The Impact of Transformational Leadership and Social Interaction on Organizational Performance in the Viewpoint of Knowledge Management: An Empirical Study in Banking Sector of Pakistan.

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ABSTRACT

This research examines the impact of transformational leadership (TL) and social interaction (SI) on organizational performance (OP) in the perspective of knowledge management (KM) within Pakistan’s banking sector. In developing countries, knowledge management (KM) is highly practiced but in Pakistan it is a new concept and at the initial stages of its implementation. The situation of Pakistan’s banking sector is better than other services sectors. Therefore, Pakistan’s banking sector is opted as population of the study. Using the simple random sampling technique, 350 questionnaires were distributed in different bank’s branches. The questionnaires were filled by two officer’s rank of employee, i.e., top level managers and middle level managers. Totally, 270 questionnaires were fully completed and used for final analysis. The overall response rate was 77%. Different statistical techniques were applied on the collected data, i.e., Reliability analysis, Pearson’s correlation, Regression analysis and Sobel test. The results indicated that there is a positive relationship among transformational leadership, social interaction, knowledge management, and organizational performance. Furthermore, knowledge management acted as partially mediator between transformational leadership, social interaction and organizational performance. Additionally, current research provides guidelines to the management of banking sector of developing countries specially Pakistan that how transformational leadership, social interaction and knowledge management can improve the organizational performance.
Knowledge is the key source of competitive edge for organizations (Chen, 2004; Matusik & Hill, 1998; Spender & Grant, 1996). Its management is also considered an important source of competitive advantage that can positively influence organizations’ overall performance (Drucker, 1993; Dutta, 1997; Nonaka & Takeuchi, 1995). Organizations are now moving towards knowledge-based economy rather than industrial economy (Danish, Asghar, & Asghar, 2014). To achieve superior and desired outcomes, effective organizations continuously manage and absorb knowledge assets into their functioning activities (Droge, Claycomb, & Germain, 2003; Teece, 1998). Knowledge is a main resource of any organization which is embedded in human’s mind (Malhotra, 1997). According to Baker, Baker, Thorne and Dutnell (1997), knowledge is a set of information, abilities, expertise and practices that are used by the individuals to resolve different issues of the organization. The approach in which organizations create, use, apply, share and store knowledge is known as knowledge management (Probst, Buchel, & Raub, 1998). Thus, the objective of current research is to check the impact of transformational leadership and social interaction on organizational performance in the viewpoint of knowledge management in banking sector of Pakistan. The research explores the impact of knowledge management in Pakistan’s banking sector because this sector is playing crucial role in country’s economy (Shah, Jhatial, & Ghumro, 2012b). According to SBP, (2015) the growth rate of Pakistan’s banking sector is 16.8% which is better than all other service sectors. Knowledge management is vital to banking sector as it is for any other kind of organization (Li, 2012).

In the present study, researchers explore the relationship between transformational leadership (TL) and knowledge management (KM). There are many styles of leadership but TL enhances level of KM, improves the process of KM and implements KM in any organization (Noruzi, Majazi Dalfard, Azhdari, Nazari-Shirkouhi, & Rezazadeh, 2013). Furthermore, transformational leadership style has positive impact on knowledge management (Bryant, 2003; Crawford, 2005). For knowledge management, social interaction is considered important medium for organization’s members (Bartol & Srivastava, 2002; Levin & Cross, 2004; Singh, 2005). Social interaction refers to the extent to which organizational members interact with each other in terms of trust, communication, and coordination (Chen & Huang, 2007).

Does an organization achieve its objective or not, it can be measured with an indicator which an is organizational performance (Hamon, 2003; Venkatraman & Ramanujam, 1986). Organizational performance (OP) is a critical concept because to date there is no any generally agreeable rang among researchers who can justify it (Carton, 2004). There are number of studies which have witnessed a direct/positive relationship between an organizational performance (OP) and efficient and effective application of KM (Gold Malhotra, & Segars, 2001; Hasan & Al-Hawari, 2003; Lee & Lee, 2007; Schultz & Jobe, 2001). Knowledge management is an emerging issue in the field of management. Therefore, the basic purpose of the present study is to develop well-organized and effective knowledge management framework especially in the banking sector of Pakistan.

Problem Statement
Knowledge management is widely practiced in developing and developed countries which are in various stages of its application (Asian Productivity Organization, APO, 2005). According to
Akhavan, Jafari, and Fathian (2005), many organizations fail due to lack of proper knowledge management system and they further quoted the failure rate as 50% but this rate of failure can be increased if organizations do not introduce effective and efficient knowledge management system. A study conducted among the top 40 management consultant organizations of US indicated that more than 60% of them identified knowledge management as an important success factor for their businesses (Ofek & Saravay, 2001). According to Arif, (2013), knowledge management has 87% significant effect on organizational performance. A research conducted by Nitin Nohria and colleagues at Harvard Business School found, for example, that on average, leader contributes 14% approximately on the performance of an organization (as cited in Creating, 2003). The growth of banking sector heavily depends on how well leaders understand the objective of organization, need of the market, how effectively they share as well as apply knowledge to the employee of an organization and how successfully the employees deliver this knowledge to their customers as well (Piri & Asefzadeh, 2006; Prodromos & Vraimaki, 2009). Moreover, social interaction phenomena, i.e., trust, communication and coordination improves knowledge management’s structure in modern banking sector (Chatzoglou & Vraimaki, 2009).

In Pakistan, knowledge management is a new concept and it is at the initial stages of its implementation (Tayyab, 2009). It is evident from the vision 2030, Pakistan will make knowledge-based economy by promoting innovative culture and knowledge sharing society for efficient and effective utilization of the knowledge resources (Government of Pakistan, GoP, 2007).

Rationale of the Study
Many organizations believe that effective knowledge management is only way to control their core competencies and achieve competitive edge (Tayyab, 2009). Many studies explain the causal relationship between knowledge management (KM) and organizational performance (OP) that KM builds a competitive advantage which is directly linked to organizational performance (Chadha & Kapoor, 2010; Wang Hult, Ketchen, & Ahmed, 2009; Zack, Mckeen, & Singh, 2009). The effective Management of Knowledge may have an important role in successful performance of Pakistani Banks (Ahmed, Fiaz, & Shoaib, 2015). The present study not only covers above mentioned gap but also provides the guidance to improve the knowledge management activities for their better performance within the banking sector of Pakistan.

Knowledge Management (KM)
KM is a way to improve procedures and practices, develop and enhance employee abilities, improve the learning curve related with new employees or new tasks and customer service as well (Roman, 2004). KM is a process that control the individual and mutual knowledge within firm to avail competitive benefit (Carlsson, 2003). KM is a planned action which ensure that to cope with rapidly changing environment; organizations have sufficient knowledge to manage different situations (Alvesson & Karreman, 2001). In this study, researcher focus on knowledge sharing and knowledge application which are dimensions of KM.
Knowledge Sharing (KS)
The process in which individuals and groups deliver knowledge to solve difficult problems within short period of time is called knowledge sharing (Cross & Sproull, 2004). Without sharing, it is difficult for knowledge to be delivered to individuals or team (Quink, 2008).

Knowledge Application (KA)
The competitive advantage of the organization depends upon knowledge application as compared to knowledge itself because it is main feature of “knowledge-based theory” of the organization (Alavi & Leidner, 2001; Grant, 1996b).

Transformational Leadership (TL)
According to Burns, (1978), TL is a process in which leaders and followers help each other to develop higher level of motivation and morale. There are many styles of leadership but TL enhances level of KM, improves the process of KM and implements KM in any organization (Noruzi, et al., 2013). There are four dimensions of TL known as “the Four I’s” including Idealized Influence or Charismatic leadership, Inspirational Motivation, Intellectual Stimulation, Individualized Consideration (Bass & Avolio, 1994). But in current study, the researcher selected one more dimension that is risk acceptance (Xiaoxia & Jing, 2006).

Idealized Influence/Charisma (II): By using charismatic or idealized influence transformational leaders impress their subordinates. Moreover, such type of leaders, in the time of difficulty listen and solve problems of their workers. These leaders have proficiencies and enthusiasm to solve the problems of employees (Bass & Riggio, 2006).

Inspirational Motivation (IM): Inspirational motivation is a process in which leaders motivate and encourage employees by providing them meaningful and challenging task. For envision of optimistic future, leaders encourage their employees and promote team spirit, enthusiasm, and optimism among themselves (Bass, Avolio, Jung, & Berson, 2003).

Intellectual Stimulation (IS): In this behavior, leaders encourage employees to think in creative, innovative and effective way. They involve them in decision making process and also find solution of problems that influence their social, political, environmental, economic wellbeing (Nwagbara, 2010).

Individualized consideration (IC): In this trait of TL, leaders act as a mentor and provide special attention to each employee’s need. Leaders individually guide and support employees to find their potential skills and act accordingly (Bass & Riggio, 2006).

Risk Acceptance (RA): Risk acceptance is a characteristics of a leader that is now included in transformational leadership’s dimensions because transformational leaders accept risk positively and view risk as opportunity rather than threat. In this characteristic, leaders show their risk acceptance attitude when they face technological and organizational problems (Xiaoxia & Jing, 2006).

Social Interaction (SI)
The extent in which organizational members interact with each other in terms of communication, trust and coordination is called social interaction (Chen & Huang, 2007). According to Chen & Huang, (2007) there are three dimensions of SI: Trust, Communication,
and Coordination. Trust is a mutual understanding between employees and leaders for sharing and applying knowledge within the organization (Bartol & Srivastava, 2002). Common understanding and trusting behavior among individuals and groups allow organizations to promote knowledge sharing and knowledge application behaviors within the organization with proficiency (Bartol & Srivastava, 2002). According to Hoegl, Parboteeah, and Munson (2003), communication is a process of transforming any kind of knowledge to organization’s members. The degree in which individuals and groups feel that their organizations well integrated and organized is called coordination (Janz, Wehterbe, Colquitt, & Noe, 1997). Coordinative behaviors among organizational departments enhance the sharing and application of required knowledge inside the firms (Tsai, 2002; Janz et al., 1997).

Organizational Performance (OP)
Organizational performance (OP) is generally measured by using two indicators, i.e., efficiency and effectiveness, where efficiency refers to financial viability such as profitability (Stewart, 2010). According to Daft (2000) and Ricardo and Wade (2001), organizational performance means an appropriate use of resources in an effective and efficient manner. This concerns how an organization is able to achieve its goals. As Organization Performance has been considered in depth now but still remains debatable subject among organizational scholars (Barney, 1997). However, it is generally measured in two dimensions, i.e., financial and non-financial. The financial dimension means profitability, return on investment, return on asset (ROA), return on sale (ROS), return on equity (ROE), stock price, export growth, sales growth, revenue growth, operational efficiency, market share and organizational success (Gimenez, 2000; Stewart, 2010; Thomas & Ramaswamy, 1996). The Non-financial performance, on the other hand, measures OP in terms of organizational commitment, job satisfaction, employee turnover, innovativeness, customer satisfaction, quality, and flexibility in resource utilization (Kaplan & Norton, 2001).

Organizational performance can be assessed using either objective or subjective mode (Dess & Robinson, 1984). The objective approach refers to the financial data provided by the organization; whereas, the subjective measurement calls upon the perception of the employees (Croteau & Bergeron, 2001). Current research focuses on subjective approach by using the structured questionnaire and collects primary data from the respondents. According to Croteau and Bergeron (2001) proposed two dimensions to measure organizational performance, i.e., sales growth and probability on the basis of concept presented by Venkatraman and Ramanujam, 1986). This research focuses on the concept of Croteau and Bergeron (2001) and uses the two dimensional construct of organizational performance, i.e., sales growth and probability.

The surplus of revenue over expenses or the ability for a company to make a profit consistently, is critical to the persistence of an organization (Drucker, 1954). Clearly, profitability was the primary organizational performance dimension which is used as a dependent variable. Of 138 articles, 70% included a profitability variable as at least one of the dependent organizational performance measures. Growth was the second most common performance dimension used to measure overall organizational performance. Growth has long been considered a critical and distinct component of organizational financial performance
Capon, Farley, and Hoenig (1990) found, using a meta-analysis of performance-related studies, that sales growth rate was a generally-accepted performance indicator. They found that sales growth is positively and robustly associated with other measures of firm financial performance.

Method

Hypotheses

Gelard, Boroumand, and Mohammadi (2014) proved that transformational leadership has positive impact on knowledge management. Accordingly, current research proposes the hypothesis 1 as following:

**H1:** Transformational leadership plays an important role in knowledge management.

Social interaction has a strong positive impact on knowledge management (Chen & Huang 2007). On the basis of this fact current research propose the hypothesis 2 as following:

**H2:** Social interaction puts strong influence on knowledge management.

Knowledge management positively influences organizational performance (Ho, 2008). In the light of literature, current research proposes the hypothesis 3 as following:

**H3:** Knowledge management puts strong influences on organizational performance.

From the best of researchers’ knowledge, the relationship between transformational leadership, social interaction with organization performance by using knowledge management as mediator has not checked in pervious literature. Therefore, current study proposes the following hypotheses:

**H4:** Knowledge management plays a mediating role between transformational leadership and organizational performance.

**H5:** Knowledge management plays a mediating role between social interaction and organizational performance.

Figure 1 shows the theoretical framework of the study.

![Theoretical framework](image)

**Table 1.**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Mediating Variable</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational Leadership</td>
<td>Knowledge Management</td>
<td>Organizational Performance</td>
</tr>
<tr>
<td>Social Interaction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Instrument**

This study examines the relationship between transformational leadership, social interaction, knowledge management and organizational performance. Already established instruments are adopted in this study. The items and dimensions of transformational leadership are taken from the instruments modified by Xiaoxia and Jing (2006). Based on the work of Sivadas and Dwyer (2000), three dimensions of SI including communication, trust, coordination and its items were adopted. Based on the work of Gold et al. (2001) and Lin and Lee (2005), the researchers selected two dimensions of knowledge management, i.e., Knowledge sharing, knowledge...
application and its items. The concepts were measured by using seven point Likert scale from strongly disagree to strongly agree. According to the work of Venkatraman (1989), the researchers took the eight items of organizational performance. For measuring this concept, 7 point Likert scale from very dissatisfactory to very satisfactory was used. Thirty-five statements were finalized to measure the organizational performance.

**Population**
The present study focuses on the employees of banking sector of Pakistan as population. Due to shortage of time and capital, we selected the banks in Lahore as a sample for data collection. According to Israel, (1992) a good sample size, 200-500, is needed for simple and multiple regression which might be performed for more rigorous state impact evaluations. Therefore, using simple random sampling, 350 questionnaires were distributed among different branches of banks in Lahore, Pakistan. Of 350 questionnaires, 100 and 250 questionnaires were distributed to public bank’s employees and to the employees of private banks, respectively. In data collection process, 270 questionnaires were received back and used for data analysis. Data was collected from top level managers and middle level managers. Overall, response rate of return was 77%.

**Results**

**Validity and Reliability**
Validity is an important component of research and is concerned with whether the outcomes are actually about and what they appear (Saunders, Lewis, & Thornhill, 2007). Before measuring the behavior of individuals by different questions, the questions must be relevant, well formulated and supported to the research. In this study, there are 35 statements which measure the attitudes and behavior of individuals. However, the questionnaire employed in this study was already used and showed high extent of validity. This study is based upon 270 employees of banks. The top level and middle level employees are involved in this research. The overall Cronbach’s alpha is .91. George and Mallery (2003) provided more detailed classes of reliability values (i.e., >0.9 “Excellent”, >0.8 “Good”, >0.7 “Acceptable”, >0.6 “Questionable”, >0.5 “Poor”, while <0.5 “Unacceptable”). Therefore, the value of Cronbach’s alpha is good enough for this study.

**Correlation Analysis**
In order to examine the relationship among transformational leadership, social interaction, knowledge management and organizational performance, a bivariate correlation analysis was used. Table 1 shows the results of correlation analysis.

<table>
<thead>
<tr>
<th>Variables</th>
<th>TL</th>
<th>SI</th>
<th>KM</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership (TL)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social interaction (SI)</td>
<td>.603**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge management (KM)</td>
<td>.578**</td>
<td>.721**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Organizational Performance (OP)</td>
<td>.645**</td>
<td>.939**</td>
<td>.853**</td>
<td>1</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**
Table 1 shows the relationship between variables of current research. The value range from .578** to .939**, and these are positively associated with each other. That is between the range of 0 to +1. There is a highly significant relationship between TL and OP which is .645**, where ** shows the highly significance between two variables. Similarly, SI has a very highly significant relation with the OP which is .939** and there is a highly significant relationship between KM and OP which is .853**.

**Regression Analysis**

Regression analysis is a very powerful tool in the field of statistical analysis because it predicts the value of one variable, given the value of another variable, when those variables are related to each other. Regression analysis also provides estimates of values of the dependent variables from the values of independent variables. All hypotheses were tested according to Baron and Kenny’s (1986) standards of testing mediation. Following abbreviations are used for the variables of the study: transformational leadership (TL), knowledge management (KM), organizational performance (OP) Standard error (SE).

**H1:** Transformational leadership plays an important role in knowledge management.

As shown in Table 2, value of $R^2$ shows the level of effect of the independent variables on dependent variables. The value of $R^2$ is .33. The value of $R^2$ should be greater than .25. The Value of $F$ defines the level of relationship between dependent variables and independent variables. Greater value of $F$ denotes that there is a strong relation between these variables. The value of $F$ in results is 134.28 and its significance value is .000. This shows that there is a strong relationship among dependent variables and independent variables. The value of $t$ should be non-zero and Table 2 indicates that $t$-value is non-zero. For the relationship of TL and KM, the value of $\beta = .76$ indicates that one unit change in transformational leadership may result in 77.0% change in knowledge management. The value of $p$ describes the real extent of the relationship. When the value of $p$ is less than .10, .01 or .05, then the hypotheses are accepted. In this relationship, i.e., transformational leadership and knowledge management, the value of $p$ for the relationship is .000 which is less than .01. This means that hypothesis regarding transformational leadership and knowledge management is accepted.

**H2:** Social interaction puts strong influence on knowledge management.

As shown in Table 3, value of $R^2$ shows the level of effect of the independent variables on dependent variables. The value of $R^2$ is .52. The value of $R^2$ should be greater than .25. The Value of $F$ defines the level of relationship between dependent variables and independent variables. Greater value of $F$ denotes that there is a strong relation between these variables. The value of $F$ in results is 289.79 and its significance value is .000. This shows that there is a strong relationship among dependent variables and independent variables. The value of $t$ should be non-zero and Table 3 indicates that $t$-value is non-zero. For the relationship of SI and KM, the value of $\beta = .83$ indicates that one unit change in social interaction may result in 83.0% change in knowledge management. The value of $p$ describes the real extent of the relationship. When the value of $p$ is less than .10, .01 or .05, then the hypotheses are accepted. In this relationship, i.e., social interaction and knowledge management, the value of $p$ for the relationship is .000 which is less than .01. This means that hypothesis regarding social interaction and knowledge management is accepted.
As presented in Table 3, the value of $R^2$ is .52. The value of $F$ is 289.79 and its significance value is .000. The value of $t$ is non-zero. Among the relationship of SI and KM, the value of $\beta = .83$ shows that one unit change in social interaction may result in 83.2% change in knowledge management within banking sector of Pakistan. The hypothesis regarding social interaction and knowledge management is accepted.

**H3:** Knowledge management puts strong influences on organizational performance.

As indicated in Table 4, the value of $R^2$ is .72. The value of $F$ is 713.83 and its significance value is .000. The value of $t$ is non-zero. In the relationship of KM and OP, the value of $\beta = .73$ indicates that one unit change in knowledge management may result in 74.0% change in organizational performance within banking sector of Pakistan. The hypothesis regarding knowledge management and organizational performance is accepted.

**H4:** Knowledge management plays mediating role between transformational leadership and organizational performance.

As presented in Table 5, for the mediation analysis, the predictor (transformational leadership) is related to the outcome (organizational performance) which is Step 1. The standardized regression coefficient ($\beta = .76$) associated with the transformational leadership on organizational performance is significant ($p < .05$). Therefore, Path c is significant, and thus the condition of mediation in Step 1 is met. Figure 1 shows the mediator effect of KM on TL and OP.

**Table 4**

Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>Std. Error</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.22</td>
<td>.15</td>
<td>8.09</td>
<td>.000</td>
</tr>
<tr>
<td>KM</td>
<td>.73</td>
<td>.02</td>
<td>26.71</td>
<td>.000</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>713.83</td>
<td>.000</td>
<td></td>
<td></td>
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</tbody>
</table>

***Significant at the 0.01 level. **Significant at the 0.05 level. * Significant at the 0.10 level
Dependent Variable: Organizational Performance (OP); Independent Variable (Predictor): Knowledge Management (KM)

As indicated in Table 4, the value of $R^2$ is .72. The value of $F$ is 713.83 and its significance value is .000. The value of $t$ is non-zero. In the relationship of KM and OP, the value of $\beta = .73$ indicates that one unit change in knowledge management may result in 74.0% change in organizational performance within banking sector of Pakistan. The hypothesis regarding knowledge management and organizational performance is accepted.

**H4:** Knowledge management plays mediating role between transformational leadership and organizational performance.

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**Table 5**

Testing Mediator Effect of KM on TL (IV) and OP (DV)

<table>
<thead>
<tr>
<th>Testing Steps of Mediation</th>
<th>$B$</th>
<th>SE</th>
<th>$F$</th>
<th>$R^2$</th>
<th>Decision</th>
<th>$B$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 (Path c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome: OP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predictor: TL</td>
<td>.73</td>
<td>.05</td>
<td>190.76</td>
<td>.41</td>
<td>.000&lt;.05</td>
<td>.73</td>
</tr>
<tr>
<td>Step 2 (Path a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome: KM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predictor: TL</td>
<td>.76</td>
<td>.06</td>
<td>134.29</td>
<td>.33</td>
<td>.000&lt;.05</td>
<td>.76</td>
</tr>
<tr>
<td>Step 3 (Paths b and c')</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome: OP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mediator: KM (Path b)</td>
<td>.62</td>
<td>.03</td>
<td>713.83</td>
<td>.72</td>
<td>.000&lt;.05</td>
<td>.62</td>
</tr>
<tr>
<td>Predictor: TL (Path c')</td>
<td>.26</td>
<td>.04</td>
<td>426.99</td>
<td>.76</td>
<td>.000&lt;.05</td>
<td>.26</td>
</tr>
</tbody>
</table>
As displayed in Figure 1, the regression coefficient ($\beta = .765$) is significant, $p < .05$ and thus the condition of Step 2 is met (significant Path a). This shows that transformational leadership is related to knowledge management (the hypothesized mediator).

To test whether knowledge management is related to organizational performance; organizational performance regressed simultaneously on both transformational leadership and the knowledge management variables (Step 3). The coefficient concerning the relationship between knowledge management and organizational performance (controlling for transformational leadership), is significant ($\beta = .621, p < .05$). Thus, the condition for Step 3 is met (significant Path b). The third regression analysis also provided an estimate of Path $c'$, the relation between transformational leadership and organizational performance, controlling for knowledge management. When path $c'$ is zero, i.e., the independent variable becomes insignificant, then there can be a complete mediation. Nevertheless, Path $c'$ is ($\beta = .261$) also significant ($p < .05$), though it is smaller than Path $c$ which is .736. After controlling for knowledge management, the effect of transformational leadership appeared to be significant and smaller, i.e., from $\beta = .736$ to $\beta = .261$ and hence reduced by $736 - .261 = .475$ which is supported partial mediation. To check the significance of indirect effect, Sobel test was applied which eventually determined the significance of partial mediation. The results of Sobel test indicated that indirect effect (.475) is statistically significant ($z = 10.66, p < .05$). Hence, it is established that knowledge management acts as a partially mediator between transformational leadership and organizational performance and this hypothesis is accepted. It is important to know the amount of mediation. It is calculated from the standard of Shrout and Bolger (2002) which is $ab/c (.475/.736 = .64)$ and it is obtained from unstandardized coefficients. Thus, about 64% of the total effect of transformational leadership on organizational performance is mediated by knowledge management.

**H5:** Knowledge management plays mediating role between social interaction and organizational performance.

For the mediation analysis as presented in Table 6 and Figure 3, it is established that the predictor (social interaction) is related to the outcome (organizational performance) which is the Step 1. The standardized regression coefficient ($\beta = .934$) associated with the social interaction on organizational performance is significant ($p < .05$). Therefore, Path $c$ is significant, and thus condition of mediation in Step 1 is met.
Table 6
Testing Mediator Effect of KM on SI (IV) And OP (DV)

<table>
<thead>
<tr>
<th>Testing Steps of Mediation</th>
<th>B</th>
<th>SE</th>
<th>F</th>
<th>R²</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 (Path c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome: OP</td>
<td>.934</td>
<td>.021</td>
<td>198.42</td>
<td>.881</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Predictor: SI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2 (Path a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome: KM</td>
<td>.832</td>
<td>.049</td>
<td>289.79</td>
<td>.520</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Predictor: SI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3 (Paths b and c')</td>
<td></td>
<td></td>
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<tr>
<td>Outcome: OP</td>
<td></td>
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</tr>
<tr>
<td>Mediator: KM (Path b)</td>
<td>.316</td>
<td>.018</td>
<td></td>
<td></td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Predictor: SI (Path c')</td>
<td>.671</td>
<td>.020</td>
<td></td>
<td></td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

Figure 3. Mediator Effect of KM on SI and OP

As displayed in Table 6 and Figure 3, the regression coefficient ($\beta = .832$) is significant, $p < .05$ and thus the condition of Step 2 is met (significant Path a). This shows that the social interaction is related to knowledge management (the hypothesized mediator).

To test whether knowledge management is related to organizational performance, the organizational performance regressed simultaneously on both social interaction and the knowledge management variables (Step 3). The coefficient, the relation between knowledge management and organizational performance (controlling for social interaction), is also significant, $\beta = .316$, $p < .05$. Thus, the condition for Step 3 is met (significant Path b). The third regression analysis is also provided an estimate of Path c', the relation between social interaction and organizational performance, controlling for knowledge management. When path c' is zero, i.e., the independent variable becomes insignificant, there can be a complete mediation. Nevertheless, Path c' is ($\beta = .671$) also significant ($p < .05$), though it is smaller than Path c which is .934. After controlling for knowledge management, the effect of social interaction appeared to be significant and smaller, i.e., from $\beta = .934$ to $\beta = .671$ and hence reduced by .934 - .671 = .263 which is supported partial mediation. To check the significance of indirect effect, Solbe test was performed which is eventually determined the significance of partial mediation. The results of Solbe test indicated that indirect effect (.263) is statistically significant, $z = 14.40$, $p < .05$. Therefore, it is established that knowledge management acts as partially mediator between social interaction and organizational performance and hypothesis is accepted. By using the standard of Shrout and Bolger (2002) the value of mediation was calculated which is $ab/c$, .263/.934 = .28 and it is obtained from unstandardized coefficients. Thus, about 28% of the total effect of social interaction on organizational performance is mediated by knowledge management.
Discussion
This research examines the role of knowledge management between transformational leadership, social interaction and organizational performance. The results revealed a positive association between the transformational leadership, social interaction, knowledge management and organizational performance. The prior studies and their results proposed the similar positive relationship between TL and KM (Gelard et al., 2014). Moreover, the earlier studies and their results also revealed the similar effect of SI with KM (Chen & Hung, 2007). In addition, the results of different studies have indicated a positive relationship between KM and organizational performance (Gold et al., 2001; Hasan & Al-Hawari, 2003; Lee & Lee, 2007; Schultz & Jobe, 2001). Thus, above discussion clarifies that current research is also in compliance with the preceding studies. Furthermore, the results of the regression analysis indicate that in general if organization adopts transformational leadership style, the knowledge will be easily managed among organizational members and then the volume of organizational performance will be increased.

As the results of the present study indicated, knowledge management partially mediates between transformational leadership and organizational performance. In addition, if an organization promotes social interaction behavior among individuals, the management of knowledge will be improved among members and then the levels of organizational performance will be increased. Therefore, knowledge management plays a mediating role in the relationship between social interaction and organizational performance. It can be concluded that if the banks of developing countries especially in Pakistan, adopt transformational leadership style and enhance the social interaction behavior within organization, then knowledge will be properly managed and ultimately the performance of the organization will be increased.

Managerial Contribution and Limitation
From a practical point of view, this study suggests that managers should be aware of the importance of knowledge management in the link of transformational leadership, social interaction and organizational performance. The empirical results indicate that transformational leadership and social interaction are crucial for knowledge management and ultimately for organizational performance.

This study has some limitations. Due to the cost and time restraint, the target population focused on only banks of Lahore. The target population of current research is only banking sector but other sectors such as textile sector, education sector and telecommunication sector remained unexplored. This is a cross-sectional study; the data were collected from respondents at specific point of time.

For future research, the population and sample size of the current research can be increased in order to get better and generalized results. The same research can also be conducted in other organizations, e.g., industrial sector, telecommunications, hospitality sectors, educational institutions to check the generalizability of the results. A longitudinal study on banking sector of Lahore can also reveal other aspects of the present study. Further research can be conducted to determine the factors that influencing the adoption of knowledge management in the banking sector of Pakistan.
References


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