dropped from the model.	596.87 421.38	116 2	.76 .80	.13 .14	.12, .14 .13, .15

Note. $N = 243$ supervisor-subordinate dyads. LMX, leader-member exchange; SSC, supportive supervisor communication; IF, Interpersonal facilitation; JD, Job dedication; SB- χ^2 , Satorra – Bentler scaled chi-square statistic (corrects for multivariate non-normality); RCFI, robust comparative fit index (not dependent upon sample size); CFI, comparative fit index; RMSEA, root-mean-square error of approximation; CI, confidence interval for RMSEA. Models 2 through 5 were compared to model 1. All SB- χ^2 values are significant at $p < .001$. Except for model 7, all Δ SB- χ^2 values are significant at $p < .001$.

Discriminant Validity

The discriminant validity of the measures was assessed by loading each set of indicators on their respective factors (traits), and loading all of the supervisor rated items on a sixth factor, and the employee rated items on a seventh factor (methods). To test for discriminant validity of the traits, the hypothesized factors were allowed to correlate freely, and the methods were allowed to correlate freely. Then this model was compared to a model made up of perfectly correlated traits and freely correlated methods. A significant change in SB- χ^2 (Δ SB- χ^2) and in practical fit RCFI (Δ RCFI) provides evidence of discriminant validity. Results indicate a significant Δ SB- χ^2 value, but a small Δ RCFI [Δ SB- $\chi^2 = 46$; ($\Delta df = 6, p < .001$); Δ RCFI = .02; Δ CFI = .02; Δ RMSEA = .02]. However, given the factors under study, these results are fairly consistent with previous construct validity research in the social sciences (Byrne & Goffin, 1993).

The discriminant validity of method effects was assessed by comparing a model with freely correlated traits (a priori hypothesized factors) and freely correlated methods (supervisor ratings and employee ratings) to a model containing freely correlated traits and perfectly correlated methods. A non-significant Δ SB- χ^2 (or minimal Δ RCFI) suggests a lack of discriminant validity and would thus suggest common method bias across the methods of measurement. Results show a significant Δ SB- χ^2 value and decrease in RMSEA, but, as before, the Δ RCFI was small [Δ SB- $\chi^2 = 12.76$; ($\Delta df = 1, p < .001$); Δ RCFI = .01; Δ CFI = .01; Δ RMSEA = .01]. Again, these results are consistent with previous construct validity research (Byrne & Goffin, 1993). Based on the strength of statistical (Δ SB- χ^2) and practical criteria, it is concluded that, while there was evidence of discriminant validity, it was stronger for traits than it was for methods.

The model comparison results presented in the lower half of Table 2 provide satisfactory support for the proposed theoretical model (model 6). Specifically, the fit indices exceed Bentler's (1990) CFI cutoff value of .90, and RMSEA is less than Brown and Cudeck's (1993)

suggested cutoff value of .08 or less [$SB-\chi^2 = 246.12$; ($df = 115, p < .001$); RCFI = .93; CFI = .94; RMSEA = .07].

Next, a multivariate Lagrange multiplier test was conducted to determine if any of the fixed parameters in the theoretical model, if set free, would lead to a significantly better-fitting model (Byrne, 1994). Results from this test indicated that a path from job dedication to interpersonal facilitation would result in a better fitting model. When compared to the theoretical model 6, results indicate that model 7 in Table 2 was a significantly better fitting model [$\Delta SB-\chi^2 = 70.63$; ($\Delta df = 1, p < .001$); RCFI = .97; CFI = .97; RMSEA = .05]. Specifically, the RCFI increased from .93 in model 6 to .97 in model 7, and RMSEA decreased from .07 to .05, respectively.

Mediation

In Table 3, we present the standardized indirect effects coefficients for the revised theoretical model. These results provide strong support for the revised, fully mediated model by showing significant indirect relationships between LMX and job dedication through SSC, and between LMX and interpersonal facilitation and task performance, through SSC and job dedication. Furthermore, SSC had significant indirect relationships with interpersonal facilitation and task performance, through job dedication, and a significant direct relationship with interpersonal facilitation, indicating that job dedication partially mediated the relationship between SSC and interpersonal facilitation (an unexpected result). The $SB-\chi^2$ difference test results for model 9 show, that when compared to model 7, the removal of the mediator (SSC), had a profound negative impact on model fit, thus providing additional support for the inclusion of SSC in the model, and shows that SSC explains significant incremental variance in employee performance over that of LMX.

Tests of Indirect Relationships through Supportive Supervisor Communication and Job Dedication

Relationship	Indirect Effect Through			
	SSC, and SSC \Rightarrow JD	Supportive Supervisor Communication	Supportive Supervisor Communication & Job Dedication	Job Dedication
LMX \Rightarrow JD		.30		
LMX \Rightarrow IF	.40			
LMX \Rightarrow TP			.24	
SSC \Rightarrow TP				.27
SSC \Rightarrow IF				.21

Note. $N = 243$ supervisor-subordinate dyads. SSC, supportive supervisor communication; LMX, leader-member exchange; IF, interpersonal facilitation; JD, job dedication.

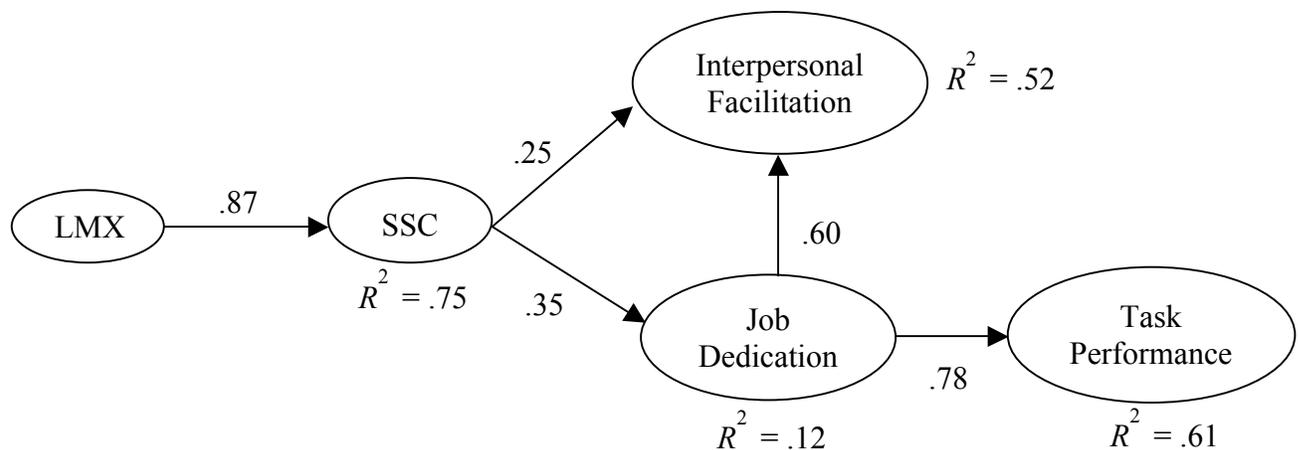
All indirect effects coefficients are significant at $p \leq .01$.

To test for mediation, a fully mediated model was compared to a partially mediated model (model 8) in which a direct path was specified from LMX to interpersonal facilitation, job dedication, and task performance. Results in Table 2 show that this model had a poor fit with the data [$\Delta SB-\chi^2 = 147.42$; ($\Delta df = 2, p < .001$); RCFI = .86; CFI = .88; RMSEA = .10]. Next, a fully

mediated model was compared to a non-mediated model in which LMX had direct relationships with interpersonal facilitation, job dedication, and task performance, and SSC was excluded from the model. Based on these results, the non-mediated model was the worst fitting model [$\Delta SB-\chi^2 = 421.38$; ($\Delta df = 2, p < .001$); RCFI = .76; CFI = .80; RMSEA = .13]. These results taken together provide strong support for the fully mediated model.

Figure 1 presents the standardized maximum likelihood parameter estimates of the structural paths for the revised theoretical model (model 7). All parameter estimates for this revised model were significant and positive. Next, the R^2 values associated with each equation were examined to determine the percentage of variation explained by the independent and mediating variables. LMX accounted for 75% of the variance in employee perceptions of SSC. In turn, LMX, SSC and job dedication explained 60% of the variation in supervisor ratings of employee interpersonal facilitation, while LMX and SSC explained 12% of the variation in supervisor ratings of employee job dedication. Finally, employee ratings of LMX and SSC, and supervisor ratings of employee job dedication explained 61% of the variation in supervisor ratings of employee task performance.

Figure 1
Standardized Solution for Final Structural Equation Model



Note. $N = 243$ supervisor-subordinate dyads. LMX = leader-member exchange; SSC = supportive supervisor communication. All standardized path coefficients are significant at $p < .001$.

Discussion

The research reported here responds to Mueller and Lee's (2002) call for additional research on other variables central to communication and communication satisfaction in organizations, and to Cooren's (2006) appeal for more communication research focusing on how

organizational interaction actually functions. It also responds to Graen and Uhl-Bien's (1995) call for more research across the three domains of leadership: leader, follower, and relationship. Most importantly, these results provide initial evidence that high-quality LMX relationships may lead to supportive supervisor behaviors exemplified by supervisors' use of supportive communication with subordinates with whom they have high-quality relationships. This, in turn, influences follower behaviors in terms of contextual and task performance.

These results also provide substantial support for the contention that SSC mediates the relationship between LMX and employees' contextual performance in terms of interpersonal facilitation and job dedication, and that job dedication mediates the relationship between SSC and task performance. It is suggested here that LMX quality may encourage SSC, which in turn influences the employee's motivation to reciprocate the supervisors' favorable treatment with acceptable commodities of exchange, such as increased levels of interpersonal facilitation, job dedication, and task performance. It appears that subordinates may perceive SSC as being a result of the quality of the LMX relationship. It is likely that the LMX dimension of supervisor loyalty may positively influence subordinate perceptions of supervisor support which engenders subordinate support of the supervisor, as demonstrated through job dedication and interpersonal facilitation. Just as employee's affective commitment has been shown to relate to perceived supervisor support, employee commitment to a supervisor may be influenced by how loyal and committed the supervisor is to subordinates. SSC is the primary means for providing support and demonstrating loyalty and commitment, and employees appear to reciprocate supportive supervisor treatment through direct and indirect acts of kindness, benevolence, citizenship, and performance enhancement. While not examined here, it seems likely that beyond the initial encounter phase of relationship development, not only does LMX quality encourage SSC it is likely that SSC may in turn serve to nourish the supervisor-subordinate relationship. Thus, future research may benefit by examining the reciprocal relationship (a non-recursive model) between LMX and SSC over time.

Several compelling research questions arise: What is the relative value of SSC versus other forms of favorable treatment, and do they differ in terms of their influence on employee reciprocation efforts? Is SSC a dimension of the more general construct of perceived supervisor support discussed in the literature (e.g., Eisenberger, Cotterell, & Marvel, 1987; Gouldner, 1960; Rhoades & Eisenberger, 2002)?

This study also demonstrates the important role that contextual performance plays in overall task performance assessments. Contextual performance, particularly job dedication, may translate into assessments of task performance. The only difference between the hypothesized model and the better-fitting revised model was the addition of a direct link from job dedication to interpersonal facilitation. In retrospect, it is understandable how a supervisor's observation of an employee's job dedication behaviors (i.e., self-discipline, initiative, effort and persistence) might be perceived as causing or leading to interpersonal facilitation activities such as being pleasant, helping others, and other acts of benevolence. These results raise the possibility that, rather than being two discrete dimensions of contextual performance, interpersonal facilitation and job dedication might be causally related, particularly as assessed by supervisors. Do supervisors in fact perceive employee acts of interpersonal facilitation as behavioral manifestations of job dedication, such that they believe that employees help others because of their job dedication? Future research would benefit by explicitly focusing on the relationships between interpersonal facilitation, job dedication, and task performance. In particular, research should consider using

diverse assessors of these performance measures. In this study, all three forms of performance were assessed by supervisors. Assessments could also be made by coworkers, customers, or self.

Limitations

There are several limitations in our research that are worth noting. First, while we collected data from different sources, several adjacent constructs in our model were collected using common methods and respondents. SSC and LMX were both collected from subordinates. Employee contextual performance (i.e., job dedication and interpersonal facilitation) and task performance data were collected from each employee's supervisor. While our CFA results suggest that these constructs are unique, future research would benefit from utilizing different sources or methods for collecting theoretically adjacent constructs. While common method and same source concerns may generate caution in interpreting the results of portions of the model, the results still provide compelling evidence that employee assessments of LMX and SSC explained unique variance in supervisor ratings of employee contextual and task performance.

Another limitation was the utilization of a cross-sectional design rather than a longitudinal one, thus preventing us from making causal inferences. Also, our data were collected from dyads in only one industry. Future researchers should include multiple industries to increase generalizability, and if possible, utilize a longitudinal design to permit causal inferences to be drawn.

Conclusion

Graen and Uhl-Bien (e.g., 1991, 1995) have highlighted the importance of "leadership making," i.e., efforts to improve the level of LMX in organizations so as to reap the benefits of enhanced relationship quality. Our research suggests that high-quality LMX relationships encourage SSC, which in turn creates an overall supportive environment that translates into higher employee contextual and task performance. Unfortunately, communication is a leadership skill that many supervisors are lacking (Delahoussaye, 2001a, 2001b). From a leadership making and human resource management perspective, this research suggests that if supervisors are trained and encouraged to use more effective supportive communication strategies, organizations may reap the benefits of greater employee job dedication, interpersonal facilitation, and task performance.

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