

Gender Similarity and Individual Creativity as Moderators of the Relationship between Informal Leadership and Leader-Member-Exchange: A Longitudinal Study

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Abstract

This longitudinal study examines the quality relationship building between informal and formal leadership. Multisource data gathering technique was used to collect data from 46 teams with 333 subordinates and 46 supervisors at time 1 and 33 teams with 189 subordinates and 33 supervisors at time 2 of an Insurance company operating in Pakistan. Using threat theory we tested two contingencies: demographic similarity and competency on relationship building between informal and formal leadership. We found that Informal leadership position is positively related with Leader Member Exchange (LMX) quality and provided support to LMX literature that informal leadership precede LMX. We also found support for competency threat to shape relationship between informal leadership and LMX. Implications and future research directions also discussed.

Keywords: Demographic Similarity, Education Similarity, Informal Leadership, Individual Creativity, Leader Member Exchange (LMX), Vertical Relations, Value Threat.

1. Introduction

Presence of Informal leaders is critical for effective work performance at organizations (Friedrich et al., 2009; Pearce & Sims, 2002; Carson et al., 2007; Ensley et al., 2006). Unlike formal leaders, informal leaders use more relationship oriented approach by shaping others' motivation and task behavior for achievement of goals at workplaces (Lord, Foti, & De Vader, 1984; Schneier & Goktepe, 1983). Due to their relations and informal influence, Informal leaders are very affective at their workplaces (Pielstick, 2000). Through their relations with peers at organizations they manage to maintain influence, power, and peers' motivation (Schneier & Goktepe, 1983; Sparrowe & Liden, 2005; Salk & Brannen, 2000). They also take benefits of their position for higher performance (Zhang et al., 2012; Mehra, Kilduff, & Brass, 2001; Sparrowe, Liden, Wayne, & Kraimer, 2001). They use their relations to get assistance and support at work places which other lack. Informal leaders also maintain beneficial work relations with their formal leaders (Zhang et al., 2012; Erdogan et al., 2015). In this type of relationships both parties enjoy their part of benefits, leaders enjoy the achievement of goals by maintaining downward relationships (Masterson, Lewis, Goldman, & Taylor, 2000; Wayne, Shore, & Liden, 1997) and subordinates enjoy the benefits like favorable treatment from the managers (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997). Based on social exchange framework (Blau, 1964), LMX theory explains this unique and dyadic level relationship and the benefits associated with both parties and how actors involved in quality relationships are beneficial for the achievement of organizational goals (Bauer & Green, 1996; Masterson, Lewis, Goldman, & Taylor, 2000) and how individuals suffers when they maintain low quality LMX (Sherman et al., 2012; Hughes et al., 2010).

So, informal leaders' work relations are integral and crucial part of work life. But till date it is unclear that informal leadership would precede development of LMX or LMX would precede the development process between informal and formal leaders (Zhang, Waldman & Wang, 2012; Erdogan, Bauer & Walter, 2015). Also, Potential threat can ruin the relationship between two parties (Salovey and Rodin 1984; Tesser et al., 1988). How threat can shape relationship between informal and formal leaders also never investigated in previous literature. So, purpose of this study is twofold, we will explore the directionality of relationship between informal leadership and LMX, and we will also explore how potential threat shapes relationship between informal and formal leaders.

Most of previous research investigated relationships with vertical leader based on obligation to reciprocate to leaders using social exchange lens (e.g., Bauer & Green, 1996; Masterson, Lewis, Goldman, & Taylor, 2000; Wayne, Shore, & Liden, 1997). This mechanism is not sufficient to fully explain the nature of relationship which informal leaders maintain with their formal leaders because some relationships are also shaped by threat (Salovey and Rodin 1984; Tesser et al., 1988). So, Empirical studies are necessary to investigate the role of social exchange processes, confirmation bias and halo effects, in-group favoritism and competency, and out-group jealousy in accounting for relationship building between informal and formal leaders. Specifically, in this research we attempt to explore how quality relationship develops between informal and formal leaders and how threat shape quality relationship between informal and formal leader.

Purpose of this study is to fill three identified gaps in previous literature. First, this study is not the first to discuss the relationship building between formal and informal network position holders; some scholars

investigated impact of LMX on informal network positions (Zhang, Waldman & Wang, 2012; Erdogan, Bauer & Walter, 2015). We extend this inquiry but from other direction; we investigate the directionality of relationship between informal leadership and LMX by collecting data at different points in time, because, till date there is no empirical study to confirm the directionality of relationship between informal network position and LMX as noted by some researchers (Zhang et al., 2012; Erdogan et al., 2015). By doing so, we can complement with current studies to set the directionality between informal network positions and LMX and will have more complete understanding on the quality relation between informal leadership and LMX. Second, the critical role of LMX has been well addressed in previous studies (Erdogan & Baue, 2014) but we still know little about antecedents of LMX especially from subordinates' perspective. This study fits with the recent resurgence in the leadership literature that focuses on followers, rather than leadership itself (Uhl-Bien et al., 2014). So investigating the relationship between informal and formal leadership is critical and meaningful. Third, previous literature describes LMX as a dyadic level reciprocal relationship between subordinates and supervisors (Bauer & Green, 1996; Masterson, Lewis, Goldman, & Taylor, 2000). We extended this research by focusing on role of threat in relationship building between informal and formal leaders. Previous literature on threat showed that threat can affect and shape relationships (Salovey and Rodin 1984, 1991; Tesser et al., 1988) but how threat shapes relationship between desirable informal network positions and formal leaders have never been investigated previously. By doing so we will extend previous research on LMX that although reciprocal patterns in interactions develops quality LMX (Graen & Scandura, 1987) but potential threat will shape and manifest workplace relations in a different way.

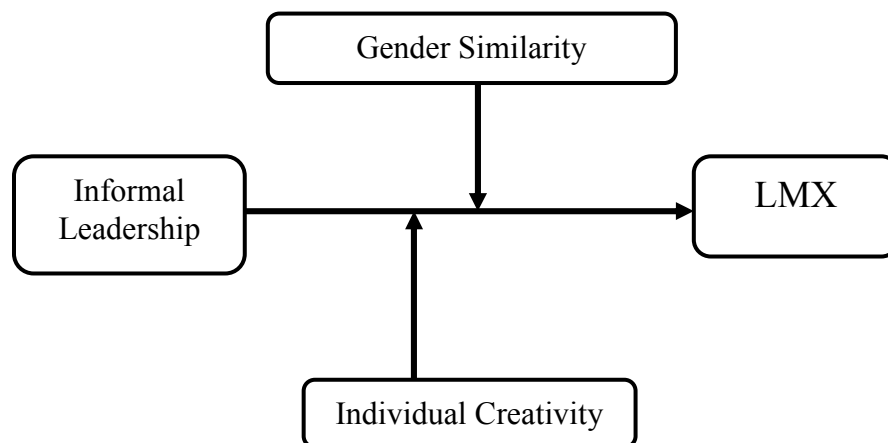


Figure 1: **Theoretical Model**

To explore the relationship between informal leadership and LMX we will build on previous bodies of research on LMX (e.g., Bauer & Green, 1996; Dienesch & Liden, 1986; Graen & Scandura, 1987) and value threat (M. Duguid, et al., 2012). Quality relationships are developed over time after several valuable exchanges between supervisors and subordinates (Bauer & Green, 1996; Dienesch and Liden, 1986; Graen and Uhl-Bien, 1995). Both formal and informal leaders hold valuable position in their networks, we will explore, do these desirable positions offer value to each other for further development of quality LMX while building on previous bodies of research on LMX. Also, LMX is a temporal process which necessitates a longitudinal study to understand development and directionality of quality LMX between informal and formal leaders. Further, to understand the role of threat in shaping relationships between informal and formal leader we will examine two contingencies: demographic similarity of informal leader with peers and competency of informal leader as sources of threat for formal leader. Collective threat, favoritism threat, and competitive threat are three types of threat which individuals feel in social settings (M. Duguid, et al., 2012). As prime objective of this study is to understand dyadic level relationship building between informal and formal leader so, for this study our focus will remain with favoritism threat and competitive threat. From this perspective, cardinal assumption of threat theory is that people feel threat of being seen less competent when other competent persons are available and also feel threat from the person who is perceived to be seen positively biased from similar others in the group. Integrating this concept to LMX literature will clear our understanding that although LMX is a developmental process but how workplace relationships are shaped by threat between informal network position holders and formal leaders. We expect here that competency and demographic similarity of informal leader with peers will moderate the relationship between informal leadership and LMX quality. To best of our knowledge, this is the only empirical study which explored systematically the threat perspective for informal network positions and also for LMX development. This study will also contribute to leadership literature by introducing novel predictors of leadership relations. Our study provided unique reason that how competency and demographic similarity of informal leader with peers shape relationships between informal and formal leaders.

2. Literature Review and Hypothesis

"It is not known what takes place between a leader and subordinate that results in a particular type of exchange" (Dienesch and Liden, 1986: 626). Since then a large body of research investigated to develop an understanding of LMX. Some theorist proposed that LMX quality is a developmental process initiated by interactions of supervisors and subordinates and these initial interactions are influenced by characteristics of both supervisors and subordinates (e.g., Dienesch & Liden, 1986; Mayer et al., 1995). In these early developments, both supervisors and subordinates bring different demographic characteristics and personalities to set a stage for further quality relationships. Some researchers found that LMX are developed in a process of role making, role taking, and role routinization (Bauer & Green, 1996). Prime premise in LMX theory is that dyadic level exchange relationship develops between individuals based on reciprocal nature of invested efforts by involved partners (Maslyn & Uhl- Bien, 2001). Parties involved in these exchange relationships test each other over a series of mutual exchanges to determine potential value of each other; this exchange relationship turns to quality relationship when parties involved see each other valuable for further mutual development of LMX quality (Maslyn & Uhl- Bien, 2001). Through a series of exchange relations parties involved invest and judge each other for offered value; leaders may offer increased liberty and power, and subordinates may offer performance in form of commitment, loyalty, and goal achievement (Dienesch & Liden, 1986; Liden & Graen, 1980). Indicating that if both leaders and subordinates continue to make value for each other than a mature and quality exchange relationship will be developed. However, if anyone of involved partners will see other partner less valuable for further development of quality relationship then a lower quality exchange relationship develops which is limited to minimum contractual requirement of workplace relationship (Erdogan et al., 2014). So, seeing other party valuable is integral and critical part in quality LMX development.

Leaders at organizations seek to maintain good relationships at organizations as key factor of managers' effectiveness at organizations is their relationships with subordinates (Yukl, 2010). Having formal authority, they delegate power (Bauer & Green, 1996) and provide favorable treatment (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997; Nelson, 1993) to employees who maintain good working relationships with them. At the other end, Informal leaders by virtue possess informal central positions in their networks. They use influence and relationship oriented approach at work places to get things done. They can affect individual's motivation, team process, and goal achievements (Schneier & Goktepe, 1983). They enjoy high prominence in their social circles (Salk & Brannen, 2000) and they enjoy influence and power in their teams (Brass, 1984, 1985; Sparrowe & Liden, 2005). So, both formal and informal leader holds their unique and individual value in their teams. Therefore, based on LMX theories, we expect here that both formal and informal leaders' valuable positions will attract each other for a quality relationship building. Formally:

Hypothesis 1: Informal Leadership position is positively related with LMX.

2.1. Favoritism and Competency Threat to Formal leader

Threat, "harms or losses that have not yet taken place but are anticipated" (Lazarus and Folkman 1984, p. 32). Different acts of individuals can activate threat for others, and activated threats are almost always associated with negative emotional responses because these are related with material and non material losses which spoil image, status, and power (Williams, 2007). Individuals can experience different forms of threat which can shape their behavior and focus (Aquino and Douglas, 2003; Forster, Higgins & Bianco, 2003). Value threat (Collective, Favoritism, and Competency) is a special form of threat which triggers when an individual perceives that others will not see him as valuable as he see himself valuable for the group. This threat perception is related with external appraisal and not related with any internal or actual perception of others (Mead, 1934; Tice & Wallace, 2003). Most social structures are instable and have potential to change (Sapolsky, 2005; Van Vugt et al., 2008; Ellemers, Wilke, & Van Knippenberg, 1993). Instability within group hierarchy can be threatening for the leader's power and position. Consequently, in social structures, any individual can feel, experience, and perceive this value threat but Individuals with high status and power will experience more value threat than other low status and less powerful persons of the group (M. Duguid, et al., 2012). These explanations shows that formal leader in any team is more vulnerable to value threat than other members of the team.

Peers see Informal leaders more similar to themselves in the group (J. Klein et al., 2004), which increases sense of similarity, attraction, and social integration (Byrne, 1971; Lincoln and Miller 1979). Similarity with others promotes attraction and enhance interactions (e.g., Chatman et al., 1998; O'Reilly, Caldwell, & Bameett, 1989; Smith, Smith, Olian, Sims, O'Bannon, & Scully, 1994). However, dissimilarity can be costly and negatively influence the social integration in same work units (Williams & O'Reilly, 1998). Individuals who share some traits are seen to be inclined to each other. Similarities among group members make them clearly identify each other, interact with each other, and link them psychologically in the group through social integration process (Hambrick, 1994:189). Demographic similarity with supervisors is also found to have positively biased influence on performance ratings at organizations (Tsui & O'Reilly, 1989; Turban & Jones, 1988) and leader relations (Matkin & Barbuto, 2012). Gender is chosen in this study to measure demographic

similarity between informal leaders and other group members because gender is proved to be source of substantial inclination between individuals (Markham, Harlan, & Hackett, 1987; Farh, Tsui, Xin, & Cheng, 1998; Schaubroeck & Lam 2002). Threat theory explains that high status and powerful person of the group feels threat from the person who is perceived to be seen positively biased due to demographic similarity by others in the group, this type of threat is called favoritism threat (M. Duguid, et al., 2012). So, gender similarity between informal leader and other group members will increase inclination between them. Based on threat framework, we hypothesize here that this inclination will be seen favoritism threat by formal leaders of the group and will negatively moderate the relationship between informal and formal leader. Formally:

Hypothesis 2: Gender similarity of informal leader with peers will moderate negatively the relationship between Informal Leadership and LMX.

In social settings, individuals make comparisons with others that favor themselves to enhance their image and self-esteem (Beauregard and Dunning, 1998) but when individuals compare themselves with others who are performing better than themselves, they often feel threat. These upward comparisons (comparison with better others) often produce negative emotional responses and spawn inferiority, insecurity, jealousy, frustration, and hostility (Mussweiler et al., 2000; Salovey and Rodin, 1984; Testa and Major, 1990; Martin, 1986; Marsh and Parker, 1984). Supporting these lines of research, threat theory also explains that presence of one competent person is competency threat to high status and powerful member of the group (M. Duguid, et al., 2012).

Creative individuals are good performers of the teams and can be a source of such threat for formal leader. Creative individuals possess tremendous abilities to find new and appropriate solutions to complex and routine problems (Cummings & Oldham, 1997). They provide their work environment a diverse pool of knowledge and multiple ideas for any situation (Taggar, 2001, 2002). They increase likelihood of finding solutions, new variety of answers, and new directions of thinking (Tagger, 2001; Zhou, 2003). Due to their proficiency in skills, they can gain high status, prominence, and power in teams. Competency threat can also turn good relationships into bad ones by increasing desire to distance oneself from better performers (Salovey and Rodin 1984, 1991; Tesser et al., 1988). So presence of creative informal leader will spawn threat in relationship between informal and formal leaders. Therefore, based on threat framework, we expect here that individual creativity of informal leader will negatively moderate the positive relationship between informal leader and LMX. Formally:

Hypothesis 3: Individual Creativity of informal leader moderates negatively the relationship between Informal Leadership and LMX.

3. Methodology

3.1. Sample and Data Collection

Management of a Insurance company operating in Pakistan was contacted for data collection from teams working at different controlling offices of the bank. Purpose of study and its significance was discussed in detail with bank's management. With approval from higher management we selected 46 teams to provide their feedback on different scales at two points in time. 334 members of these 46 teams provided their feedback (time 1) and after approximately 28 weeks (time 2) we again requested for data collection from these 46 teams. At time 2 we received completed survey from 31 teams (77.5% overall response rate) with 195 members (66% overall response rate). In time 2 only dyads which were not changed during this time were considered eligible to test our model of this study. Eligible data of 33 teams (72%) and 189 members (60.8%) were used to test directionality in relationship between informal and formal leaders and then impact of threat on informal and formal leaders relationship building is tested using same data set.

Time 1 sample consisted of 76.2% male and 23.8 % female; average education of employees was 2.01; current organization working experience of employees was 10.45 years; total job experience was 16.76 years with current team working experience 4.85 years as an average. The eligible sample after time 2 had an average 78.2% male and 21.8% female; average education level of employees was 2.62; current organization working experience of employees was 11.01 years; total experience was 15.60 years with current team working experience 4.51 years as an average.

Our selected 46 teams work at controlling offices of the Company with 6-9 employees per team. We started our data collection process with formal approval of higher management of the bank. One officer from HR department of the Company assisted data collection process. Each one of these 334 Members of 46 selected teams already had an assigned computer for routine work. For both time 1 and time 2, we uploaded the questionnaire for employees, coworkers, and for their managers and tagged id of each employee with relevant questionnaire as per our requirements using learning portal of the bank. Each member of these selected teams and their supervisors provided their individual response for the questionnaire using their individual profiles on that learning portal.

Three sources (employee, coworkers, and managers) were used to collect data at time 1. We asked all participants to provide demographic information and also their individual response for main study variables. Self

reporting measure of LMX quality was used for response of employees. Coworker's response was used to check informal leader in every team. Each member ranked all others on a scale excluding formal manager and self. Finally, managers ranked each individual of their team for individual creativity. Likert type scales were used to collect data for all measures of this study. Data for Informal leader of the team was collected using 3 point likert type scale (Carson et al., 2007). At time 2, approximately 28 weeks after time 1 response, we again asked employees of these teams to provide their response for LMX quality on self reporting measure. Response of all participants were downloaded and emailed to the first author directly by the coordinator of data collection process. Dummy employee codes and dummy team numbers were assigned to all teams, supervisors, and subordinates for identification and matching of response at time 1 and time 2.

3.2. Measures

Informal leadership: Coworker's perceived influence for leadership is used to measure informal leader in teams (Carson et al., 2007) at time 1. Each member of the team ranked every other individual excluding self and manager. To eliminate the chances of any social concern among coworkers we asked them to recall and provide at-least 5 names of their team mates by themselves excluding self and manager and then rate each of these individuals by answering the question: "To what degree do these mentioned coworkers have influence in this team?" on a three point likert type scale 1-Very little, 2- Some, and 3- Very much. Then informal leader for each team was calculated using average method of coworker's rankings (Carson et al., 2007). Response rate in each team was above 70% which is a threshold in social network literature (Zohar & Tenne-Gazit, 2008).

Leader-member exchange (LMX) quality: Liden & Graen (1980) Seven-item, seven point likert type scale is used to measure LMX at both time 1 and time 2. A sample item is "My supervisor and I are suited to each other". Subordinates provided their feedback at both time 1 and time 2 on this self reporting scale.

Individual Creativity: In field studies, supervisor ratings are most widely used to measure individual creativity (George & Zhou, 2001, 2002; Oldham & Cummings, 1996; Scott & Bruce, 1994; Zhou, 2003; Zhou & George, 2001). Janssen, (2001) Three-item, five point likert type scale is used to measure individual creativity by supervisors at time 1. Sample item is "How often does this employee generating original solutions to problems".

Gender similarity: Gender was dummy coded as 0 representing Female and 1 representing Male. Following previous research we used absolute difference method to measure gender similarity (Liden et al., 1993; Turban and Jones, 1988; Kurdek, 1993; Bauer & Green, 1996) between informal leader and other group members.

Control Variables: Several control variables are used in this research. Several demographic variables have shown affects on quality of LMX (Dienesch & Liden, 1986; Liden et al., 1993; Bauer and Green, 1996). Following previous studies, we controlled for gender, education, current organization experience, total experience, and current team tenure. Subordinates and supervisors both provided response for control variables on self reporting measures.

4. Results

Table 1 shows the mean, standard deviation, and correlation among all the study variables collected at time 1 and Table 2 shows mean, standard deviation, and correlation among study variables of eligible sample collected at time 1 and 2. Our selected teams of the company were nested further into departmental units so use of OLS regression was not relevant for our research and sample because use of this could under estimate the coefficient and standard errors. Therefore, we used Mplus 7.0 to test multiple and nested groups with random coefficients in our study. Mplus framework explicitly supports nested group analysis and suited for analysis of our study. We grand mean centered all the variables before analysis as recommended by Hofmann and Gavin (1998).

Table 3 contains regression results with standardized coefficients, Chi-Square test performed to test each model with nested models and significance of coefficient also examined. Although Mplus is a strong statistical tool for different type of tests but for nested model, output produced by the software cannot be used directly for Chi-Square difference test. So to make this output useable we have to further perform Satorra-Bentler scaled Chi-Square difference tests using Loglikelihood as recommended by Muthén and Muthén (1998-2010).

Table 1.
 Means, Standard Deviation, and Correlation among study variables, time 1

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. Gender	0.69	0.33								
2. Education	2.01	0.31	-0.012							
3. Current Org. Experience	10.45	2.02	0.098*	-0.076						
4. Total Job Experience	16.76	3.07	0.121**	-0.012	0.203**					
5. Member's Team Tenure	4.85	1.08	0.198	-0.042	0.019**	0.073**				
6. Informal Leadership	1.83	0.88	0.109	0.198**	0.087**	0.024**	0.017*			
7. Leader Member Exchange (LMX)	4.19	1.12	0.098	0.276**	-0.078	0.084	-0.012	0.024**		
8. Gender Similarity	0.83	0.23	-0.092**	-0.291*	-0.113	-0.201	-0.123**	-0.028**	-0.021**	
9. Individual Creativity	3.43	0.43	0.178	0.0389**	-0.012**	-0.078	-0.023**	0.128**	0.012**	-0.028

Note. N=333. Gender was coded as 0 = Female, 1 = Male. Education was coded as 1= College Graduate, 2 = Bachelor Degree, 3=Master Degree. Current Organization's Experience, Current Team Experience, and Total Banking Experience were measured in years.
 * $p < .05$. ** $p < .01$

Table 2.
 Means, Standard Deviation, and Correlation among study variables, time 2

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	0.71	0.31									
2. Education	2.62	0.41	-0.028								
3. Current Org. Experience	11.01	2.14	0.135	-0.156							
4. Total Job Experience	15.60	3.15	-0.172*	-0.093	0.038**						
5. Member's Team Tenure	4.51	1.09	0.163*	-0.074	0.076**	0.204**					
6. Informal Leadership	1.62	0.76	0.073	0.298**	0.084**	0.046**	0.304				
7. Leader Member Exchange (LMX), time1	4.76	1.15	0.052	0.056**	-0.176	-0.031	-0.276	0.054**			
8. Leader Member Exchange (LMX), time 2	0.76	0.32	0.087	0.067**	-0.066	-0.192	-0.112*	0.103**	0.037**		
9. Gender Similarity	3.31	0.52	-0.065**	-0.238	-0.026	-0.034	-0.211**	-0.224**	-0.014	-0.050*	
10. Individual Creativity	0.73	0.36	0.090	0.092**	-0.013	0.072	-0.344**	0.031	0.029**	0.017**	-0.301

Note. N=189. Gender was coded as 0 = Female, 1 = Male. Education was coded as 1= College Graduate, 2 = Bachelor Degree, 3=Master Degree. Current Organization's Experience, Current Team Experience, and Total Banking Experience were measured in years.
 * $p < .05$. ** $p < .01$

Table 3.
 Random Coefficient Regression Results for the Moderator Analysis with Leader-Member-Exchange Time 2 as the outcome variable ^a

Predictor	Model1		Model2		Model3		Model4	
	Estimate1	Estimate2	Estimate1	Estimate2	Estimate1	Estimate2	Estimate1	Estimate2
Leader Member Exchange time 1		0.304**		0.324**		0.345**		0.387**
Informal Leadership	0.718**	0.168*	0.072**	0.675**	1.665**	0.032**	1.806**	1.082**
Gender Similarity	0.232	0.017	0.194	0.042			1.087	0.801
Individual Creativity	0.026	-0.206			0.098*	0.733	0.812**	0.303*
Informal Leadership X Gender Similarity			-0.339	-0.062			-0.309	-0.057
Informal Leadership X Individual Creativity					-0.052*	-0.088*	-0.403**	-0.023**
$\Delta \chi^2$	25.00**	38.60**	39.50**	46.01**	34.70**	46.92**	49.80**	53.17**
R ²	0.063	0.082	0.026	0.252	0.233	0.331	0.105	0.235

Note. N=189. $\Delta \chi^2$ refers to Satorra-Bentler scaled chi-square difference test Muthén and Muthén (1998-2010). R² is degree of reduction in error variance (Snijders, 2011).
 * $p < .05$. ** $p < .01$

^a Coefficients of all control variables are excluded from the table.

Table 1 results shows that LMX is positively related to education ($r = 0.276$, $p < .01$), informal leadership ($r = 0.024$, $p < 0.01$), individual creativity ($r = 0.128$, $p < 0.01$), and negatively related to gender similarity ($r = -0.021$, $p < 0.01$). Table 2 results shows that LMX time 1 is positively related to education ($r = 0.056$, $p < 0.01$), informal leadership ($r = 0.054$, $p < 0.01$), LMX time 2 ($r = 0.037$, $p < 0.01$), and individual creativity ($r = 0.029$, $p < 0.01$). LMX time 2 is positively related to education ($r = 0.067$, $p < 0.01$), informal leadership ($r = 0.103$, $p < 0.01$), individual creativity ($r = 0.029$, $p < 0.01$), and negatively related to member's team tenure ($r = -0.112$, $p < 0.05$) and gender similarity ($r = -0.050$, $p < 0.05$).

Hypothesis 1 predicts informal leadership position is positively related to LMX. LMX was measured at two points in time from same raters, informal leadership was measured at time 1, moderators were measured from data collected at time 1, and all control variables were also collected at time 1. Hypothesis 2 and 3 predicts moderating effect of gender similarity and individual creativity on relationship between informal leadership and LMX. We conducted random coefficient regression analysis using our final sample to test directionality in relationship and role of moderators in shaping relationship. Results of these regression analyses are presented in Table 3. There are 4 models in this table and two estimates under each model. First estimate represent regression results of study variables with LMX collected at time 2 and second estimate of each model represent regression results of the study variables with LMX collected at time 2 and controlled for LMX time 1.

In model 1 we entered all control variables along with informal leadership, LMX, gender similarity, and

individual creativity. In model 2, we entered interaction term representing moderating effect of gender similarity on relationship between informal leadership and LMX. In model 3, we entered another interaction term representing moderating effect of individual creativity on the relationship between informal leadership and LMX. In model 4, we entered both interaction terms to check moderating role of each variable in presence of another one. Informal leadership showed more stable behavior for LMX than other variables of this study in all tested models confirming hypothesis 1 and directionality of relationship between informal leadership and LMX. Intra-class correlation coefficient for LMX(time 1) was 0.310; LMX(time 2) was 0.276; informal leadership was 0.276; Individual creativity was 0.216.

In model 1, Informal leadership was positive predictor of LMX for both estimates. In model 2 LMX time 1 and informal leadership were positive predictors of LMX. However, the interaction term representing moderating effect of gender similarity showed non-significant effect on the relationship between informal leadership and LMX for both estimates indicating no support for our hypothesis 2. In model 3, we entered informal leadership, individual creativity, and interaction term representing moderating effect of individual creativity on the relationship between informal leadership and LMX. Informal leadership and individual creativity remained positive predictors of LMX however, interaction term showed negative significant effect of moderator on the relationship between informal leadership and LMX indicating partial support for our third hypothesis.

In model 4, we entered informal leadership, individual creativity, gender similarity, and both interaction terms. Informal leadership and individual creativity remained positive predictors and moderating effect of individual creativity showed negative significant coefficient for both estimates proving our hypothesis 1 and 3. However, again non-significance coefficient of interaction term of gender similarity for both estimates finally rejected hypothesis 2 of our study. We found that individual creativity of informal leader weakened the positive relationship between informal leadership and LMX; however, gender similarity was not moderating the relationship between informal leadership and LMX.

5. Discussion

Good relations are advantageous for both formal leaders and informal network position holders. In this study we focused on the relationship building between informal network position holders and formal leaders. Our results revealed that the relationship between informal leadership position and LMX is preceded by informal leadership. Creative informal leaders are seen threat by formal leaders. Competency of informal leader can independently hinder quality relationship building between formal and informal leader in teams.

In this study we integrated LMX literature with threat theory (M. Duguid, et al., 2012) to clarify our understanding about relationship building of informal network position holder with formal leader of the team. In this longitudinal study our results revealed that informal network position is positively related with LMX indicating that both informal network position holder and formal leader need good work relationships at workplaces. Formal leaders see network created Informal positions valuable and beneficial as through these they can manage and control their work teams. Informal leaders also see relationship building with formal leaders valuable as through good relations they can receive desirable treatment; these findings are consistent with previous research on informal leadership and LMX.

However, informal leadership is negatively related with LMX when informal network position holder is a creative individual, indicating that creative individual in team holding central network position will be seen a competitive threat by formal leader. Competency threat can lead to increase in distance between individuals (Salovey and Rodin 1984, 1991; Tesser et al., 1988) and also competency of a group member is a competency treat to high status and powerful person of the group (M. Duguid, et al., 2012). Our results also supported this contingency, informal leaders who are also creative at their organizations are seen as threat by formal leaders, informal leaders of this ability will see it difficult to maintain quality relationships with formal leaders and their chances of making good work relationships with formal leader are fewer. However, our results show that gender similarity between informal leader and peers is not seen as threat by formal leader so is not affecting relationship between informal leader and LMX.

5.1. Theoretical Implications

LMX development between supervisors and subordinates is a temporal process (Bauer & Green, 1996). Through this study we found general support to LMX development and threat in relationships. We tested threat framework to understand more on relationship building between informal and formal leadership in teams and made some theoretical contributions. Our findings generally confirm the temporal nature of LMX development between informal and formal leaders. LMX and network informal positions are related with each other although, these arguments existed in literature but the directionality of relationship between informal leadership and LMX has never been tested previously. The longitudinal analyses of this study, unfolds the directionality between informal leadership and LMX. Moreover, central to LMX literature our results also revealed that seeing valuable

to each other is integral part of LMX development. These findings, coupled with previous literature on LMX (e.g. Bauer & Green, 1996) suggest that both formal leaders and subordinates judge each other for offered value which promote or hinder further development of quality LMX between involved parties.

We also advance research on LMX quality by testing the key tenets of value threat theory (M. Duguid, et al., 2012). In line with this framework, our results revealed that high status and powerful member (formal leader) of a group feel threat from competent person of the group. Consistent with previous literature we found that competency threat impedes good relationships (Salovey and Rodin 1984, 1991; Tesser et al., 1988). As hypothesized, we found that Informal Leadership is positively related with LMX, indicating that informal network position holders and formal leaders both need good work relations for their own benefits. Also as expected, we found that informal leader's creativity independently hinder relationship building between informal and formal leaders. These empirical findings supporting threat theory that competency is seen threat by high status and powerful member of team (M. Duguid, et al., 2012) and impedes relationships between individuals (Salovey and Rodin 1984, 1991; Tesser et al., 1988). However, our results did not provide support to the contingency that gender similarity between informal leader and peers is threat for formal leadership. Two of our hypothesis regarding relationship building between informal leadership and LMX are supported by our results which are theoretically significant and meaningful.

This study also extends previous research on informal leadership that how individuals who hold informal central network positions can enjoy their good relationships with formal leaders. In these relationships we investigated subordinates as a source of threat, and how in threat conditions relationships between informal and formal leaders flourish. Most of the previous research on leadership is from leader's perspective. This study also stands with current resurgence in leadership literature which focuses on followers rather than leaders (Uhl-Bien et al., 2014). Our results revealed that creative individuals who hold informal leadership position in their network face difficulty in maintaining good work relations with their formal leaders. This study is among the first to test informal leaders' vertical relations from threat theory perspective.

5.2. Practical Implications

Studies on real life teams for informal leadership are very rare as most of researchers used students as their sample while investigating leadership in teams (e.g., Vecchio, 2002). To understand leadership, previous researchers composed teams for short period of time in controlled and experimental environments (Hogan, Curphy, & Hogan, 1994; Wheelan & Johnston, 1996). So till date we know little about relationship building between employees and formal leaders when employees occupy central network positions. Thus understanding the relationship building of informal network position holder with formal leader in real life teams was significant and critical. Because unlike temporarily composed student teams, real life teams have different compositions, they have more autonomy in their relationships, they perform diverse tasks at organizations, they have different coordination settings, they have large life span, and their relationship effects work environment for performance and effectiveness. Empirical findings of real life teams will help practitioners to closely understand the relationship building between informal network position holders and formal leaders and what factors are actually hindering or promoting relationships building between these two parties.

In social settings individuals have to maintain good work relations with different actors of their teams. Our empirical findings revealed that good relationships between informal leader and formal leader are important, beneficial, and required by both parties. Informal network position holders at organizations are seen valuable by their formal leaders which lead to development of quality relationships between these position holders and formal leaders. So, social standing of focal employee among peers is important predictor of his/her relationships with formal leader. Individuals who want good working relations with their formal leaders are advised to strengthen their social standing among peers so that formal leaders could see them valuable in their group.

However, if informal leader is a creative individual then he will get fewer chances to make good relationships with formal leader due to his potential competency threat for formal leader. Indicating that formal leaders not only see someone valuable for development of quality relationships they also consider how much that focal employee is a potential threat to value of formal leader. In fact, it seems that focal actor must take into consideration that despite of offering value to formal leader for development of quality relationships what else he/she is doing to signal formal leaders a threat image which is hindering his valuable position to maintain quality relationships with formal leaders.

Summarizing above empirical findings, not all informal leaders will be able to maintain quality relationships with formal leaders of their group, and relationship building of informal leader with his/her supervisor depends on how much the value he/she offer as a central network position holder and how less he is seen threat by formal leader.

5.3. Limitations and future research

If data collected on two measures at same time from same person using same data collection technique then

correlation between these two variables can be inflated. To mitigate this validity issue we took two steps, first, on recommendation of (Podsakoff and Organ, 1986: 546), we separated data collection for dependent and independent variables at different points in time. Second, we collected data from different sources (employee, coworkers, and managers) for dependent, independent, and moderating variables to reduce chance of common method biasness for some measures. These two conservative steps reduced our sample size from 334 members of 46 teams to 189 members of 33 teams. Although, Our empirical findings revealed valuable information about formal and informal leaders relationship building for both practitioner and academia, Informal leadership was positively related with LMX and one moderator also worked as hypothesized. But this study is also not free from limitations.

First, Similarity with formal leader is seen to be positively related with development of LMX (e.g. Bauer & Green, 1996) on the other hand when formal leader see someone from his/her group similar to others instead of himself he feel threat from that focal person (M. Duguid, et al., 2012). We combined these two frameworks to check impact on relationship between that focal employee and formal leader of that group. But gender similarity showed non-significance behavior failing to predict that gender similarity between informal leader and peers is seen threat by formal leaders and the relationship between informal leadership and LMX will be negatively moderated by gender similarity. We do not see our results stands in stark contrast to threat and demographic similarity literature (e.g. M. Duguid, et al., 2012; Tsui & O'Reilly, 1989). Although, this finding is consistent with previous research which showed that gender similarity is not criteria to build trust, cooperation and attraction between individuals (Orbell et al., 1994; McAllister, 1995). But non-significance of gender similarity might also be result of our sample composition. In our final sample 79% of the formal leaders were male and 21% were female; 86% of the informal leaders were male and 14% were female. This shows that in our sample informal leaders were not only similar to peers of the groups they were also similar to formal leaders of their teams. Also, demographic characteristics affect relationships at early stage of LMX development (e.g. Bauer & Green, 1996) but performance related parameters matter in later stages (Dienesch & Liden, 1986). In our study we collected data from the teams which were mature in terms of tenure. So, there is a possibility that demographic similarity is seen threat by formal leaders in newly formed teams not in mature teams. These might be reasons of rejection of our second hypothesis. Future research can extend our work by investigating other demographic variables to measure demographic similarities between informal leaders and peers also, collecting data from newly formed teams at different points in time. By doing so, favoritism threat image of informal leader will clearly come out which may affect relationship between informal and formal leaders. The researchers are also advised to consider the similarity issues for same variable between informal and formal leaders, because in presence of similarity between informal and formal leader the potential threat will not come out. This type of investigation will clarify role of demographic similarity as a source of favoritism threat for formal leader.

Second, there exist multiple reporting lines in some real life teams. However, design limitations restrict us to test how relationships are shaped in presence of more than one formal leader. So, further study can extend our research by investigating teams with multiple formal leaders that how relationships flourish and shaped in presence of multiple formal leaders.

Third, in our longitudinal study we collected data from teams at two points in times whose dyads are not changed during that time. But employees' good relationships with formal manager starts in just 5 working days (Liden, Wayne, & Stilwell, 1993) and turn to quality relationships after several valuable exchanges (Bauer & Green, 1996; Maslyn & Uhl- Bien, 2001). Further research should collect data at different points in time from the teams whose formal leadership changed between these time frames. This type of study will help us understand that whether any change in formal leadership and team composition does have any effect on informal influence, power, and relationships in teams. The findings of this type of study will clear more dynamic picture of informal leaders' relationship building with formal leaders.

Further research should also use different industry to understand that whether relationships building between informal and formal leaders are same in other industries. Choosing industry other than banking will clear more dynamic picture of relationship between informal leader and formal managers. Finally, we tested individual creativity and education level similarity as moderators on the relation between informal leadership and LMX using threat framework. Further research should use other frameworks and moderators like voice behavior, other impression management tactics, and OCB to test the relationship between informal leader and LMX so that more dynamic picture of informal leader and formal leader relations come out.

6. Conclusion

Through this longitudinal study, we have shown that informal leadership position will precede LMX. Informal and formal leaders develop quality relationships by seeing each other's position valuable for further exchange. However, individual creativity of informal leader plays vital role in shaping the relationship such that individual creativity of informal leader weaken the relationship between informal leader and LMX. These findings indicate that, not all informal leaders will be able to maintain quality relationships with form leader, and social standing

of informal leaders with formal leader depend how much value his position creates for formal leaders and how less he/she is seen threat by formal leader. Further investigation into potential threat of informal leader is fruitful are for future research.

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