An Examination of the Relationship between Leader-Member Exchange and Innovative Work Behavior with the Moderating Role of Trust in Leader: A Study in the Turkish Context

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Abstract

This study aimed to examine the influence of leader-member exchange (LMX) from the perspectives of subordinates on innovative work behavior (IWB) and to test the role of perceived trust in leader as a moderator variable. A structured research survey was performed and data were collected from a sample of 327 non-supervisory employees that represented corporations and medium size companies from different sectors operated in Turkey. Confirmatory Factor Analysis (CFA) was used to examine the construction of the questionnaire and the relationship among LMX, IWB and trust in leader were tested applying the Structural Equation Modelling (SEM) technique. The analysis indicated that LMX quality had positive influence on trust in leader, but the influence of LMX was not significant on employees’ IWB. Contrary to what was hypothesized, LMX did not influence IWB. Moreover, the results revealed that trust in leader had positive influence on IWB and significantly moderated the relationship between perceived LMX quality and IWB of employees. Key implications of the research findings both for theory and for practice were discussed, potential limitations were identified, and suggestions for future research were specified.

Keywords: Leader-Member Exchange; Innovative Work Behavior; Trust in Leader; Structural Equation Modelling (SEM)

1. Introduction

It has been indicated that one way for organizations to become more innovative is to enhance employees’ creativity and ability to innovate (e.g. Nijhof et al., 2002; de Jong and Den Hartog, 2007). The extant literature reveals that the employees’ innovative work behavior (IWB) has been thought of in terms...
of personality characteristics (Hurt et al., 1977; McAdam and McClelland, 2002), situational-organizational characteristics (Kahai et al., 2003; de Jong and Den Hartog, 2008), and social psychological-behavioral characteristics (West and Farr, 1990; Shalley and Perry-Smith, 2001; Dorenbosch et al., 2005; de Jong and Den Hartog, 2008). In the current study, we adopted a “behavioral perspective” and address the influence of “leader-employee relations” and “employees’ trust in their leaders” on individual IWB. Thereby, we focused on investigating how LMX and employees’ trust in leader can influence their IWB. Although we viewed these factors as being crucial part of the IWBs, it is seen that these factors are still under-researched. In particular, we suggest that these mutually dependent or reciprocal interactions would be able to generate the quality of LMX, trust and IWB.

1.1. Innovative work behavior (IWB)

The pioneer psychological studies on innovation and innovative behavior addressed the term “innovative work behavior” (IWB) and contributed to the development of its conceptualization. Innovation theory has implied that innovation is broader than human creativity and also included the implementation of ideas (e.g. King and Anderson, 2002; de Jong and Den Hartog, 2008). The IWB literature shows that various authors have studied on its definition and brought up different dimensions in the IWB concept. West and Farr (1990) defined IWB as the intentional generation, promotion and realization of new ideas within a work role, workgroup or organization in order to benefit role performance, the group or the organization. Scott and Bruce (1994) built their conceptualization of IWB on Kanter’s (1988) study and proposed three distinct dimensions: idea generation, championing and implementation of the innovation. De Jong and Den Hartog (2008, p.5) indicated that IWB typically includes exploration of opportunities and the generation of new ideas (creativity related behavior), but could also include behaviors directed towards implementing change, applying new knowledge or improving processes to enhance personal and/or business performance (implementation oriented behavior. Carmeli et al. (2006) explained that IWB begins by employee’s identification of a work-based problem; continues with the development of new ideas and solutions for problems, and finally develops support for the new ideas and solutions, so they become embedded within the organization. Concerning the dimensionality of IWB construct, the literature provides researches which have been mostly performed over three dimensional view on IWB (e.g. Messmann and Mulder, 2010; Holman et al., 2012). Some authors also adopted more dimensions in the IWB concept (e.g. de Jong and Den Hartog, 2008; de Jong and Den Hartog, 2010; Spiegelaere et al., 2012). Nevertheless, researchers have agreed that IWB comprises employee creativity, the generation of new and useful ideas concerning products, services, processes & procedures, and implementation of the created ideas (Axtell et al. 2000; Anderson et al., 2004). It is also recognizable that Scott and Bruce (1994) have conceptualized individual innovation as a set of discretionary employee behaviors.

In the current study, we focus on IWB concept as a behavioral approach and explicate it within a broader framework encompassing social, organizational, motivational and psychological processes which yield employee IWB. According to some authors, contextual factors such as job design, job resources and job characteristics affect IWB through increased levels of motivation (Amabile et al., 1996; Shalley et al., 2004). Other empirical studies have focused on the effect of different factors on IWB, through a changed level of motivation (e.g. Carmeli and Spreitzer, 2009; Yuan and Woodman, 2010). It should be noted that usually, IWB is not specified as part of the formal job description of employees which can be stated as discretionary and extra-role behavior (Katz and Kahn, 1978). Thus, it is suggested that IWB mostly arise with the discretionary efforts and intuitions of employees as a result of their cognitive evaluations concerning the organizational environment, supervisor relations, contextual factors, etc. Driven by this assumption, this study focused on identifying IWB’s potential antecedents. The literature reveals that a
variety of organizational, individual and contextual factors have been studied as important determinants of IWB (e.g. Mumford et al. 2002; Janssen et al., 2004; Mumford and Licuanan 2004; Sanders et al., 2010; Taştan, 2013). Pioneering the IWB works, Hurt et al. (1977) examined generalized willingness to change as a personality-based aspect of individual innovation at work. A number of authors have examined how individual differences affect IWB and particularly focused on “personal characteristics” - propensity to innovate, intrinsic interest, mastery orientation- (Janssen and van Yperen 2004; Bunce and West 1995; Yuan and Woodman 2010), “cognitive features of individuals” - problem-solving style, problem ownership- (Scott and Bruce 1994; Dorenbosch et al., 2005), and “self-efficacy” (Farr and Ford, 1990; Bandura, 1997). As further, many researchers have studied on organizational and contextual factors and suggested supervisory behavior as an important driving force for IWB (Scott and Bruce 1994; Tierney et al., 1999; Mumford et al., 2002). There are particular works which have studied the effects of transformational leadership and leader-member exchange on IWB (e.g., Scott and Bruce 1994; Pieterse et al., 2010; Yuan and Woodman 2010; Xerri, 2013). Organizational culture (Scott and Bruce 1994), organizational climate (Scott and Bruce 1994; Taştan, 2013), and support for innovation (Axtell et al., 2000) have been also revealed as other organizational factors that were related to IWB. It was found that LMX had positive relationship with IWB (Li et al., 2012; Agarwal et al., 2012; Munoz-Doyague and Nieto, 2012; Xerri, 2013). In particular, we devoted attention to the relation of LMX with IWB noticing the role of perception of trust in leaders/managers.

It is known that LMX theory was originally referred to as Vertical Dyad Linkage (VDL) theory (Dansereau et al., 1975). This movement of vertical dyad linkage theory (Dansereau et al., 1975) took considerable attention of scholars and studies with the term leader-member exchange (LMX) theory (Graen and Uhl-Bien, 1995; Uhl-Bien, 2006). It is indicated that high-quality relations generate more positive leader outcomes than do lower-quality relations (Gerstner and Day, 1997; Krishnan, 2005; Uhl-Bien, 2006). The research studies that have investigated the potential predictors of LMX have revealed that work group cohesiveness, organizational climate, organizational support, job characteristics, and leader power were related to LMX (Cogliser and Schriesheim, 2000; Wayne et al., 2002; Piccola and Colquit, 2006). On the other hand, the previous literature confirms that quality of LMX is positively related to follower’s role clarity, job satisfaction, organizational commitment, social interactions, job performance, and citizenship behaviors and negatively related to role ambiguity, role conflict, intentions to turnover (Bauer and Green, 1996; Settoon et al., 1996; Wayne et al., 1997; Gerstner and Day, 1997; Schriesheim et al., 1999; Mayfield and Mayfield, 2009). It is suggested that basically Social Exchange Theory (SET) explains the interaction of leaders and employees and the reasons for differences in the influences of LMX quality on individual outcomes (Greguras and Ford, 2006; Xerri, 2013). Most of the research has also shown that higher LMX increases employee creativity and innovative behaviors. Amabile et al.’s (2004) studies on the Componential Theory of Creativity and showed that leaders can impact the level and frequency of followers’ creative behaviors. Shalley et al.’s (2004) study investigated the relationship between a supervisor’s LMX quality and employee creativity. A number of studies also provided substantial support for the positive relationships between high LMX quality and creativity (e.g., Zhou and George, 2003; Atwater and Carmeli, 2009). Scott and Bruce (1994) found that LMX was associated with IWB and high-quality LMX was an important determinant of creativity and innovation. In addition, Rüschoff (2008) found that the LMX quality mediates the relationship between transformational leadership and employees’ IWB. Based on the background literature, it is suggested that there is a high probability that high-quality LMX enhances more creative and IWB of employees. Thus, we have constructed a potential model which supposes that LMX quality and employees’ IWB are positively related. The first hypothesis is proposed as follows:

**Hypothesis 1:** Perceived LMX quality has a significant influence on IWBs of employees.
1.2. The relation of trust in leader with LMX and innovative work behavior

Borgen (2001, p. 224) implied that “trust in leader is integrally related to the capacity to predict and affect the other party’s behavior”. Due to the importance of trust in leader, Dirks and Ferrin (2002) have indicated that trust is studied with two different perspectives in literature. Trust between leader and member is explained using Social Exchange Theories and the group of studies using this approach is called “relation based”. In the second perspective, the emphasis is on the perceptions of members and their degree of vulnerability to the behaviors of the leader and this approach is called “character based” (Dirks and Ferrin, 2002). The literature shows that trust in leader concept has been studied with its potential antecedents and consequences in the organizations. The antecedents of trust in leader were also examined under “organizational factors, relational factors and individual factors” (Whitener et al., 1998, p. 513). Moreover, as a result of their meta analytic research, Dirk and Ferrin’s model (2002) involved variables such as LMX, job satisfaction, and innovation constructs which are also examined in the current study. With their Group Value Theory Lind and Tyler (1988) have shown procedural justice to be an antecedent of trust in leader. Wat and Shaffer (2005) demonstrated that trust in leader fully mediated the relationship between interactional justice and dimensions of OCB. Trust in leader also mediated the relationship between LMX and the conscientiousness dimension of LMX (Özyılmaz, 2010). A study of Poon et al. (2006) tested a model of trust in leader, propensity to trust and supervisor attributes (i.e. ability, benevolence, and integrity) and the path analysis results revealed that supervisor ability, benevolence, and integrity positively influenced trust in leader. Thus, hypothesis for the relation between perceived LMX quality and perceived trust in leader is proposed as follows:

Hypothesis 2: Perceived LMX quality has a significant influence on perceived trust in leader.

Besides, as Hudson (2004) mentioned, high levels of trust in leader influences subordinate performance, and influences the quality of the organizational outputs. Mayer et al. (1995) implied that subordinates with high levels of trust in leader are more motivated and willing to perform activities concerning the well-being of the organization. Chenhall and Langfield-Smith (2003) addressed that employees’ trust in leader facilitates reaching the individual and organizational goals, participation in problem solving and developing innovative strategies. An empirical study among public sector employees has revealed that trust in leader influenced employees’ innovative behavior significantly (Jafri, 2012). In this context, it is recognized that the literatures on trust in leader and innovative work behavior provides few researches explaining the influence of employees’ trust in leader on their innovative work behavior. Based on this objective, the third hypothesis is proposed as follows:

Hypothesis 3: Perceived trust in leader has a significant influence on IWBs of employees.

1.3. The moderating role of trust in leader on the relationship between LMX and IWB

The extant literature reveals that trust in leader concept has been examined as moderating variable within a number of research studies including the variables such as leadership, LMX, organizational justice, OCB, job performance, job satisfaction, commitment, and intention to leave (e.g., Chang and Chi, 2007; Schoorman et al., 2007). A meta-analytic review of Dirks and Ferrin (2002) focused on investigating the moderator role of trust between different trust antecedents such as transformational leadership, justice, and propensity to trust and outcomes such as OCBs, job performance, and job satisfaction. The trust in leader is also analyzed as a moderating variable on the relationship between justice dimensions and task performance(Colquitt et al., 2006). Moreover, the study of Chang and Chi (2007) demonstrated that affective trust in leader was a moderator of the relationship between strategic partner role and employee indicators. An empirical study which was conducted in Turkey among employees working in production facilities has also revealed that trust in leader perception significantly
moderated the relationship between LMX and OCB (Kuşçuluoğlu, 2008). Based on the preceding background, a potential moderated model can be constructed in this study. It is assumed that LMX and IWBs are related, but trust in leader moderates LMX and IWB. This means, the interaction of trust in leader will affect the direction and degree of the relationship between LMX and IWB such that; as trust in leader is low, relation of LMX with IWB will decrease and as trust in leader is high, relation of LMX with IWB will increase. We suggest that such a model would also hinder an overlapping with the previous studies of LMX and IWB relationship. Therefore, we propose the following hypothesis:

**Hypothesis 4:** Trust in leader moderates the relationship between LMX quality and IWBs of employees.

2. Methodology

2.1. Statistical population

Statistical population includes 1700 employees working in corporations & medium size companies, from the sectors of: financial services and banking, information technology and telecommunication, education and consulting in Turkey. According to Krejcie and Morgan (1970) the minimum number of sample size was determined as 313 people. A total of 340 questionnaires were distributed among respondents by stratified random sampling and 327 usable questionnaires were returned. Descriptive statistics showed that about 62% of the respondents were males, 38% were females. About 25% of the respondents were below 30, 43% were between the ages 31–40, and 21% were between the ages 41–50. Majority of the sample (47%) had a bachelor and below bachelor degree and 43% had master degree.

2.2. Instrument

A questionnaire was used to test the hypotheses of the study. The 12 items scale developed by Liden and Maslyn (1998) was used to measure four dimensions of LMX: affect, loyalty, contribution of exchange, and professional respect. The 10 items scale of Jong and den Hartog (2010) was used to measure four dimensions of IWB; i.e. idea exploration, idea generation, championing, idea implementation. Trust in leader was measured by the 6 items scale developed by Podsakoff et al. (1990).

2.3. Reliability and Validity

For reliability evaluation Cronbach's alpha was utilized and reliability of all variables were more than 0.7, indicating that all scales demonstrated good reliability (Table 1). Content validity was used for evaluating the validity of the questionnaires. For testing the content validity, after devising a framework for the questionnaire, the authors asked 5 professors to modify it if needed. These professors evaluated all implemented criteria and confirmed it. Further, the authors used Confirmatory Factor Analysis (CFA) to investigate the construction of the questionnaire. The results of CFA of variables indicated that all mentioned criteria have been measured in these questionnaires. The authors tested the relationship between the latent variables of LMX, innovative work behavior, trust in leader, and their indicators. The results of the CFA (Table 2) show good fitness of the models, proving that the selected indicators are good representatives for each dimension of research variables.

3. Results of SEM analysis

In this study the relationship among LMX, IWB and trust in leader were tested using the Structural Equation Modeling (SEM) technique. For testing the hypotheses, the structural model applying 4
dimensions of LMX, 4 dimensions of IWB, and 6 questions of trust in leader were performed. Fitness's indices show the good fitness of the Structural model; as RMSEA = 0.072, p-value = 0.000, and chi-square/df = 2.7124. Moreover, Figure 1 and Table 3 summarize the hypotheses test results in terms of path coefficients (standardized solution) and t-value, by SEM technique.

Table 1. The summary statistics of survey

<table>
<thead>
<tr>
<th>Factors</th>
<th>Number of questions</th>
<th>Mean</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect</td>
<td>3</td>
<td>4.1957</td>
<td>0.82</td>
</tr>
<tr>
<td>Loyalty</td>
<td>3</td>
<td>3.8563</td>
<td>0.85</td>
</tr>
<tr>
<td>Contribution of exchange</td>
<td>3</td>
<td>4.4159</td>
<td>0.81</td>
</tr>
<tr>
<td>Professional respect</td>
<td>3</td>
<td>4.0398</td>
<td>0.78</td>
</tr>
<tr>
<td>LMX</td>
<td>12</td>
<td>....</td>
<td>0.92</td>
</tr>
<tr>
<td>Idea exploration</td>
<td>3</td>
<td>3.2966</td>
<td>0.80</td>
</tr>
<tr>
<td>Idea generation</td>
<td>2</td>
<td>3.6972</td>
<td>0.74</td>
</tr>
<tr>
<td>Championing</td>
<td>2</td>
<td>3.3761</td>
<td>0.75</td>
</tr>
<tr>
<td>Idea implementation</td>
<td>3</td>
<td>3.5494</td>
<td>0.82</td>
</tr>
<tr>
<td>Innovative Work Behavior</td>
<td>10</td>
<td>....</td>
<td>0.86</td>
</tr>
<tr>
<td>Trust in leader</td>
<td>6</td>
<td>3.6269</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Table 2. Fitness indices of research variables based on CFA

<table>
<thead>
<tr>
<th>Fitness indices</th>
<th>LMX</th>
<th>Innovative work behavior</th>
<th>Trust in leader</th>
<th>Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square/df</td>
<td>2.3873</td>
<td>2.2846</td>
<td>2.7933</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>P-value</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.065</td>
<td>0.063</td>
<td>0.074</td>
<td>&lt; 0.10</td>
</tr>
<tr>
<td>GFI</td>
<td>0.95</td>
<td>0.96</td>
<td>0.98</td>
<td>&gt; 0.9</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.91</td>
<td>0.93</td>
<td>0.94</td>
<td>&gt; 0.9</td>
</tr>
</tbody>
</table>

Table 3. The results of the hypotheses test

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Path coefficients</th>
<th>T-value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 LMX → Innovative work behavior</td>
<td>0.09</td>
<td>1.10</td>
<td>Rejected</td>
</tr>
<tr>
<td>H2 LMX → Trust in leader</td>
<td>0.20</td>
<td>2.93</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H3 Trust in leader → Innovative work behavior</td>
<td>0.50</td>
<td>4.03</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H4 LMX → Trust in leader → Innovative work behavior</td>
<td>0.10</td>
<td>2.35</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>

Fig 1. Structural equation model
4. Discussion and Conclusion

The present study aimed to investigate the relationships among LMX quality, trust in leader and IWB. Additionally, the relationship between LMX and IWB was examined in the moderating context of trust in leader. The hypothesized relationships were tested due to the data collected throughout a survey among employees working in corporations and medium size companies from various sectors. The structured questionnaire was composed of standard scales with totally 28 items which were used in previous studies with high reliability. With a stratified random sampling, 327 usable questionnaires were returned and the reliabilities of the scales were evaluated by utilizing Cronbach's alpha. Cronbach’s alpha internal consistency coefficient was found as 0.92 for LMX scale, 0.86 for IWB scale, and 0.83 for trust in leader scale (Table 1). Moreover, confirmatory Factor Analysis (CFA) revealed that the relationship between the latent variables of LMX, IWB, trust in leader, and their indicators were tested and the results of the CFA indicated good fitness of the models, proving that the selected indicators were good representatives for each dimension of research variables (Table 2). As further, the hypotheses proposing the relationship among LMX, IWB and trust in leader were tested using the Structural Equation Modeling (SEM) technique and the structural model applying 4 dimensions of LMX, 4 dimensions of IWB, and 6 questions of trust in leader. Fitness's indices showed the good fitness of the Structural model (RMSEA = 0.072, p = 0.000, chi-square/df = 2.7124). The results also indicated significant links between the tested variables supporting our proposed hypotheses. Such significant linkages are required for confirming the hypothesized model since a model may indicate a good fit with data but may have non-significant hypothesized links. Thus, according to the results of hypotheses tests in terms of path coefficients (standardized solution), t-value, by SEM technique, it was revealed that the significant influence of LMX on trust in leader and significant influence of trust in leader on IWB were confirmed. However, the results showed that the hypothesis proposing the significant influence of LMX on IWB was rejected (Path coefficient= 0.09; t= 1.10). Moreover, the hypothesis testing the moderating influence of trust in leader on the relationship between LMX and IWB was confirmed (Path coefficient= 0.10; t= 2.35). In sum, due to the interpretation of the statistical findings, the research model of this study showed a good fit while indicating that there was a significant influence of LMX quality on trust in leader and significant influence of trust in leader on IWB. In addition, the striking result of the analyses is that influence of LMX quality on IWB was non-significant and not supported while the moderating role of trust in leader between these variables were significantly supported. In this context, it is suggested that these findings are partially consistent with the literature on LMX, IWB and trust in leader. It was an interesting result of the present study that the influence of LMX quality on IWB was not observed in the research sample of this study. Although there are so many studies demonstrating the significant impact of LMX quality on IWB (e.g. Scott and Bruce, 1994; de Jong and Den Hartog, 2008; Atwater and Carmeli, 2009), the present study didn’t reveal consistent results with those studies. This was an interesting finding for this study as the level of quality of LMX has been argued as being one of the potential predictors of IWB and has been attributed to be a contextual factor impacting the IWB. This case was indicated by Gerstner and Day (1997), Krishnan (2005), and Uhl-Bien (2006) who demonstrated that high-quality LMX generate more positive employee outcomes. In addition, the impact of LMX on IWB has been explained by Social Exchange Theory (e.g. Greguras and Ford, 2006; Xerri, 2013) emphasizing how LMX is perceived by employees and how leads to higher IWB. As the current results is not consistent with these implications, this situation can be explained with rather the Turkish employees’ individual (personality, orientation, self control) and cultural characteristics or some other situational and organizational factors such as culture, climate, work characteristics, etc. Moreover, a contribution of the present study came from its finding indicating that trust in leader moderated the LMX
and IWB relationship which meant that the interaction of trust in leader influenced the direction and degree of the relationship positively. Thus, it is interpreted that even though the influence of LMX on IWB is not significant, trust in leader increased the relation of LMX with IWB. This result is consistent with Dirk and Ferrin’s (2002) and Özyılmaz’s (2010) implications about the moderation of trust in leader on the relationship between LMX and IWB, job performance, commitment etc. Additionally, it should be noted that we attempted to investigate the moderating role of trust in leader since we believed that still there are inadequate findings integrating propositions about the influence of LMX on IWB in the moderating context of trust in leader. It is recognized that, although trust has been an area of research in a wide range of studies, particularly trust in leader is supposed to be still a less investigated concept. Thereby, it is suggested that the research model and the current results differentiate this study from the previous studies and could contribute to future organizational and behavioral studies of the relevant variables. On the other side, research and theory suggested that trust in leader in organizational studies mostly studied as being antecedent or consequence of several employee attitudes, perceptions and behaviors. However, we suppose that there exists both limited and conflicting evidence as to whether LMX is a cause of trust in leader, vice-versa, or the two are reciprocally related. We suggest that such reciprocal relationships can be investigated in further studies.

Consequently, for practical implications, it is suggested that the leaders in the organizations should encourage employees to the generation and implementation of innovative ideas through enhancing LMX and by increasing their ability to innovate as well as enhancing the subordinates’ trust on them. In sum, we recommend the leaders to provide better opportunities for employee innovation and to rely on enhancing LMX and trust in the workplace for contributing to better organizational outcomes in terms of innovation and success. However, as part of a limitation of this study, questionnaire survey was conducted among the employees working in various sectors located in Turkey. Therefore, the findings may not be generalized to all sectors or countries. It is recommended that further studies should be applied within larger samples and in different countries. This would enable the generalizability and reliability of the findings. Another limitation of this survey is that LMX and IWB items were responded by the employees subjectively. For further surveys, it is suggested that items measuring LMX and IWB can be evaluated by the leader-report method or by multiple sources (self reported and leader reported) method for the objectivity of the responses and for minimizing the same-source biases.

References


