



Leader-member exchange-subordinate outcomes relationship: role of voice and justice

Kanika T. Bhal

*Department of Management Studies, Indian Institute of Technology Delhi,
New Delhi, India, and*

Mahfooz A. Ansari

Faculty of Management, University of Lethbridge, Lethbridge, Canada

Abstract

Purpose – The purpose of this paper is to explore, deriving from social exchange theory, the process paths between leader-member exchange (LMX) and subordinate outcomes (satisfaction and commitment). LMX is conceptualized as a two-dimensional construct, consisting of LMX-Contribution and LMX-Affect. The two dimensions are hypothesized to have differential impact on subordinate outcomes. Procedural and distributive justice perceptions are hypothesized to mediate the relationship of LMX with subordinate outcomes, and voice is hypothesized to mediate the relationship of LMX with procedural justice. Additionally, alternate models based on the primacy of the procedures are tested.

Design/methodology/approach – The study reports responses of 295 professionals from 30 software organizations operating in different parts of India. Data were collected by means of a structured questionnaire containing standard scales of LMX, distributive, and procedural justice, voice, satisfaction and commitment. After establishing the psychometric properties of the measures, path analysis of the hypothesized and alternate models was conducted using structural equation modeling (SEM).

Findings – Overall, results provided support for most of the hypotheses with a few exceptions. Specifically, LMX led to distributive justice through procedural justice – a finding consistent with the “procedural primacy hypothesis”.

Research limitations/implications – The results have implications for LMX interventions. However, the results are to be viewed in the light of common method variance and same source bias.

Originality/value – The paper is of value in that its results indicate that the negative effect of work-group differentiation can be neutralized if the leader uses voice mechanisms for improving procedural justice. Also, this study adds to the literature by testing the proposed model in the Indian setting, thus providing some empirical cross-cultural validity to LMX-subordinate outcomes relationships.

Keywords Leadership, Social dynamics, Group dynamics, Organizational structures, Employee relations, India

Paper type Research paper



The leader-member exchange (LMX) theory of leadership focuses on leader-member dyads and their quality of interactions (Dansereau *et al.*, 1975), wherein the quality of interaction of a leader is shown to vary across different subordinates in the

work-group. The nature of exchange relationship impacts subordinate outcomes, like satisfaction with work (Vecchio and Gobdel, 1984), commitment (Duchon *et al.*, 1986), supervisory ratings of job performance (Graen *et al.*, 1982), and frequency of promotions (Wakabayashi *et al.*, 1988).

While the role of LMX in employee outcomes is well established, the mechanism through which LMX predicts work outcomes is little researched. The intent of this study is to test a model of LMX that includes voice, distributive justice, and procedural justice in the LMX-subordinate outcomes relationship. This study makes several contributions to the existing LMX literature. Unlike previous studies, that have treated LMX as unidimensional, this study employs a two-dimensional scale consisting of “contributions” on-the-job and “affective” interactions off-the-job. Whereas the contribution dimension measures interactions on job-related issues, affect dimension measures interactions on outside or non-job related issues. It assesses the differential impact of the two dimensions of LMX on subordinate outcomes of satisfaction and commitment. It assesses unique mechanisms – such as voice and justice perceptions – through which each dimension of LMX leads to the outcomes of satisfaction and commitment. This study is probably the first one to incorporate subordinate voice into LMX research. Most previous studies, barring a few on the Chinese and Japanese samples (e.g. Hui *et al.*, 1999; Wakabayashi and Graen, 1984), have been conducted in the USA. This study adds to the literature by testing the proposed model in the Indian setting, thus providing some empirical cross-cultural validity to LMX-subordinate outcomes relationships.

Theory and hypotheses

Multi-dimensional nature of LMX and subordinate outcomes

Leader-member exchange (LMX) has been defined as the quality of exchange relationship between the supervisor and individual subordinates (Dienesch and Liden, 1986), where leaders have different quality of work relationships with different subordinates (Graen and Scandura, 1987; Scandura and Graen, 1984). Most previous conceptualizations of LMX have treated it as a one-dimensional construct focusing only on job-related interactions, with little or no focus on social interactions. Development of varying quality of interactions in a leader-member dyad has been understood in terms of role development (Graen, 1976) and social exchanges (Graen and Scandura, 1987). In an exchange framework, the leader assesses the competencies and motivation of each subordinate and offers different material and non material inducements depending on his or her ability and motivation to collaborate on unstructured tasks. Consequently, the subordinates, too, come to define their roles uniquely. According to role theory (Jacobs, 1971; Katz and Kahn, 1978), roles are multidimensional and are likely to have different combinations of task-related and social interaction (Bales, 1958). Given that both roles and exchanges are multidimensional, researchers (e.g. Dienesch and Liden, 1986; Liden and Maslyn, 1998) proposed that LMX too could be multidimensional. However, little research has been done to identify these dimensions. Dienesch and Liden suggested that LMX might be based on three “currencies” of exchange: task behaviors (perceived contribution) which deal with on-the-job dimension of interaction, loyalty (loyalty) which is manifested in social support for each other, and simply liking for each other (affect) which go beyond the work situation. This conceptualization was subsequently used by

researchers (e.g. Bhal and Ansari, 1996; Liden and Maslyn, 1998) to develop multidimensional measures of LMX.

Bhal and Ansari came up with a two-dimensional scale consisting of two dimensions: LMX-Contribution and LMX-Affect. The two dimensions of contribution and affect are consistent with the previous conceptualizations of leader behavior that have viewed leader behavior as consisting of consideration and initiating structure (Halpin and Winer, 1957), and employee orientation and production orientation (Likert, 1961). More recently, Maslyn and Uhl-Bien (2001) proposed that affect, loyalty, and professional respect dimensions are more like “social currencies” that focus on social exchange between leader and member, whereas contribution dimension is more like “work-related currency” (Bhal and Ansari, 1996; Liden and Maslyn, 1998), and these currencies are likely to predict outcomes differently.

Job satisfaction is an affective response to the job situation (Locke, 1976). It is one of the strongest correlates of LMX (Gerstner and Day, 1997). Subordinates with high LMX receive not only extrinsic rewards of better performance ratings (Graen *et al.*, 1982) and career advancement (Wakabayashi and Graen, 1984), but also have more intrinsic satisfaction in terms of autonomy and challenging tasks. Since satisfaction is predominantly affective in nature, it is possible that affective relationship with the leader gets transferred to affective reactions for the job. Consequently, we state our first hypothesis as follows:

H1. Affect dimension of LMX is positively related to job satisfaction.

Commitment is defined as the “relative strength of an individual’s identification with and involvement in a particular organization” (Mowday *et al.*, 1982, p. 226). In particular, it is characterized by a strong belief in and acceptance of the organization’s goals and values, and willingness to exert considerable effort on behalf of the organization. According to Gerstner and Day (1997), commitment is another strong correlate of LMX. Pettigrew (1979) argued that the role of commitment mechanism was to somewhat disengage the person from some of the current attachments and to redirect his/her patterns of social relationships toward the organizational needs and purpose. Hence, it might be “. . . less affected by degree of affect toward the supervisor” (Liden and Maslyn, 1998, p. 46). However, subordinates contributing to the work-group do so to benefit the organization, as the work-group is embedded in it (Shore and Wayne, 1993). Our next hypothesis hence is as follows:

H2. Perceived contribution of LMX dimension is positively related to organizational commitment.

LMX-subordinate outcomes relationship: the role of justice

Past research has mostly studied the impact of LMX and justice on subordinate outcomes independently. Of late, there have been some efforts at integrating the constructs of LMX and justice (Masterson *et al.*, 2000; Scandura, 1999; Tekleab *et al.*, 2005). These efforts at integrating the two have significantly advanced our understanding of how LMX operates in a work-group. However, most researches have treated LMX as the outcome of justice perceptions or as a mediator of justice-outcome relationships (Manogran *et al.*, 1994; Tekleab *et al.*, 2005; Masterson *et al.*, 2000). It should, however, be noted that Tekleab *et al.* (2005) have used a longitudinal design where justice perceptions at an early stage (t1) lead to LMX, which

later (time t2) results in employee outcomes. There is a possibility that the relationship between LMX and justice is time-dependent, wherein in the initial stages of role development, justice perceptions lead to LMX. At this stage, justice perceptions are at the dyadic level centering on exchanges between a leader and a member. But, once the role is stabilized there are no active exchanges (Graen, 1976; Graen and Cashman, 1975; Graen and Scandura, 1987). Once the relationship is stabilized, the work-group consists of subordinates with varying qualities of exchange with the leader, and the evaluation of justice might involve perceived fairness of rewards and exchanges as compared to other members of the work-group, and LMX is likely to lead to justice perceptions of the subordinates.

LMX and distributive justice. The construct of justice was initially studied in terms of three components – distributive, procedural (Cropanzano and Folger, 1991), and interactional (Bies and Moag, 1986). Distributive justice – defined as the perceived fairness of outcomes – has been understood through equity in social exchange (Adams, 1963), wherein people compare their contributions and rewards with comparison others. It tends to relate strongly to reactions to the organization or to one's supervisor (Folger and Konovsky, 1989).

The leader is the interface between the employee and the organization, who is instrumental in not only performing appraisals but also allocating job responsibilities and providing resources for the accomplishment of the tasks. Research has shown that LMX predicts employee outcomes like supervisory ratings of job performance (Graen *et al.*, 1982), autonomy (Scandura *et al.*, 1986), and frequency of promotions (Wakabayashi *et al.*, 1988), which are unequally distributed in a work-group as a consequence of leader-member exchange. Perception of distributive justice is based on the perceived outcomes and inputs of the self with reference to a comparison other. Further, those high on affect and contribution have high interactions with the leader both on- and off-the-job and hence those who are not a part of the in-group are likely to feel that they are not given enough opportunity and/or information which the members of the in-group get. Thus, there is not only an unequal distribution of rewards but also of the opportunities to get the rewards by virtue of the subordinates' interactions with the leader. Thus we offer our next hypothesis:

H3. LMX-Contribution and LMX-Affect lead to the perception of distributive justice.

LMX, voice, and procedural justice. In the LMX conceptualization, low and high quality exchanges vary in terms of decision latitude given to the subordinates (Dansereau *et al.*, 1975), the leader's communication (Baker and Ganster, 1985), and the level of trust in and empowerment of the subordinates (Gomez and Rosen, 2001). In our two-dimensional conceptualization of LMX, perceived contribution on-the-job might relate to communication and voice in work-related factors and affect is likely to lead to increased frequency of off-the-job voice, emanating from affective relationships. Consequently, the nature and amount of voice or say that different members have in decision-making processes vary as a function of both contribution and affect dimensions of LMX. The common link between procedural justice perceptions and LMX may be voice – that is, the amount of say that the employees have in the decision-making process, which leads to procedural justice. Given the importance of procedural fairness, researchers have devoted substantial amount of attention to

determining its antecedents; one of the most significant of which is voice (Folger and Cropanzano, 1998). Research (Folger, 1977) has shown that giving individuals the opportunity to express opinion (voice) corresponds with an increase in the perception of procedural fairness. Thus we hypothesize:

H4. Both dimensions of LMX – contribution and affect – lead to voice or the amount of say people have in decision-making processes.

H5. Voice leads to the perception of procedural justice.

Justice and subordinate outcomes

Research on the relationship between justice and outcomes has primarily focused on two broad directions. First, the relationship between the two justice elements has been explored for predicting employee outcomes. Deci (1975) was perhaps the earliest to propose that procedures have the potential to moderate the effect of perceived equity of work outcomes – an assertion subsequently supported by Cropanzano and Folger (1989), Folger *et al.* (1978), and more recently by DeCremer and van Knippenberg (2003). However, some researchers have explored the effect of the two types of justice independently on employee outcomes and have shown that the two have the potential to influence subordinate outcomes differently. Sweeney and McFarlin (1993) too found support for a two-factor model in their sample. Past research has shown that employees’ perceptions of procedural justice affect their job satisfaction (Lowe and Vodanovich, 1995) and organizational commitment (Folger and Konovsky, 1989; Konovsky and Cropanzano, 1991). Similarly, employees’ feelings of equity or distributive justice influence their satisfaction (Brief, 1998) as an outcome of social comparison processes (McFarlin and Rice, 1992). There is also evidence in support of distributive justice predicting employee commitment (DeConinck and Stilwell, 2004). Thus we state the next two hypotheses as follows:

H6a. Procedural justice leads to satisfaction and commitment.

H6b. Distributive justice leads to satisfaction and commitment.

Overall model

Our model (see Figure 1) has three important features. First, the two dimensions of LMX relate differently with the employee outcomes of satisfaction and commitment. Second, the relationship between LMX and employee outcomes gets mediated by justice perceptions, which implies that if “. . . justice is experienced by members, the effect of in/group or out/group memberships become non-significant” (Scandura, 1999, p. 35). Third, the link between LMX and procedural justice is the voice that different members have in the decision-making processes.

To find out the best fitting model, we generated five alternate models for testing. As can be seen, our hypothesized model treats distributive and procedural justices as predictor of the outcomes independently using the two factor model of procedural and distributive justice (Sweeney and McFarlin, 1993). Models 1 and 2 were developed and tested around this assertion, where model 2 is most inclusive, whereas model 1 and hypothesized model were nested in model 2. However, we also wanted to test the procedural primacy model given by Sweeney and McFarlin (1993) as some recent data (NASSCOM, 2003, 2005) shows that professionals attach a great deal of importance to

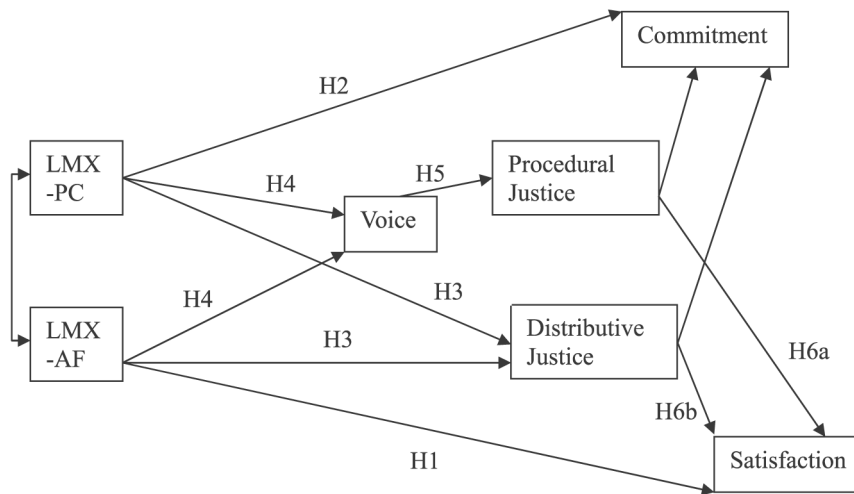


Figure 1.
Hypothesized model

the procedures followed in reward allocation instead of the amount of rewards *per se*. For this reason, our models 3, 4, and 5 add a path from procedural to distributive justice and test this assertion.

Method

Research site and participants

Seven hundred professionals working in 45 software organizations were approached to participate in the study. These organizations were located in the southern, western, and northern regions of India and each employed more than 100 software professionals. The professionals were contacted using the alumni network of a premier engineering/management school in India. To ensure anonymity, they were asked not to put any form of identification on the questionnaire. Three hundred and six completed questionnaires were returned. After deleting the incomplete ones, the sample size was reduced to 295 respondents who belonged to 30 software organizations. Of these, 250 were males and 45 were females. About 92 per cent of the participants were in the range of 20 to 31 years. The average tenure in the organization was 2.38 years (SD = 2.70). Care was taken to include only those respondents who had worked with the leader for over six months – to ensure that the relationship with the leader had stabilized. Since software organizations are project-based which have to be completed in stipulated time, the role relationships in these organizations get defined in shorter time. After discussing with many project leaders and team members, it was decided that six months could be taken as reasonable time for a relationship to become stable. Thus, all the respondents had been working with their supervisors for six months or longer.

Measures

Leader-member exchange (LMX). We assessed the quality of exchange with a ten-item quality of interaction scale (Bhal and Ansari, 1996, 2000). The scale consisted of two dimensions: contribution and affect, based on the conceptualization made by Dienesch

and Liden (1986). Each dimension of LMX consisted of five items. Two sample items included, "How much responsibility does the leader take for the jobs that are to be done together by you and him/her?" (LMX-Contribution), and "How much do you help each other in personal matters?" (LMX-Affect). We asked the respondents to rate on a 5-point scale (1 = not at all true; 5 = very true) as to how true the statements were to their relationship with the immediate supervisor.

Voice. We assessed voice with three items (Dulebohn and Ferris, 1999). A sample item is, "The supervisor while evaluating your performance listens to the reasons you give for your performance." The response was taken on a 5-point scale (1 = strongly disagree; 5 = strongly agree).

Distributive justice. Distributive justice – defined in terms of rewards and pay – was assessed by using a 3-item scale (Price and Mueller, 1986). A sample item is, "Compared to the efforts that you put in your work, how fair do you feel are the rewards?" The respondents were asked to rate the rewards on a 5-point scale (1 = very poor; 5 = very good) based on the effort that they put in their job compared to the relevant others.

Procedural justice. Procedural justice was measured with a 6-item scale (Niehoff and Moorman, 1993). A sample item is, "Job decisions are made by the superior (boss) in an unbiased manner." The respondents were asked to rate on a 5-point scale (1 = very true; 5 = not at all true) how true the items were to them.

Organizational commitment. Organizational commitment was assessed using nine items (Mowday *et al.*, 1979). A sample item includes, "I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful." and "I really care about the fate of this organization." The respondents rated, on a 5-point scale (1 = strongly disagree; 5 = strongly agree), their degree of agreement or disagreement with each statement.

Satisfaction. Satisfaction was assessed using a 6-item scale (Price, 2001). A sample item is, "I feel fairly well satisfied with my job". The respondents were asked to rate on a 5-point scale (1 = strongly disagree; 5 = strongly agree) the degree to which they agreed or disagreed with the statements pertaining to satisfaction with their job.

Personal-demographics. A series of single-statement items were used to collect information on participants' demographic variables such as age, gender, and tenure.

Results

The analysis was conducted using Amos 5.0 software. Kelloway (1998, p. 40) recommends that "... researchers would want to consider the issues of absolute fit, comparative fit, parsimonious fit for each model tested". Consequently, we used Goodness of Fit Index (GFI), and the Adjusted Goodness of Fit Index (AGFI) (Jöreskog and Sorbom, 1984), Comparative Fit Index (CFI) (Bentler, 1990) and Normed Fit Index (NFI) (Bollen, 1989), Root Mean Square Error of Approximation (RMSEA) (Browne and Cudeck, 1993) and Akaike Information Criteria (AIC) (Akaike, 1987). The model (see Figure 1) was evaluated using the process recommended by Anderson and Gerbing (1988).

In Stage 1, the fit of a confirmatory factor analytic (CFA) model to the observed data was evaluated. In this stage, a single-factor model was compared to the hypothesized 7-factor (LMX-Contribution, LMX-Affect, Voice, Procedural Justice, Distributive Justice, Satisfaction, and Commitment) model. The two LMX dimensions were treated

as co-varying in the measurement model as they were two dimensions of the same LMX scale, whereas the others were single dimension scales. The 1-factor model provided a very poor fit to the data ($\chi^2 = 3916.69$, $df = 629$, $p < 0.001$, $GFI = 0.460$, $AGFI = 0.397$, $CFI = 0.393$, $NFI = 0.356$, $RMSEA = 0.133$, $AIC = 4064.69$). Given the number of variables, however, the CFA results of the 7-factor model provided reasonable fit indices ($\chi^2 = 1733.63$, $df = 628$, $p < 0.001$, $GFI = 0.751$, $AGFI = 0.721$, $CFI = 0.796$, $NFI = 0.715$, $RMSEA = 0.077$, $AIC = 1883.62$). The hypothesized 7-factor model showed much improved χ^2 ($\Delta\chi^2 = 2183.06$, $\Delta df = 1$, $p < 0.001$) and fit statistics, providing support to the 7-factor model. All the items were found to be significant. The superiority of the 7-factor model over the 1-factor model also provides evidence against common method variance (Podsakoff *et al.*, 2003).

Before testing the model, psychometric properties of the scales were tested. Descriptive statistics, coefficients alpha, and inter-correlations of exogenous and endogenous variables are contained in Table I. The reliabilities of all the variables are acceptable for research purposes that ranged from 0.75 to 0.91 (Hair *et al.*, 1998).

The zero-order correlations were all in the expected direction. Satisfaction was significantly and positively related to both perceived contribution and affect dimensions of LMX. Though commitment was also related to both, its relationship with LMX-Contribution was much stronger than its relationship with LMX-Affect. Though voice had a strong positive correlation with procedural justice, results of CFA indicate that they can be treated as conceptually different factors. These correlations provide a preliminary confirmation of the proposed first three hypotheses – see Table I. In conclusion, results of the CFA, reliability analysis (alpha ranging from 0.75 to 0.91), and measurement model analyses indicate that the measures have sound psychometric properties.

After confirming the factor structures, we formed composite scores for each construct from their respective items and used those scores as single indicators of their respective factors in Stage 2 and path analysis was conducted to test the models. In testing the hypothesized models, an error term was included for every aggregated variable. Because the two dimensions of LMX were taken as covarying in the measurement model, they were taken as covarying even in the structural models. Though the complexity of the paths varies in different models and some models (hypothesized model and model 1) are nested in more complex model 2, there is one additional path in our models 3, 4, and 5 in comparison to the most inclusive model, i.e. model 2. This path was added to test for the procedural primacy assertion. For this

Factor	M	SD	1	2	3	4	5	6	7
1. LMX-PC	3.55	0.73	<i>0.91</i>						
2. LMX-AF	2.80	0.82	0.35**	<i>0.89</i>					
3. Voice	3.63	0.91	0.40**	0.25**	<i>0.87</i>				
4. Procedural justice	3.61	0.65	0.42**	0.21**	0.64**	<i>0.77</i>			
5. Distributive justice	2.95	0.94	0.14*	0.06	0.29**	0.31**	<i>0.77</i>		
6. Satisfaction	2.97	0.87	0.19**	0.24**	0.30**	0.33**	0.77**	<i>0.86</i>	
7. Commitment	3.42	0.55	0.29**	0.14*	0.35**	0.41**	0.36**	0.37**	<i>0.75</i>

Notes: $n = 295$; * $p < 0.05$; ** $p < 0.01$; diagonal entries in italics indicate coefficients alpha; LMX = leader-member exchange; PC = perceived contribution; AF = affect

Table I.
Descriptive statistics,
coefficients alpha, and
intercorrelations of the
study variables

reason the models can not be treated as strictly nested. It is difficult to reject any hypothesis from a large data set using χ^2 test (Little, 1997). To evaluate the model, we compared the relative fit of the hypothesized and five alternate models using the six criteria mentioned above (GFI, AGFI, CFI, NFI, RMSEA, and AIC). The results are presented in Table II.

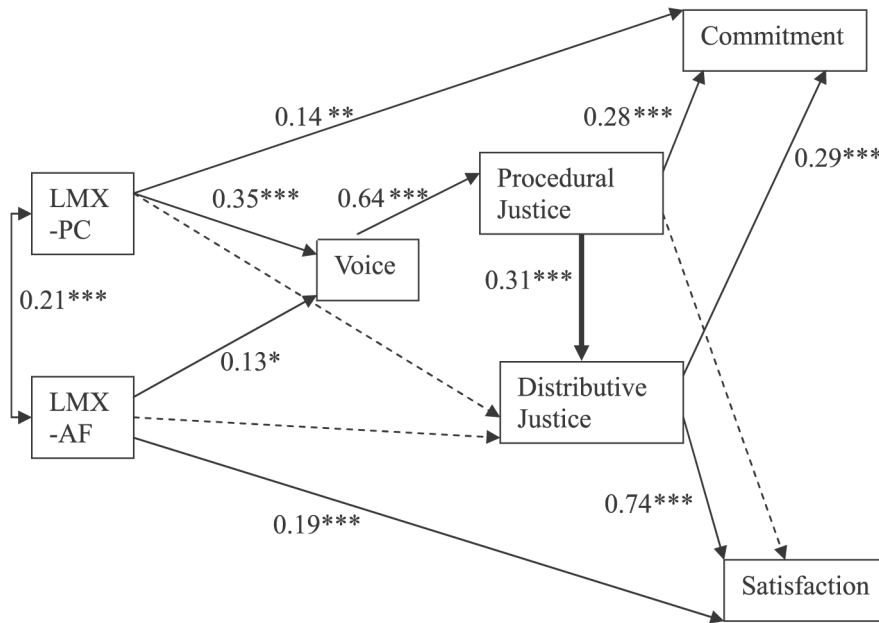
As mentioned earlier, the hypothesized model and models 1 and 2 were developed based on the assumption that procedural and distributive justice perceptions independently predict outcomes (Sweeney and McFarlin, 1993). In fact, the hypothesized model and model 1 are nested in model 2, which is the most complex model. First, in model 1, we explored whether LMX led to subordinate outcomes only through justice and voice by dropping the direct paths from LMX-Contribution to commitment and LMX-Affect to satisfaction, to be able to say that it was only through justice that LMX led to outcomes. In model 2, we tested whether LMX led to procedural justice directly too and added paths from LMX-Contribution and LMX-Affect to procedural justice to test for the same. Models 3, 4 and 5 tested the primacy of procedural justice by identifying a link between procedural and distributive justice based on the procedural primacy model (Sweeney and McFarlin, 1993). We tested whether procedural justice led to outcomes through distributive justice by dropping the direct paths from procedural justice to commitment and satisfaction, in model 3. In model 4, we dropped direct paths from LMX-Contribution and LMX-Affect to distributive justice and added a path from procedural justice to distributive justice. Finally, in Model 5 we dropped the paths from procedural justice to commitment, from procedural justice to satisfaction, from LMX-Contribution to distributive justice and LMX-Affect to distributive justice and added a path from procedural to distributive justice to test whether distributive justice fully mediates the relationship between procedural justice and outcomes.

It can be seen from Table II and Figure 2 that the data provided best fit indices for model 4. All the six fit indices (GFI, AGFI, CFI, NFI, RMSEA, AIC) show that the data best describes model 4. The standardized coefficients for direct paths from LMX-Contribution and LMX-Affect to distributive justice, and from procedural

Model	χ^2	df	GFI	AGFI	CFI	NFI	RMSEA	AIC
Hypothesized model	51.13	9	0.957	0.865	0.936	0.925	0.126	89.126
Model 1 ^a	82.49	11	0.931	0.825	0.820	0.879	0.149	116.492
Model 2 ^b	33.54	7	0.970	0.879	0.960	0.951	0.114	75.538
Model 3 ^c	52.55	10	0.954	0.870	0.936	0.923	0.120	88.554
Model 4 ^d	27.82	10	0.974	0.927	0.973	0.959	0.078	63.820
Model 5 ^e	52.65	12	0.954	0.892	0.939	0.923	0.107	84.654

Notes: In comparison with the base model, ^aModel 1 drops direct path from LMX-Contribution to Commitment and LMX-Affect to satisfaction; ^bModel 2 adds direct paths from LMX-Contribution to procedural justice and LMX-Affect to procedural justice; ^cModel 3 drops paths from procedural justice to commitment and procedural justice to satisfaction – it also adds a path from procedural justice to distributive justice; ^dModel 4 drops paths from LMX-Contribution to distributive justice and LMX-Affect to distributive justice, and adds a path from procedural justice to distributive justice; ^eModel 5 drops paths from procedural justice to commitment, from procedural justice to satisfaction, from LMX-Contribution to distributive justice and LMX-Affect to distributive justice and adds a path from procedural to distributive justice

Table II.
Results on model
comparisons



Notes: Dotted lines indicate non-significant hypothesized paths; Bold lines indicate significant path that was not hypothesized; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Figure 2. Standardized path estimates for the best fitting model

justice to commitment are non-significant, thus rejecting *H3* and part of *H6(a)*. Hence, *H6(a)* got partial support, as procedural justice does not predict satisfaction. Additionally, the path from procedural to distributive justice was significant. The fact that model 4 is best supported by data indicates towards a procedural primacy model.

Discussion

Taken as a whole, there are some hypothesized relationships that advance our understanding of LMX. Our work extends LMX theory in several ways. First, the paper conceptualizes LMX as a multidimensional construct. The unique quality of interaction develops as an outcome of the role development by the subordinates. Through repeated role episodes at the role taking, role making, and role routinization stages, subordinates develop this quality of interaction (Graen, 1976; Graen and Scandura, 1987), which involves exchanges at every level of role development. It is possible for the members of the dyad to exchange a variety of material and non-material resources like information, and valued task assignments (Graen and Cashman, 1975), which indicate towards a multidimensional nature of exchanges too. Both roles and exchanges that form the bases for LMX are multidimensional, which provide support for a multidimensional nature of LMX. The two dimensions of contribution and affect, relating to on-the-job work related interactions and off-the-job social and affective interactions, respectively, are in line with the previous conceptualizations of leader behavior (Halpin and Winer, 1957; Likert, 1961) as well. The study shows that the two dimensions of LMX predict employee outcomes

differently providing evidence of predictive validity of the two dimensions. Predominantly, affective outcome of satisfaction is predicted by LMX-Affect. LMX-Contribution on-the-job may be used to benefit the organization (Shore and Wayne, 1993).

Second, ours is the first study (to the best of our knowledge) that incorporates LMX and justice perceptions through voice mechanisms. Voice is one of the strongest mechanisms of procedural justice (Folger and Cropanzano, 1998). Researchers, however, have shown that in many cases, employees are either reticent in using formal voice mechanisms (even when the organizations provide for them) (Krone, 1992), or voice does not lead to desired outcomes of procedural justice and employee attitudes and behaviors. Thus, besides evaluating the formal documented mechanisms of expressing voice, it is important to look at the informal ways through which it becomes operational (Kolb and Putman, 1992). In this light, the nature of LMX determines whether there will be an informal opportunity for the employees to express/voice their concerns. High quality exchanges are characterized with on-the-job and off-the-job mechanisms of having a say, which lead to a perception of procedural justice.

Finally, there are some interesting findings that emerged from the alternative models that we tested in this research. To begin with, results showed that LMX leads to distributive justice through procedural justice and not directly, providing support for the "primacy of procedures" notion. This implies that subordinates in a work-group would not perceive rewards as fair or unfair independent of the process through which they are determined. That is, the negative impact of outcomes severity can be reduced by the presence of high levels of procedural justice. Thus, even in a differentiated work-group if the leader follows fair processes, the subordinates are not likely to perceive injustice in the distribution of rewards. Work-group differentiation into in/out groups is likely to occur in all situations, as all subordinates are either not capable of or willing to collaborate with the leader on unstructured tasks. Our results indicate that the negative effect of work-group differentiation can be neutralized if the leader uses voice mechanisms for improving procedural justice. The results show that LMX leads to voice which leads to procedural justice, which results in distributive justice, which influences satisfaction and commitment of the subordinates. Practically, the results indicate that though fairness in appraisal and pay-related processes can be built through various HR systems like participation (formal voice), these processes will be effective (and lead to procedural justice) only if they are implemented well by the immediate supervisor, and subordinates have their say in leader-subordinate relationship. The results have implications for leadership development and training on appraisal and pay-related processes as well. Unless the leaders are trained appropriately and made aware of the social-psychological processes that go on in a team, the design of systems by HR may not be effective.

Next, procedural justice does not determine satisfaction directly; however, it does directly influence commitment. Research linking the two types of justice (procedural and distributive) with employee outcomes has shown that procedural justice is important in predicting organizational commitment (Sweeney and McFarlin, 1993), whereas distributive justice is more significantly related to specific outcomes like satisfaction with pay, supervisor, and job.

Finally, the link between procedural and distributive justice to predict commitment indicates that employees are likely to show high commitment if they perceive

distributive justice. But, procedural justice will lead to commitment through distributive justice. Practicing managers need to pay attention not only to the rewards but also to the processes through which the rewards are determined.

The implications of the study must be considered in light of its limitations. First, all of our data came from a single source, raising concerns of common method bias. However, we conducted CFA on all the scale items used in the scales. Emergence of neat factors and all the items loading on their respective factors provide partial evidence of construct validity and partial evidence against common method bias. Second, since the data were cross-sectional, direction of causality is assumed, not tested. Thus, inclusion of longitudinal studies and others ratings of behavior and attitudes could provide support for current findings. Longitudinal studies are also likely to provide insight into how dyadic relationships grow over a period of time. Third, all the data were collected through self-reports, which may limit the findings as they are likely to be influenced by social desirability. Although this bias cannot be ruled out, some researches have shown that social desirability may not be a source of bias in measuring organizational perceptions (Moorman and Podsakoff, 1992; Spector, 1987).

References

- Adams, J.S. (1963), "Toward an understanding of inequity", *Journal of Abnormal Social Psychology*, Vol. 67, pp. 422-36.
- Akaike, H. (1987), "Factor analysis and AIC", *Psychometrika*, Vol. 52, pp. 317-32.
- Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103, pp. 411-23.
- Baker, D.D. and Ganster, D.C. (1985), "Leader communication style: a test of average versus vertical dyad linkage models", *Group and Organization Studies*, Vol. 10, pp. 242-9.
- Bales, R.F. (1958), "Task roles and social roles in problem solving groups", in Maccoby, E.E., Newcomb, T.M. and Hartley, E.L. (Eds), *Readings in Social Psychology*, Holt and Rinehart, New York, NY, pp. 437-47.
- Bentler, P.M. (1990), "Comparative fit indices in structural models", *Psychological Bulletin*, Vol. 107, pp. 238-46.
- Bhal, K.T. and Ansari, M.A. (1996), "Measuring quality of interaction between leaders and members", *Journal of Applied Social Psychology*, Vol. 26, pp. 945-72.
- Bhal, K.T. and Ansari, M.A. (2000), *Managing Dyadic Interactions in Organizational Leadership*, Sage, New Delhi.
- Bies, R.J. and Moag, J.S. (1986), "Interactional justice: communication criteria for fairness", in Sheppard, B. (Ed.), *Research on Negotiation in Organizations*, JAI, Greenwich, CT.
- Bollen, K.A. (1989), "A new incremental fit index for general structural equation models", *Sociological Methods and Research*, Vol. 17, pp. 303-16.
- Brief, A.P. (1998), *Attitudes in and around Organizations*, Sage, Thousand Oaks, CA.
- Browne, M.W. and Cudeck, R. (1993), "Alternative ways of assessing model fit", in Bollen, K.A. and Long, J.A. (Eds), *Testing Structural Equation Models*, Sage, Newbury Park, CA.
- Cropanzano, R. and Folger, R. (1989), "Referent cognitions and task decision autonomy: beyond equity theory", *Journal of Applied Psychology*, Vol. 74, pp. 293-9.

- Cropanzano, R. and Folger, R. (1991), "Procedural justice and worker motivation", in Steers, R.M. and Porter, L.W. (Eds), *Motivation and Work Behavior*, McGraw-Hill, New York, NY.
- Dansereau, F., Graen, G. and Haga, W.J. (1975), "A vertical dyad linkage approach to leadership within formal organizations: a longitudinal investigation of the role making process", *Organizational Behavior and Human Performance*, Vol. 13, pp. 46-78.
- DeConinck, J.B. and Stilwell, C.D. (2004), "Incorporating organizational justice, role states, pay satisfaction in a model of turnover intentions", *Journal of Business Research*, Vol. 57, pp. 225-31.
- DeCremer, D. and van Knippenberg, D. (2003), "Cooperation with leaders in social dilemmas: on the effects of procedural fairness and outcome favorability in structural cooperation", *Organizational Behavior and Human Decision Processes*, Vol. 91, pp. 1-11.
- Deci, E.L. (1975), *Intrinsic Motivation*, Plenum, New York, NY.
- Dienesch, R.D. and Liden, R.C. (1986), "Leader-member exchange model of leadership: a critique and further development", *Academy of Management Review*, Vol. 11, pp. 618-34.
- Duchon, D., Green, S.G. and Taber, T.D. (1986), "Vertical dyad linkage: a longitudinal assessment of antecedents, measures and consequences", *Journal of Applied Psychology*, Vol. 71, pp. 56-60.
- Dulebohn, J.H. and Ferris, G.R. (1999), "The role of influence tactics in perceptions of performance evaluations' fairness", *Academy of Management Journal*, Vol. 42, pp. 288-303.
- Folger, R. (1977), "Distributive and procedural justice: combined effect of 'voice' and peer opinions on responses to inequity", *Journal of Personality and Social Psychology*, Vol. 35, pp. 108-19.
- Folger, R. and Cropanzano, R. (1998), *Organizational Justice and Human Resources Management*, Sage, Thousand Oaks, CA and London.
- Folger, R. and Konovsky, M.A. (1989), "Effects of procedural and distributive justice on reactions to pay decisions", *Academy of Management Journal*, Vol. 32, pp. 115-30.
- Folger, R., Rosenfield, D., Hays, R.P. and Groove, R. (1978), "Justice versus justification effects on productivity: reconciling equity and dissonance findings", *Organizational Behavior and Human Performance*, Vol. 22, pp. 465-78.
- Gerstner, C.R. and Day, D.V. (1997), "Meta-analytic review of leader-member exchange theory: correlates and construct issues", *Journal of Applied Psychology*, Vol. 82, pp. 827-44.
- Gomez, C. and Rosen, B. (2001), "The leader-member exchange as a link between managerial trust and employee empowerment", *Group and Organization Management*, Vol. 26, pp. 53-69.
- Graen, G. (1976), "Role making processes within complex organizations", in Dunnette, M.D. (Ed.), *Handbook of Industrial and Organizational Psychology*, Rand McNally, Chicago, IL, pp. 1201-45.
- Graen, G. and Cashman, J. (1975), "A role-making model of leadership in formal organizations: a developmental approach", in Hunt, J.G. and Larson, L.L. (Eds), *Leadership Frontier*, Kent State University Press, Kent, OH, pp. 143-65.
- Graen, G.B. and Scandura, T.A. (1987), "Toward a psychology of dyadic organizing", in Cummings, L.L. and Staw, B. (Eds), *Research in Organizational Behavior*, Vol. 9, JAI Press, Greenwich, CT, pp. 175-208.
- Graen, G., Novak, M. and Sommerkamp, P. (1982), "The effects of leader-member exchange and job design on productivity and satisfaction: testing a dual attachment model", *Organizational Behavior and Human Performance*, Vol. 30, pp. 109-31.

-
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, Prentice-Hall, Upper Saddle River, NJ.
- Halpin, A.W. and Winer, B.J. (1957), "A factorial study of the leader behavior descriptions", in Stogdill, R.M. and Coons, A.E. (Eds), *Leader Behavior: Its Description and Measurement*, Ohio State University, Bureau of Business Research, Columbus, OH.
- Hui, C., Law, K.S. and Chin, Z.X. (1999), "A structural equation model of the effects of negative affectivity, leader-member exchange, and perceived job mobility on in-role and extra-role performance: a Chinese case", *Organizational Behavior and Human Decision Processes*, Vol. 77, pp. 3-21.
- Jacobs, T.O. (1971), *Leadership and Exchange in Formal Organizations*, Human Resources Research Organization, Alexandria, VA.
- Jöreskog, K.G. and Sörbom, D. (1984), *LISREL-VI User's Guide*, Scientific Software, Mooresville, IN.
- Katz, D. and Kahn, R.L. (1978), *The Social Psychology of Organizations*, Wiley, New York, NY.
- Kelloway, E.K. (1998), *Using LISREL for Structural Equation Modeling: A Researcher's Guide*, Sage, Thousand Oaks, CA.
- Kolb, D.M. and Putman, L.L. (1992), "The multiple faces of conflict in organizations", *Journal of Organizational Behavior*, Vol. 13, pp. 311-24.
- Konovsky, M. and Cropanzano, R. (1991), "The perceived fairness of employee drug testing as a predictor of employee attitudes and job performance", *Journal of Applied Psychology*, Vol. 76, pp. 698-707.
- Krone, K.J. (1992), "A comparison of organizational, structural and relationship effects on subordinates' upward influence choices", *Communication Quarterly*, Vol. 40, pp. 1-15.
- Liden, R.C. and Maslyn, J.M. (1998), "Multidimensionality of leader-member exchange: an empirical assessment through scale development", *Journal of Management*, Vol. 24, pp. 43-73.
- Likert, R. (1961), *New Patterns of Management*, John Wiley, New York, NY.
- Little, T. (1997), "Mean and covariance structures (MACS) analyses of cross-cultural data: practical and theoretical issues", *Multivariate Behavioral Research*, Vol. 32, pp. 53-76.
- Locke, E.A. (1976), "The nature and causes of job satisfaction", in Dunnette, M.D. (Ed.), *Handbook of Industrial and Organizational Psychology*, Rand McNally, Chicago, IL, pp. 1293-349.
- Lowe, R.H. and Vodanovich, S.J. (1995), "A field study of distributive and procedural justice as predictors of satisfaction and organizational commitment", *Journal of Business and Psychology*, Vol. 70, pp. 99-114.
- McFarlin, D.B. and Rice, R.W. (1992), "The role of facet importance as a moderator in job satisfaction processes", *Journal of Organizational Behavior*, Vol. 13, pp. 41-54.
- Manogran, P., Stauffer, J. and Conlon, E.J. (1994), "Leader-member exchange as a key mediating variable between employees' perception of fairness and employee citizenship behavior", *National Academy of Management Meeting Proceedings*, Dallas, TX.
- Maslyn, J. and Uhl-Bien, M. (2001), "Leader-member exchange and its dimensions: effects of self-effort and other's effort on relationship quality", *Journal of Applied Psychology*, Vol. 86, pp. 697-708.

- Masterson, S.S., Lewis, K., Goldman, B.M. and Taylor, M.S. (2000), "Integrating justice and social exchange: the differing effects of fair procedures and treatment on work relationships", *Academy of Management Journal*, Vol. 43, pp. 738-48.
- Moorman, R.H. and Podsakoff, P.M. (1992), "A meta-analytic review and empirical test of the potential confounding effects of social desirability response sets in organizational behavior research", *Journal of Occupational and Organizational Psychology*, Vol. 65, pp. 131-49.
- Mowday, R.T., Porter, L.W. and Steers, R.M. (1982), *Employee-Organization Linkages*, Academic Press, New York, NY.
- Mowday, R., Steers, R.M. and Porter, L.W. (1979), "The measurement of organizational commitment", *Journal of Vocational Behavior*, Vol. 14, pp. 224-47.
- NASSCOM (2003), *NASSCOM Hewitt Total Rewards Study*, NASSCOM, New Delhi.
- NASSCOM (2005), *NASSCOM Strategic Report*, NASSCOM, New Delhi.
- Niehoff, B.P. and Moorman, R.H. (1993), "Justice as a mediator of the relationship between methods of monitoring and organizational internship behaviors", *Academy of Management Journal*, Vol. 36, pp. 527-56.
- Pettigrew, A.M. (1979), "On studying organizational cultures", *Administrative Science Quarterly*, Vol. 4, pp. 570-81.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88, pp. 879-903.
- Price, J.L. (2001), "Reflections on the determinants of voluntary turnover", *International Journal of Manpower*, Vol. 22, pp. 600-24.
- Price, J.L. and Mueller, C.W. (1986), *Handbook of Organizational Measurement*, Pitman, Marshfield, MA.
- Scandura, T.A. (1999), "Rethinking leader-member exchange: an organizational justice perspective", *Leadership Quarterly*, Vol. 25, pp. 25-41.
- Scandura, T.A. and Graen, G.B. (1984), "Moderating effects of initial leader-member exchange status on the effects of a leadership intervention", *Journal of Applied Psychology*, Vol. 69, pp. 428-36.
- Scandura, T.A., Graen, G. and Novak, M.A. (1986), "When managers decide not to decide autocratically: an investigation of leader-member exchange and decision influence", *Journal of Applied Psychology*, Vol. 71, pp. 1-6.
- Shore, L.M. and Wayne, S.J. (1993), "Commitment and employee behavior: comparison of affective commitment and continuance commitment with perceived organizational support", *Journal of Applied Psychology*, Vol. 78, pp. 774-80.
- Spector, P.E. (1987), "Method variance as an artifact in self reported affect and perceptions at work: myth or significant problem?", *Journal of Applied Psychology*, Vol. 72, pp. 438-43.
- Sweeney, P.D. and McFarlin, D.B. (1993), "Workers' evaluations of the ends and means: an examination of four models of distributive and procedural justice", *Organizational Behavior and Human Decision Processes*, Vol. 55, pp. 23-40.
- Tekleab, A.G., Takeuchi, R. and Taylor, M.S. (2005), "Extending the chain of relationships among organizational justice, social exchange, and employee reactions: the role of contract violation", *Academy of Management Journal*, Vol. 48, pp. 146-57.

- Vecchio, R.P. and Gobdel, B.C. (1984), "The vertical dyad linkage model of leadership: problems and prospects", *Organizational Behavior and Human Performance*, Vol. 34, pp. 5-20.
- Wakabayashi, M. and Graen, G.B. (1984), "The Japanese career progress study: a 7-year follow-up", *Journal of Applied Psychology*, Vol. 69, pp. 603-14.
- Wakabayashi, M., Graen, G.B., Graen, M.R. and Graen, M.G. (1988), "Japanese management progress: mobility into middle management", *Journal of Applied Psychology*, Vol. 73, pp. 217-27.

Further reading

- Graen, G.B. and Schiemann, W. (1978), "Leader-member agreement: a vertical dyad linkage approach", *Journal of Applied Psychology*, Vol. 63, pp. 206-12.

Corresponding author

Kanika T. Bhal can be contacted at: kanika@dms.iitd.ernet.in or ktbhal@gmail.com