LEADER-MEMBER EXCHANGE, JOB STRESS, AFFECTIVE COMMITMENT, AND JOB SATISFACTION: IMPLICATIONS FOR TURNOVER INTENTIONS USING COVARIANCE-BASED STRUCTURAL EQUATION MODELING

Muhammad Shahnawaz Adil¹, Ayesha Awais² and Imran Khan³

Abstract

This study analyzes the effect of LMX on employee job satisfaction, affective commitment, job stress, and turnover intention (TOI). Using a-priori statistical power analysis 300 responses are taken from the manufacturing companies of Karachi, Pakistan. Five different measuring scales are used to ascertain the research objectives. CMV bias is assessed using Harman’s and CLF methods. A covariance-based measurement model is developed using CFA approach which demonstrates high construct reliability, convergent, and discriminant validity. Finally, covariance-based SEM technique is used to test six hypotheses. The results show that LMX and affective commitment reduce TOI, however, LMX is found to have a positive impact on satisfaction which has a positive effect on affective commitment. Besides, stress is positively correlated with TOI. The significant original contribution to the knowledge of this study is that LMX can be positively related with occupational stress, particularly in manufacturing companies. Therefore, manufacturing firms should deploy such organizational practices which could reduce job stress and intent to leave the organization.

Keywords: Job Satisfaction, Affective Commitment, Turnover Intention, Organizational Practices, Job Stress.

JEL Classification: Z000

¹Assistant Professor, Department of Business Administration, IQRA University, Karachi, Pakistan. Email: adil.s@iuk.edu.pk
²MBA Graduate, Department of Business Administration, IQRA University, Karachi, Pakistan. Email: ayesha_awais@hotmail.com
³Assistant Professor, Department of English Language, College of Arts and Sciences, University of Hail, Hail, Kingdom of Saudi Arabia. Email: drimrankhan810@gmail.com
Introduction

Leader-member exchange (here-in-after called ‘LMX’) theory has attracted numerous empirical and theoretical contributions in organizational studies (Liden, Wayne, & Stilwell, 1993). Previous leadership related theories were centered around personality traits of a leader however, LMX theory specifies the dyadic (or two-way) connection between leader and follower where the term ‘dyadic’ refers to the two-way interaction between a pair of individuals (Dulebohn et al., 2012; Graen & Uhl-Bien, 1991). The LMX theory has received some gradual evolution in the last couple of decades however, the central idea of the theory remains unchanged. Recently, Sheer (2015) argued that interaction-based exchange behavior has been less emphasized in the literature so far as compared to the characteristics of leaders and the very association amid member and leader.

LMX Theory

The LMX theory (Graen & Uhl-Bien, 1995) is built on the social exchange theory (Blau, 1964) which involves four evolutionary stages: a) vertical dyad linkage; b) LMX; c) leadership making; and d) team-making. Firstly, a vertical two-way (called ‘dyadic’) interaction is built between a follower and his/her leader as soon as the individual joins a team. Theoretically, the individual remains in the ‘unknown zone’ in the eyes of the leader until s/he is given an assignment. With the help of this official assignment, the leader makes an attempt to carefully evaluate the competencies of the follower. One of the plausible objectives of this exercise is to assess the specific work unit where the follower could perform his/her best. It results in the role-making stage where the leader assigns a particular role for the individual. This is recognized as the phase where the leader intuitively categorizes the subordinate either in the ‘out-group’ or ‘in-group’ domains. Predominantly, there are different bases of this categorization such as member’s capability to prove his loyalty towards leader, trustworthiness, and the follower’s combination or portfolio of competencies. This constitutes the phase of routinization where leader builds a strong belief about the subordinate.

Turnover Intention in Manufacturing Jobs

One of the major characteristics of a successful organization has been its ability to attract and retain skilled workforce whose needs get changed over a period of time (Aghazadeh, 1999). Karachi, the biggest financial and commercial center of Pakistan, not only fascinates a vast majority of national and multinational manufacturing organizations but also gives access to Karachi via three completely-operational container terminals. This remarkable benefit of doing business in the city enables employers to gain access to a wide range of semi and highly-skilled employees from across the country. It results in a tough hyper-competition among employers in retaining their key human resource. They believe that senior employees learn a number of organizational capabilities over a period of time therefore, they tend to make efforts to reduce TOI of their regular employees (Adil & Awais, 2016).
A large number of multinational corporations in the city has implemented contemporary information and communications technologies (ICTs) for product designing and manufacturing processes (e.g. computer-aided manufacturing or CAD/CAM). Besides, the employers are also increasingly establishing a high-speed communication networks to connect their distant manufacturing facilities situated within as well as outside the county having different time zones. Moreover, they have also heavily invested in implementing one large corporate-wide integrated information system (e.g. SAP). This situation originates a wide spectrum of fierce competition among market players because it has become increasingly very easy to attract highly-skilled and well-educated technologically-savvy workforce from one manufacturing organization to another by offering them competitive salaries and value-added fringe benefits. Employees are therefore, compelled to seriously start thinking of quitting their jobs and join rival companies in order to receive better incentives within the same city. Therefore, manufacturing sector in Karachi has been overwhelmingly affected by the high rate of employee’s TOI (Adil, 2015).

Interestingly, both academicians and manufacturing professionals may find the roots of the aforementioned problem in the LMX theory where the leadership either increases or decreases the power distance (Hofstede, 1983) with followers. At one side, the management encourages every possible ways to optimize organizational communications however on the other side they tend to classify their workforce in either high or low quality relationships. Despite the fact that a leader classifies his/her followers into these two categories of reciprocal relationship either intentionally or unintentionally, it severely hinders the way these followers perform their duties hence, they not only require higher job satisfaction but also tend to reduce occupational stress (Adil & Awais, 2016).

In fact, a highly-satisfied manufacturing workforce shows a high rate of affective commitment (AC) with their organization which ultimately reduces their TOI. There is no doubt that human resource management (HRM) practices could possibly enhance manufacturing performance (Adil, 2015) but employees’ dedications with higher-order competencies could also reinforce the organizational ability to meet its mission and manufacturing objectives. However, to make sure that these employees would stay in the organization for a more drawn out timeframe, different antecedences such as satisfaction, commitment, stress, etc. are essential (Ansari, Hung, & Aafaqi, 2007). In short, LMX theory plays an integral role in reducing the rate of TOI causing a positive step towards organizational stability in Pakistan.

**Exclusive nature of LMX relationship in Pakistan**

In contrast with the Western context, the LMX relationship in the manufacturing organizations in Karachi may pose different practical implications. For example, high-quality relationship is established with subordinates considering two different schools of thoughts. First, few line managers tactfully identify talented people from the pool of employees and then begin a relatively meaningful relationship with them to merely meet their departmental goals. These subordinates start to understand...
that they are closer to their superiors hence, they hold a high-quality relationship including trust and likeability. Consequently, it increases their motivation level to produce better results for the same managers. Recently, using a multi-group mediation analysis, Adil and Ab Hamid (2017) reported that LMX relationship partially (or complementary) mediated the positive connection between one’s feeling of vigor and his involvement in creative task. In short, the school-of-thought encompasses the vested interest of line managers to merely exploit the competencies of their talented subordinates.

Nevertheless, the second school-of-thought is held by those managers who properly follow the aforementioned four phases of LMX theory. This reflects a true implication of LMX theory which involves a pool of subordinates who are selected based on their performance shown from the given assignments. A team of in-group is formed which usually lasts for more time and the in-group members enjoy maximum possible benefits as the beneficiary of privileged class of people in the eyes of their managers (Hooper & Martin, 2008; Ma & Qu, 2010; Schriesheim, Neider, & Scandura, 1998; Vidyarthi, Liden, Anand, Erdogan, & Ghosh, 2010).

This study analyzes the effect of high-quality LMX on employee’s intention to leave a manufacturing company in Karachi. This study has its theoretical and managerial implications because Pakistan has scarcity of leadership research including a few empirical evidences on LMX theory. For instance, previous studies (e.g., Imran & Fatima, 2013) have analyzed the implications of LMX theory with fragmented variables in different industries of Pakistan. However, none of these studies investigated the multivariate structural relationship amid LMX, job satisfaction, AC, stress, and TOI. Recent authors (e.g. Lee, Chae, & Shin, 2016) have also urged to study LMX in different social contexts. Besides, it extends the LMX theory to TOI in a presumably unique social context of manufacturing concerns in Pakistan. It attempts to guide practitioners in better understanding of the role of LMX relationship in mitigating the looming problem of TOI by answering the following research question:

**Research Question**

What is the impact of LMX on satisfaction, stress, AC, and TOI when controlling for employee’s level of responsibility, work experience, gender and age?

**THEORETICAL BACKGROUND AND DEVELOPMENT OF HYPOTHESES**

**LMX and Job Satisfaction**

Indeed, the members who fall in the ‘in-group’ are the beneficiaries of ‘high-quality exchanges’ of a number of value-added support from their leader e.g. information sharing, access to available resources, timely job promotions, recognition, appreciation, best recommendations, etc. In
contrast, members in the ‘out-group’ often suffer from ‘low-quality exchanges’ which comprise of low trust, respect, and duties. The early studies of LMX theory have concluded that the leader retains a small number of ‘in-group’ relationships because of his/her limited time and social resources (Graen & Uhl-Bien, 1995). In essence, members of the high-quality relationship with their leaders maintain high working standards with relatively better work progress than their counterparts. Therefore, LMX theory has been attributed with employee’s performance in the form of organizational outcomes viz. TOI, organizational citizenship behavior, organizational commitment, job satisfaction, organizational justice and dysfunctional conflicts.

LMX relationship is classified into high and low quality of reciprocal association between leader and each of the followers in the work unit. By virtue of high-quality LMX relationship, the member tends to gain access to a wide range of occupational benefits and rewards. It increases the job satisfaction among the ‘in-group’ employees hence they are considered as the privileged class in the organization (Graen & Uhl-Bien, 1995). Thus, it is quite evident that employees with high job satisfaction tend to fulfill their job effectively and efficiently (Lapierre & Hackett, 2007). LMX with high quality relationships are linked with subordinates who receive increased access to rewards and well-informed communication which raises employees’ job performance and job satisfaction. Hence, the following hypothesis is formulated:

H1: LMX relationship has a positive effect on job satisfaction.

Job Satisfaction, Affective Commitment and Turnover Intention

Job satisfaction and AC reflect a long-standing relationship in the literature of organizational studies. AC is one of the three types of organizational commitment where the employee shows his/her commitment towards the organization at his/her will (Meyer & Allen, 1991). It is largely because of the fact that he/she is very much pleased with a number of noticeable aspects within the organization e.g. competitive salary package, career growth, learning opportunities or professional development programs, flexible work hours, timely recognition of efforts, international work exposure, etc. (Islam & Siengthai, 2010). In short, a satisfied person tends to reflect more AC towards the organizations thus utilizing every available opportunity for self-development (Meyer, Srinivas, Lal, & Topolnytsky, 2007).

Whilst establishing the unidirectional relationship of satisfaction with TOI and organizational commitment, Cheung and Wu (2012) ascertained the similar findings and concluded that job satisfaction increases with the increase in commitment however, negatively related with TOI. Moreover, Adil (2016) examined the influence of change readiness on employee commitment to a technological change and in turn, on their active and passive change-related behavior. If a leader successfully maintains high-performance work system (HPWS) in the organization, it serves as a very effective motivating tool for increasing various organizational outcomes (Ang, Bartram, McNeil,
Leggat, & Stanton, 2013) e.g. work engagement, loyalty, job satisfaction and AC thereby reducing TOI (Adil, 2014; Alvi, Hanif, Adil, Ahmed, & Vveinhardt, 2014).

More recently, A’yuninnisa and Saptoto (2015) have argued that AC mediates the negative relationship between pay satisfaction and TOI. Based on the above-mentioned theoretical connections, the following two hypotheses are posited:

\[ H2: \text{Job satisfaction has a positive effect on affective commitment.} \]

\[ H3: \text{Affective commitment has a negative effect on turnover intention.} \]

**LMX Relationship, Stress and Turnover Intention**

The organizational members are sensitively closer to their leader than the organization. They are continually motivated by the streams of actions what their leaders wish them to adopt. Over the period of time, the working conditions reinforce the member to further reflect upon the LMX relationship. Although, extensive researches have focused on the association between social support and job stress (Viswesvaran, Sanchez, & Fisher, 1999), a little evidence is available which relate role stressors and LMX as measures. With this perspective, Landry and Vandenberghe (2009) scrutinized LMX, commitment, employee-supervisor conflicts and supervisor-based self-esteem. The results revealed that AC, supervisor-based self-esteem, and LMX shrink the association and substantive conflicts among boss/supervisor and employees. In short, an improved quality of LMX relationship will further relax role stressors which could in turn, increases employee satisfaction with job and decrease TOI (Ghosh, Reio, & Bang, 2013). Similarly, Firth, Mellor, Moore, and Loquet (2004) reported that lack of supervisor support caused stress. Hence, the following hypothesis is suggested:

\[ H4: \text{LMX relationship has a negative effect on job stress.} \]

Numerous authors (e.g. Eatough, Chang, Miloslavic, & Johnson, 2011) have studied role stressors which shape one’s attitude and behavior to observe organizational outcomes may also have some serious repercussions on organization itself in the form of high employee turnover rate (Wallace, Edwards, Arnold, Frazier, & Finch, 2009). These variables (stress, in particular) are largely influenced by LMX thus, has a very strong bond with TOI (Mayo, Sanchez, Pastor, & Rodriguez, 2012). Recently, Adil and Awais (2016) has also reported a decrease in TOI with an increase in LMX. There is a well-accepted view in the eyes of both academia and professionals that LMX relationship has negative relationship with TOI (Elanain, 2014). Hence, the following two hypotheses are formulated:

\[ H5: \text{Stress has a positive effect on turnover intention.} \]

\[ H6: \text{LMX relationship has a negative effect on turnover intention.} \]
**Method**

**Statistical power and the minimum required sample size**

While estimating the minimum sample size, it is extremely important to increase the extent to which one could clearly differentiate between the null and alternate hypotheses using significance tests (Faul, Erdfelder, Lang, & Buchner, 2007). Thus, a statistical analysis of power was carried out in this study before estimating the sample size for the use of a series of SEM equations.

For this purpose, *a-priori* power analysis (Cohen, 1988) was used in G*Power version 3.0 package (Faul et al., 2007). In fact, this is a widely-used free sample-size calculator which requires five necessary parameter values to estimate the minimum required sample size to identify a) required effect size, b) model structure, and c) the recommended minimum sample size. These five necessary parameters include effect size, statistical power, no. of latent variables, no. of observed variables, and Type-I error rate. There were 32 five-point Likert-scale items which were expected to converge on five latent variables (namely, LMX, AC, job satisfaction, stress, and TOI). Accordingly, to meet the research objectives of this study, the following values were provided: large effect size, statistical power (0.80), five latent variables, 32 indicators, and 95% CI.

**Sample and procedure**

Based on the statistical power analysis discussed above, the G*Power calculator recommended a minimum required sample size of 269 to detect the required effect size and model...
structure is at least 269. In short, this was the minimum number of sample size to detect a large effect size for SEM. Therefore, considering potential extreme values (outliers), 300 responses was collected from the manufacturing firms of Karachi on a self-completion questionnaire written in English by using a non-probability convenience sampling method. Removal of 29 outliers at 99.99% CI (p<.001) resulted in a useable sample of 271 responses (300-29) which exceeds the minimum required sample size as suggested by G*Power.

In a sample of 271 cases, the respondents were mostly in the age range of 25 to 30 years (M = 2.62; SD = 1.40), and 77.1 percent were male. Over 52 percent respondents held a Master’s degree (SD = 0.77), and 44.6 percent of the respondents were serving at the middle management level in their respective organizations (SD = 0.94). Besides, 53.5 percent respondents had more than 5 years of experience (M = 2.31; SD = 0.82). A detailed demographic account is presented in Table 1.

Table 1
*Composition of Data (n = 271)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>209</td>
<td>77.1</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>62</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>Less than 25 years</td>
<td>55</td>
<td>20.3</td>
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<td>25 to 30 years</td>
<td>109</td>
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<td></td>
<td>31 to 35 years</td>
<td>40</td>
<td>14.8</td>
</tr>
<tr>
<td></td>
<td>36 to 40 years</td>
<td>29</td>
<td>10.7</td>
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<td></td>
<td>41 to 45 years</td>
<td>29</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>46 to 50 years</td>
<td>7</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>above 50 years</td>
<td>2</td>
<td>.7</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>155</td>
<td>57.2</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Married</td>
<td>116</td>
<td>42.8</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>20</td>
<td>7.4</td>
</tr>
<tr>
<td>Qualification</td>
<td>Bachelor’s degree</td>
<td>81</td>
<td>29.9</td>
</tr>
<tr>
<td></td>
<td>Master’s degree</td>
<td>141</td>
<td>52.0</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>29</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>Non managerial staff</td>
<td>57</td>
<td>21.0</td>
</tr>
<tr>
<td>Level of Responsibility</td>
<td>Supervisor</td>
<td>63</td>
<td>23.2</td>
</tr>
<tr>
<td></td>
<td>Middle management</td>
<td>121</td>
<td>44.6</td>
</tr>
<tr>
<td></td>
<td>Senior management</td>
<td>30</td>
<td>11.1</td>
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<td></td>
<td>Less than 2 years</td>
<td>62</td>
<td>22.9</td>
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<td></td>
<td>between 2 to 5 years</td>
<td>64</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>More than 5 years</td>
<td>145</td>
<td>53.5</td>
</tr>
</tbody>
</table>
Measures

The study used five latent variables including LMX relationship, job satisfaction, stress, AC, and TOI. They are measured by using 32 questionnaire items measured on a 5-point Likert-type scale and unless otherwise specified. There were no sub-scales or dimensions to any of these constructs. In addition, the reliability of each of the five measuring scales (discussed below) was assessed with Cronbach coefficient alpha. Reliabilities of all variables ranged between 0.68 and 0.93 (Nunnally & Bernstein, 1994). Moreover, employee’s level of responsibility, work experience, gender and age were taken as control variables during each hypothesis testing using covariance-based SEM. Following is the description of the measuring scales used in this study:

**LMX**

The scale of Lee, Scandura, Kim, and Lee (2012) was used for measuring LMX. A sample item reads, “My leader recognizes my potential well enough”. Cronbach alpha = 0.86.

**Job Satisfaction**

Seven items from the revised version of the Minnesota Satisfaction Questionnaire (Weiss, Dawis, & England 1967) were used to measure job satisfaction. A sample item reads, “The chance to tell people what to do.” These items were rated on a five-point Likert-type scale ranging from 1 (very dissatisfied) to 5 (very satisfied). Cronbach alpha = 0.79.

**Affective Commitment**

AC was measured by eight items adapted from Allen and Meyer (1990). A sample item includes, “I would be very happy to spend the rest of my career with this organization”. Cronbach alpha = 0.91.

**Job Stress**

Stress was ascertained by six items from the component of stress of Occupational Stress Inventory (OSI-R). A sample item was as under: “I am expected to perform tasks on my job for which I have never been trained”. Cronbach alpha = 0.68.

**Turnover Intention**

TOI was measured by a total of five items jointly taken from Liu, Cai, Li, Shi, and Fan (2013), Long, Thean, Ismail, and Jusoh (2012), and Bushra (2012). A sample item reads, “I often feel
that I should quit”. Cronbach alpha = 0.93.

Analysis

The following sections include principal component analysis, confirmatory factor analysis, and assessment of common method bias with the help of both Harman’s single factor and CLF tests in SPSS and AMOS respectively. Finally, the testing of six hypotheses using SEM in AMOS.

Exploratory Factor Analysis (EFA)

Five variables were emerged from the 32 indicators during EFA. The value of KMO was 0.83 therefore, the sample is sufficient enough to run EFA. The Bartlett’s test (Chi-square = 4072.056, DF = 276, p = .000) depicts that the identity matrix is not present in the correlations (Leech, Barrett, & Morgan, 2005). These five factors explained over 67.62 percent of the total variance (see Table 2). The minimum Eigenvalue was 2.10.
Table 2

**Exploratory Factor Analysis (N = 271)**

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Indicators</th>
<th>Factor Loadings</th>
<th>Alpha</th>
<th>Eigenvalues</th>
<th>% of Variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover Intention</td>
<td>TOI_3</td>
<td>.93</td>
<td>0.93</td>
<td>4.11</td>
<td>17.11</td>
<td>17.11</td>
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<td>TOI_4</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>TOI_5</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>TOI_1</td>
<td>.86</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>TOI_2</td>
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<td></td>
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<tr>
<td>Affective Commitment</td>
<td>AC_6</td>
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<td>0.91</td>
<td>3.79</td>
<td>15.77</td>
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<td></td>
<td>AC_8</td>
<td>.84</td>
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<td></td>
<td>AC_5</td>
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<td></td>
<td>AC_4</td>
<td>.69</td>
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<tr>
<td>Leader-Member Exchange</td>
<td>LMX_1</td>
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<td>0.86</td>
<td>3.38</td>
<td>14.10</td>
<td>46.98</td>
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<td>LMX_3</td>
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<td>LMX_5</td>
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<td>Job Satisfaction</td>
<td>JS_4</td>
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<td>JS_3</td>
<td>.74</td>
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<td></td>
<td>JS_6</td>
<td>.68</td>
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<tr>
<td></td>
<td>JS_7</td>
<td>.54</td>
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<tr>
<td>Job Stress</td>
<td>S_1</td>
<td>.79</td>
<td>0.68</td>
<td>2.10</td>
<td>8.76</td>
<td>67.62</td>
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<tr>
<td></td>
<td>S_3</td>
<td>.69</td>
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<tr>
<td></td>
<td>S_4</td>
<td>.59</td>
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<td></td>
<td>S_6</td>
<td>.52</td>
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</table>

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Factor loadings less than |0.40| are omitted to maintain clarity. Values are rounded to two decimal places.

In fact, these five orthogonally-rotated factors constitute the final solution of EFA. Table 3 specifies the mean, SD and bivariate correlations between factors. The highest correlation was found...
between AC and LMX ($r = 0.48$, $p<0.01$). Substantial cross-loadings is not found in EFA solution and the highest correlation in the matrix is less than 0.70 ensuring the discriminant validity of the extracted factors because none of the factors explained majority of the shared variance i.e. $0.70 \times 0.70 = 49$ percent. Moreover, all 24 reflective items are converged onto their respective factors indicating convergent validity (Hair, Black, Babin, & Anderson, 2010).

Table 3  
**Means, Standard Deviations, Correlations, and Reliabilities (N = 271)**

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover Intention</td>
<td>3.18</td>
<td>1.01</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective Commitment</td>
<td>3.79</td>
<td>.77</td>
<td>-0.18**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leader-Member Exchange</td>
<td>4.01</td>
<td>.62</td>
<td>-0.18**</td>
<td>0.48**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>3.98</td>
<td>.55</td>
<td>-0.06</td>
<td>0.30**</td>
<td>0.39**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Job Stress</td>
<td>3.76</td>
<td>.62</td>
<td>0.12</td>
<td>0.37**</td>
<td>0.47**</td>
<td>0.35**</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note:* **. Correlation is significant at the 0.01 level (2-tailed).  
Values are rounded to two decimal places.  
SD = Standard Deviation

**Measurement Model**

A measurement (or outer) model was developed using CFA with configural invariance approach in AMOS Graphics version 22. It is *a priori* to the structural model in order to test hypotheses (Byrne, 2016). Therefore, to test whether the measurement model is ‘psychometrically sound’, composite reliability (CR) was estimated separately for each latent variable. AVE was estimated to ascertain the convergent validity. Furthermore, maximum and average shared variance (MSV and ASV) as well as inter-construct correlations were estimated to investigate the discriminant validity of the latent variables (see Table 4).

Interestingly, Cronbach alpha is also listed in Table 4 to compare it with the composite reliability. It can be observed that alpha shows an overestimate reliability statistic for job satisfaction and LMX, similar statistics for TOI and AC whereas, underestimated job stress. Therefore, CR is a better reliability predictor than alpha (Lin & Lee, 2005). As shown in Table 4, the AVE and CR of all of the five constructs exceeds 0.70 and 0.50 respectively suggesting an acceptable level of construct reliability and convergent validity of measurement model.
Table 4
Confirmatory Factor Analysis: Reliability, Convergent and Discriminant Validity

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Reliability</th>
<th>Convergent Validity</th>
<th>Discriminant Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alpha</td>
<td>CR</td>
<td>AVE</td>
</tr>
<tr>
<td>JS</td>
<td>0.79</td>
<td>0.74</td>
<td>0.59</td>
</tr>
<tr>
<td>TOI</td>
<td>0.93</td>
<td>0.93</td>
<td>0.74</td>
</tr>
<tr>
<td>AC</td>
<td>0.91</td>
<td>0.91</td>
<td>0.72</td>
</tr>
<tr>
<td>LMX</td>
<td>0.86</td>
<td>0.84</td>
<td>0.52</td>
</tr>
<tr>
<td>Job Stress</td>
<td>0.68</td>
<td>0.73</td>
<td>0.57</td>
</tr>
</tbody>
</table>

Notes: All values are rounded to two decimal places. Square root of AVE is listed in bold face on diagonal. AVE = (Σ squared standardized loading) / (Σ squared standardized loading + Σ IME)

CR = (Σ standardized loading)^2 / (Σ standardized loading)^2 + Σ IME)

Where, IME (i.e. Indicator Measurement Error) = 1 - standardized loading

CR = Composite Reliability; AVE = Average Variance Extracted; MSV = Maximum Shared Variance; ASV = Average Shared Variance

Moreover, to assess discriminant validity of the measurement model, in addition to estimating both maximum and average shared variance (MSV & ASV) we also applied Fornell and Larcker (1981) criterion (Hair, Ringle, & Sarstedt, 2011; Henseler, Ringle, & Sinkovics, 2009). The AVE is greater than its respective maximum and average shared variances. Besides, according to Fornell and Larcker (1981) criterion, the discriminant validity can be established if the square root of AVE should be greater than its inter-construct correlations as shown in Table 4 on diagonals in boldface. We can observe that each square root of AVE is greater than its inter-construct correlations thus it can be concluded that the discriminant validity is also established (Hair, Sarstedt, Ringle, & Mena, 2012) endorsing that the measurement model indicates sound psychometric properties (Bhal, Gulati, & Ansari, 2009; Molina, Lloréns-Montes, & Ruiz-Moreno, 2007). The formula of estimating AVE and CR is shown in the bottom of Table 4.

Common Method Variance (CMV)

Before hypothesis testing phase, it is now considered an integral part of psychometric analysis to test the potential occurrence of CMV in the dataset due to method bias (Malhotra, Kim, & Patil, 2006). It refers to a situation in which the dataset involves ‘something’ which is actually external to the dataset. This ‘external’ aspect may either inflate or deflate the findings (MacKenzie & Podsakoff, 2012). Since, the study collected data from one common method (i.e. self-administered
questionnaire), it used two different methods for the said purpose: a) Harman’s Single Factor Test (Schriesheim, 1979) in SPSS; and b) Common Latent Factor (in AMOS) as discussed below:

Harman’s test tests the hypothesis if only one unrotated factor explains majority of the variance. For this EFA is performed by restricting the SPSS software to generate only one single factor without rotation. The results show that only 28.17 percent variance is explained by only one factor which is less than 50 percent threshold value (Podsakoff & Organ, 1986; Scott & Bruce, 1994). It means that the dataset does not have any potential occurrences of CMV (Organ & Greene, 1981).

Moreover, for a further robust assessment of CMV, a CFA approach was also employed in AMOS by introducing a common latent factor (CLF) to capture the common variance among all of the Likert-scale (observed) items in the measurement model. The standardized regression weights of this model (with CLF) were compared with the standardized regression weights of the basic model (without CLF). There were no large differences (say, more than 0.20) therefore, we concluded that there were no CMV issues even with CLF method. In other words, this findings of this study is not influenced by CMV bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

**Discussion and Managerial Implications**

Table 5 shows the results of six hypotheses testing using covariance-based SEM approach in AMOS. It includes unstandardized estimates with standard error, standardized estimates, critical ratio (i.e. unstandardized estimate ÷ standard error) and p-value. All of the variables have shown statistically significant relationship in predicting TOI. Cumulatively, all of the four predictors (viz. LMX, job satisfaction, AC & stress) explained over 25 percent of the total variance ($R^2$) in predicting TOI of employees in the manufacturing sector of Karachi when controlled for their level of responsibility, work experience, gender and age.

<table>
<thead>
<tr>
<th>SEM Patha</th>
<th>Standardized Estimate</th>
<th>Unstandardized Estimate</th>
<th>SE</th>
<th>Critical Ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 LMX ➔ JS</td>
<td>0.52</td>
<td>0.40</td>
<td>0.07</td>
<td>5.85</td>
<td>0.000***</td>
</tr>
<tr>
<td>H2 JS ➔ AC</td>
<td>0.29</td>
<td>0.47</td>
<td>0.12</td>
<td>3.80</td>
<td>0.000***</td>
</tr>
<tr>
<td>H3 AC ➔ TOI</td>
<td>-0.19</td>
<td>-0.26</td>
<td>0.09</td>
<td>-2.92</td>
<td>0.004**</td>
</tr>
<tr>
<td>H4 LMX ➔ Stress</td>
<td>0.70</td>
<td>0.72</td>
<td>0.09</td>
<td>7.96</td>
<td>0.000***</td>
</tr>
<tr>
<td>H5 Stress ➔ TOI</td>
<td>0.28</td>
<td>0.46</td>
<td>0.21</td>
<td>2.22</td>
<td>0.026*</td>
</tr>
<tr>
<td>H6 LMX ➔ TOI</td>
<td>-0.27</td>
<td>-0.46</td>
<td>0.21</td>
<td>-2.22</td>
<td>0.026*</td>
</tr>
</tbody>
</table>

Notes: SE = Standard Error of the unstandardized estimates.

*** p < 0.001; ** p < 0.01; * p < 0.05
When controlled for level of responsibility, experience, gender and age.

The results reveal that LMX has significant positive effect on JS (0.52; \( p=0.000 \)). Both constructs should be and are positively correlated thus, H1 is supported. Therefore, it is recommended that the LMX quality should be improved to observe higher job satisfaction. In addition, the results find that job satisfaction has significant and positive effect on AC (0.29; \( p<0.000 \)) therefore, H2 is supported. Due to high-quality (in-group) LMX, at one side the job satisfaction of the member gets increased which results in more interactions with the leader. But on the other sides, these communications often provide a member of different opportunities to interact with other senior officials of other manufacturing firms. Consequently, the member is exposed to a number of better job opportunities in other manufacturing companies. Since the member is satisfied with the job and intends to observe further professional growth which s/he might not forecast in the current organization. Albeit, s/he enjoys a good LMX relationship with superiors but exactly at the same time, s/he may intend to explore better job opportunities with the help of those communications channels introduced to him/her by the leader. Eventually, it is very important in the manufacturing organization to note that the sub-ordinate may wish to stay in the organization until s/he does not avail any better job opportunity in the manufacturing industries.

This interesting situation may also be realized where 170 respondents (63.7 percent) hold at least master degree or above (see Table 1). In the manufacturing sector of Karachi, people having higher post-graduate qualifications tend to have better job opportunities. Despite they are satisfied with their current jobs there are a number of hidden problems that they preemp t well before the time e.g. incivility acts to out-group members by their leaders at workplace (Leiter, 2013). The member starts to predict the potential situation in case if she is moved to the under-privileged (‘out-group’) category of employees. As a result, she will have to face all those workplace incivilities e.g. harassment, unnecessary occupational stress, and above all forced involuntary turnover (Pearson & Porath, 2009).

In view of these unwanted circumstances, the person plans to leave the organizations in his/her good times with good employment reference letter from the leader even he/she holds job satisfaction. Therefore, it is highly suggested that the leader should not only be very cautious about the job satisfaction of the followers but also be very vigilant about the AC. Hence, it is quite evident from the results that JS and AC are the two complex concepts which still require ‘well-informed’ revision in the theory particularly in Pakistan.

Moreover, the outcomes support the rests of the four hypotheses. More specifically, AC has shown significant negative impact on TOI (-0.19; \( p=0.004 \)). LMX relationship has been found positively related with stress (0.70; \( p=0.000 \)) and negatively correlated with TOI (-0.27; \( p=0.026 \)). Lastly, stress is found to be positively linked with TOI (0.28; \( p=0.026 \)). Thus, except H4, all hypotheses are supported. Figure 2 illustrates the ‘unidirectionality’ of constructs (Byrne, 2016).
These findings are important in further understanding the theoretical connection between high-quality LMX relationship and occupational stress. Moreover, the findings provide practical suggestions for the manufacturing companies in Karachi. For instance, the management of these organizations should note that the stress level of employees tends to increase when the management prefers to assign a number of operational tasks to their in-group subordinates than out-group employees. Consequently, a high rate of TOI may be observed. These findings are emerged from the manufacturing firms of Karachi.

The high and low quality LMX relationship between leader and the member has shown major managerial implications to predict voluntary or involuntary TOI. Besides showing a significant direct association between LMX and TOI, there are other important variables which often emerge from LMX relationship but ultimately leads to TOI. Therefore, it should be of paramount interest for leaders to engage themselves in listening to the problems of their followers and adopt an attitude to realistically figure them out within financial constraints of the business. The central aim is to invest in human resource in such a manner that they could bring about their maximum effective and efficient output at the point in time when it is required. It is equally essential for the management to realize that they could not retain even their good employees for a longer period of time. By virtue of high-quality
LMX relationship, these employees firstly enjoy their tenure in the organization and side-by-side they start searching better job opportunities from the contacts which leaders introduce to them in different social settings and occasions.

Theoretical Contributions

In light of high-quality LMX relationship and based on the results of the second hypothesis which has a large effect size and high statistical power, this study contributes in the LMX literature that high-quality LMX relationship may have a positive effect on stress. This is empirically tested in the manufacturing sectors of Karachi (Pakistan) using a covariance based SEM technique. This might be attributed to the fact that the stress level of employees tends to increase when they are engaged in a high-quality LMX relationship with the management who prefers to assign a number of operational tasks to the in-group subordinates than out-group employees. Consequently, it leads to increase occupational stress and ultimately, a high rate of turnover intention. In addition, this study is amongst the first reports on LMX relationship using boundary conditions in Pakistan. Moreover, it is also argued that Cronbach alpha overestimates the reliability measure thus, composite reliability should be preferred in non-recursive models (Lin & Lee, 2005; Molina et al., 2007). These findings extend our understanding about the theoretical connection between high-quality LMX relationship and occupational stress, in particular.

Conclusion

LMX theory has gained significant attention from both academicians and practitioners. It reflects the quality of relationship between leader and follower. It is argued that high-quality LMX relationship will trim down the chances of intent to leave a manufacturing company in Karachi. We analyzed the unidirectional impact of LMX relationship on JS, AC, stress and TOI in the manufacturing firms of Pakistan.

Future studies may further explore the impact of job satisfaction on continuance and normative commitment scales with some mediating or moderating constructs e.g. workplace incivility, organizational justice, occupational stress, organizational identification, or even ‘low quality’ LMX relationship as moderator particularly in the financial (service), petro-chemical, pharmaceutical and bio-technology and automobile and spare parts sectors of Karachi. It could further reinforce our understanding of the theoretical and practical implications of LMX theory.

References


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