Knowledge Management, Emotional Capability, Teamwork, and Innovativeness: Mediating Role of Organizational Learning

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ARTICLE DETAILS

ABSTRACT

Innovation has become critical success factor in many industries today and numerous scholars approve that it could be achieved through learning in organizations. Despite the availability of numerous researches on innovativeness and organizational learning in international context, there are limited studies that analyze the effect of learning on innovativeness in context of Pakistan. Specifically, the research is limited regarding mediating role of organizational learning between knowledge management, teamwork, emotional capability, and innovativeness; and the main purpose of this study was to fill this research gap. This study draws its framework mainly from resource based view, knowledge based view, and dynamic capability perspective. For this research, data was obtained through survey from managers in Pakistani SMEs operating in multiple sectors. The study performed its analyses using SmartPLS 3.0 based on 149 responses. The study concludes that organizational learning significantly mediates the relationship between knowledge management, teamwork, emotional capability, and innovativeness. The study provides valuable information for Pakistani SMEs about how they could enhance their innovative capability through learning capability.

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1. Introduction

It is argued that in business, innovativeness plays a crucial role (Damanpour, 1991). It has been an important and obvious requirement to be competitive and successful as it enables an organization to be able to adjust according to market changes (Hult & Ferrell, 1997). Theoretically, innovation diffusion theory considers innovation as critical component of any business (Aragón-Correa, García-Morales, & Cordón-Pozo, 2007). On the other hand, organizational learning theory describes how an organization could enhance its innovativeness and performance. Zander and Kogut (1995) argue that organizational learning is based on resources (tangible and intangible) which are significant for an organization to be innovative and competitive. Scholars have suggested that number of factors could lead to innovativeness; however, some are more important, like organizational learning (Garcia-Morales, Llorens-Montes, & Verdu-Jover, 2006; Zander & Kogut, 1995). Further, it is argued that out of several
variables that create innovativeness through means of organizational learning, some of the crucial ones are emotional capability (Akgün, Keskin, & Byrne, 2009), knowledge management (Garratt, 1990; Su, Huang, & Hsieh, 2004), and teamwork (Boyatzis, 2009; Koman & Wolff, 2008). By the analyses of existing literature and past studies’ results, it is figured out that to increase the level of organizational learning, an organization, at different levels, need to develop a system based on knowledge management. Without proper knowledge management, it’s actually hard to attain a standardized and acceptable level of organizational learning among employees (Garratt, 1990; Su et al., 2004). Moreover, some studies show that knowledge management is related to innovativeness in a positive manner and it casts a great effect on innovativeness (Garcia-Morales et al., 2006; Nonaka & Takeuchi, 1995; Shani, Sena, & Olin, 2003). Therefore, knowledge based view provides a theory for this study.

As regards emotional capability, it is believed that it also makes organizational learning fast and effective. Enhanced emotional capability makes employees to learn with full devotion and understanding and to be more productive (Akgün et al., 2009). Furthermore, many researchers argued that if an employee is satisfied with his/her work, then there are higher chances that innovativeness would be higher as more quality ideas could be produced (Akgün et al., 2009; Huy, 2005). Along with that team based skills are also very important for an organization. It is believed that these skills enable organizations to enhance their learning and innovativeness (Ayiro, 2010; Boyatzis, 2009; Koman & Wolff, 2008). Business environment today has become very competitive characterized by increased level of competition, advance technology and higher expectations by the customers and other stakeholders. Hence, to catch up with the dynamic environment, it is important to choose and try effective ways to be innovative and attain superior performance for securing high position in the market. Teamwork is such an approach which contemporary businesses adopt today. It is considered as one of the ways to create innovative ideas and to try out new things (Bikfalvi, Jäger, & Lay, 2014). However, some suggest that in spite of number of researches, there are certain questions to be answered regarding teams and teamwork (Benders & Hootegem, 1999) and more and better studies could be conducted regarding teamwork.

Although there is a large volume of research on the above variables but one of the gap existing in the literature is about the role of organizational learning as mediator between knowledge management, teamwork, emotional capability, and innovativeness. Further, there has been comparatively less research in SME context in Pakistan for these variables which this study wanted to accomplish. This study is accomplished for SMEs in Pakistan due to their utmost importance for the country. Pakistan’s economy largely depends on SME sector. Around 3.2 million companies operate in the country, which engage 78% non-agriculture labor, and contribute 25% to manufacturing goods exports (Khan & Khalique, 2014). Notably, Pakistani SMEs do not stand in par with large corporations with respect to innovation. But innovation could be considered to be very important factor behind SMEs success (Ismail, Omar, Soehod, Senin, & Akhtar, 2013). Similarly, researchers have highlighted the importance of knowledge management, teamwork, learning, and emotional capability also for SMEs (Fu, Chang, & Wu, 2001; King, Marks, & McCoy, 2002; Piperopoulos, 2010). Through its framework, this study therefore, puts forwards useful set of suggestions for SMEs regarding these variables.

2. Literature Review
2.1 Mediating Role of Organization Learning between Knowledge Management and Innovativeness

Making the argument from knowledge based view, it could be suggested that in knowledge based economies today, knowledge management is important for SMEs to keep them well informed and address innovation. Scholars have also argued that level of innovativeness can be enhanced by the proper knowledge management (Chung-Jen, Jing-Wen, & Yung-Chang, 2010; Garcia-Morales et al., 2006). Knowledge need identification, its acquirement, and interpreting it to clear up the strategic purposes can help gear up innovativeness (Fugate, Stank, & Mentzer, 2009). In SMEs, effective knowledge management makes them capable to hold and share knowledge and thus innovate more (Argote, McEvely, & Reagans, 2003). Moreover, knowledge management is also related to organizational learning. Gunsel, Siachou, and Acar (2011) discussed knowledge management as a cyclic model that enhanced learning by applying new knowledge. In order to be innovative, SMEs should always be in a state of full awareness related to market competition and its emerging trends. The knowledge acquired about the customers, competitors and other stakeholders would facilitate learning in SMEs.

Organizational learning capability always plays a constructive role. Cefis and Marsili (2005) discuss that it is very important to enhance organizational learning because it can help every organization to compete more efficiently by introducing new product and services. So it can be said that learning capability is positively related to innovativeness (Lemon & Sahota, 2004). Organizational learning is all about acquisition of required knowledge and
then utilization of that knowledge to produce novel products and services. Organizational learning enables organizations to compete through the introduction of something new. It involves the generation of unique ideas and then implementing those ideas effectively (García, Ruiz, & Llorens, 2007; Salim & Sulaiman, 2011). The discussion leads to following hypothesis.

**H1:** Organizational learning mediates the relationship between knowledge management and innovativeness.

### 2.2 Mediating Role of Organization Learning between Emotional Capability and Innovativeness

Emotional capability is considered as an important competency of SMEs. Emotional capability could comprise of certain dimensions like dynamics of playfulness, dynamics of encouragement, dynamics of reconciliation, dynamics of identification, dynamics of display freedom, and dynamics of experiencing. (Huy, 1999). Kocoglu, Imamoglu, Akgun, Ince, & Keskin (2015) argue that for the increased level of innovativeness, it is important to pay attention to the emotional aspects of an organization, which can help to get long lasting positive results. Personal efficiency and potential can be increased at the organizational level by adopting certain measures and those measures include the management of emotions and taking care of employee’s identity. All this helps to enhance organizational learning capability by providing identity and shared vision (Huy, 1999). Overall, to support learning and innovation, it is important for upper management to do emotions management using shared vision, managerial commitment and high management support (Akgün et al., 2009). The discussion leads to following hypothesis.

**H2:** Organizational learning mediates the relationship between emotional capability and innovativeness.

### 2.3 Mediating Role of Organization Learning between Teamwork and Innovativeness

The business world is getting more complicated and the level of competition is increasing. To cope up with all the environmental changes and to compete in an efficient manner, a collective effort from employees is required. Thus, teamwork could positively contribute in this matter (Kozlowski & Bell, 2003; Marks, Mathieu, & Zaccaro, 2001). Learning could be enhanced by working in the form of teams (Offenbeek, 2001; Yost & Tucker, 2000) and team based capabilities could do wonders to attain high level of innovativeness along with learning (Ayiro, 2010; Boyatzis, 2009; Koman & Wolff, 2008). Teamwork acts as a link between employees’ competencies and organizational learning (Swieringa & Wierdsma, 1992) as it enables smooth flow of knowledge between employees (Marquardt, 1996). Previous studies indicate that teamwork and innovativeness could be connected through organizational learning. Learning individually may not be as efficient as learning in the form of groups in which knowledge is shared with more efficiency and ease (Jordan, Ashkanasy, Hartel, & Hooper, 2002). Collective learning process could be more effective because collaboration, cohesion and cooperation is enhanced through teamwork (Dyerson & Mueller, 1999). The discussion leads to following hypothesis.

**H3:** Organizational learning mediates the relationship between teamwork and innovativeness.

### 3. Methodology

This study used survey method for data collection. Almost 300 questionnaires were sent to senior executives and managers of SMEs in different parts of Southern Punjab, Pakistan wherein most of the enterprises were located in Multan. Some questionnaires were sent through mail and others were delivered personally. The sampling process followed Dillman (2000). Unit of analysis was SME. The questionnaires sent were followed by telephone calls. This effort helped to get 185 responses. Out of these, 149 responses were valid, which meant the response rate was 61% which is normally considered satisfactory for this kind of research (Nutley, Walter, & Davies, 2007). The respondent companies were mainly telecom franchises (69), chemical related companies (22), and educational institutes (20). 20 belonged to hotels & restaurants and 18 questionnaires were responded by Ginning, and Travelling & Tourism firms.

Questionnaire was constructed using past studies. Eight items were adapted from study of Rašula, Vukšić, and Štemberger (2008) to measure knowledge management. The study of Akgün, Keskin, Byrne, and Aren (2007) provided the items for organizational learning. Items for emotional capability were taken from study of Akgün et al. (2009). Teamwork was measured by the items adapted from the study of Montes, Moreno, and Morales (2005). The study of Wang and Ahmed (2004) helped to assess the innovativeness.
4. Findings and Conclusions

4.1 Validity and Reliability of the Instrument

This research involved mediator variable and therefore, mediator analysis was conducted using SmartPLS 3.0 software. Measurement model was constructed to verify validity and reliability and structural model was constructed to test hypotheses, initially through PLS algorithm and afterwards through bootstrapping (1000 samples) (Preacher & Hayes, 2008). For innovativeness, organizational learning, and emotional capability, a 2nd order formative model was used as these constructs contained various dimensions. Table 1 presents information (for reflective models for knowledge management and teamwork) about items’ loadings and indicates that the loadings are more than 0.7 that indicate convergent validity (Henseler, Ringle, & Sarstedt, 2012). Table 1 also shows other statistics for reliability and validity. It presents Cronbach’s alpha, which is used to gauge the internal consistency of data. The reported Cronbach’s alpha for both constructs is greater than 0.7 which is satisfactory. AVE values are greater than 0.5 that show divergent validity. Composite reliability (CR) is greater than 0.7 which is also satisfactory (Chin, 1998). All VIF values were also less than 0.5. The model fit value SRMR is 0.056, (<0.08) (Hu & Bentler, 1998) which is also satisfactory.

Table 1: Item loadings

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>Loadings</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork</td>
<td>TW13</td>
<td>0.804</td>
<td>Cronbach’s alpha: 0.872, composite reliability: 0.907, AVE: 0.662</td>
</tr>
<tr>
<td></td>
<td>TW14</td>
<td>0.808</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TW15</td>
<td>0.843</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TW16</td>
<td>0.846</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TW17</td>
<td>0.766</td>
<td></td>
</tr>
<tr>
<td>Knowledge Management</td>
<td>KM1</td>
<td>0.900</td>
<td>Cronbach’s alpha: 0.904, composite reliability: 0.927, AVE: 0.679</td>
</tr>
<tr>
<td></td>
<td>KM2</td>
<td>0.882</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KM3</td>
<td>0.848</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KM4</td>
<td>0.793</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KM5</td>
<td>0.774</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KM6</td>
<td>0.735</td>
<td></td>
</tr>
</tbody>
</table>

4.2. Mediating effect of Organizational Learning between Knowledge Management and Innovativeness

The structural model is provided in Figure 1 and the results of hypotheses’ tests are provided in Table 2.

Figure 1: Structural Model

Table 2 shows that knowledge management has significant indirect impact on innovativeness with p-value = 0.026, and t-value = 2.222, while the direct impact is also significant (p-value: 0.039). That’s why mediation effect of organizational learning is partial. All the variables are positively related i.e. the coefficients of impact of knowledge
management on innovativeness (0.193), coefficient of impact of knowledge management on organizational learning (0.2), as well as coefficient of impact of organizational learning on innovativeness are (0.436) all are positive. It concludes that increase in knowledge management leads to increase in organizational learning and innovativeness. The bias corrected confidence intervals also show satisfactory statistics as zero does not fall between the two intervals. H1 is therefore accepted.

Table 2. Results of Hypotheses Tests

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Confidence Interval (Bias Corrected)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Path Coefficient</td>
<td>p-value</td>
<td>t-value</td>
</tr>
<tr>
<td>Organizational Learning → Innovativeness</td>
<td>0.436</td>
<td>0.000</td>
<td>4.292</td>
</tr>
<tr>
<td>Knowledge Management → Innovativeness</td>
<td>0.193</td>
<td>0.039</td>
<td>2.065</td>
</tr>
<tr>
<td>Knowledge Management → Organizational Learning</td>
<td>0.200</td>
<td>0.013</td>
<td>2.477</td>
</tr>
<tr>
<td>Teamwork → Innovativeness</td>
<td>0.061</td>
<td>0.427</td>
<td>0.795</td>
</tr>
<tr>
<td>Teamwork → Organizational Learning</td>
<td>0.272</td>
<td>0.000</td>
<td>4.315</td>
</tr>
<tr>
<td>Emotional Capability → Innovativeness</td>
<td>0.162</td>
<td>0.054</td>
<td>1.929</td>
</tr>
<tr>
<td>Emotional Capability → Organizational Learning</td>
<td>0.453</td>
<td>0.000</td>
<td>8.689</td>
</tr>
</tbody>
</table>

4.3 Mediating effect of Organizational Learning between Emotional Capability and Innovativeness

Table 2 shows that emotional capability also has significant indirect impact on innovativeness with p-value = 0.000, t-value: 3.683, while the direct impact is not significant at least at 95% level of significance (p-value: 0.054). This concludes that organizational learning is a mediating factor between emotional capability and innovativeness (H2 is supported). All the concerned coefficients are also positive that suggest that as emotional capability increases, it leads to increase in organizational learning and innovativeness. Confidence intervals also show satisfactory statistics with no zero falling between them.

4.4 Mediating effect of Organizational Learning between Teamwork and Innovativeness

Table 2 shows that teamwork has an indirect impact on innovativeness with the p-value of 0.003 (t-value: 2.943) and the direct effect is insignificant (p-value: 0.427). This concludes that organizational learning is full mediator between teamwork and innovativeness (H3 is supported). All the concerned coefficients are also positive suggesting that increase in teamwork increases organizational learning and innovativeness. Confidence intervals also show satisfactory statistics with no zero falling between them.

5. Discussion

This research reveals the important and significant part that knowledge management, team work, and emotional capability play for improving organizational learning, and then how it enables SMEs to better address innovation. All the results of the study are supported by literature and previous research. Firstly, the relationships revealed in this research between knowledge management, organizational learning, and innovativeness are supported by number of past scholars such as Penrose (1959), Hall (1993), and Darroch (2005). Hall (1993) argued that knowledge management was important factor for bringing innovation as it directly affected SMEs’ capability to do that. The process of decision making is affected by knowledge management in SMEs. The availability of knowledge puts SMEs in a right position to take right decisions on the basis of business related information and they should pay attention to knowledge management if they want to develop innovativeness (Penrose, 1959). Similarly, when SMEs focus on knowledge management, they attain highest level of organizational learning (Günself et al., 2011). In SMEs, the effect of knowledge management and organizational learning is strong and it enables better SME growth (King et al., 2002). Positive effect of organizational learning on innovativeness is also supported by large volume of research (Darroch & McNaughton, 2002; García-Morales et al., 2006; Shani et al., 2003).
Secondly, every organization needs to manage emotional capability for being innovative as employees’ emotions are involved in their work as equally as their hands and minds. Scholars argued that emotional capability was an important determinant of innovativeness in organizations (Akgün et al., 2009; Michie & Gooty, 2005). Huy (1999) argued that for SMEs, emotional capability was important to manage for improving their innovativeness and making fast progress. The importance of emotional capability makes it resonate across various research fields including organizational behavior (Elfenbein, 2007), strategic management (Huy, 1999, 2011), and innovation (Akgün et al., 2009). The social constructionism theory of emotions (Fineman, 1993), social psychology theory of creativity (Amabile, Conti, Coon, Lazenby, & Herron, 1996), and the work motivation theories (Locke, 1969; Vroom, 1964) suggested that employees’ emotional capability affected their work attitudes, hence, affecting their performance, which eventually determined SME innovativeness. Similarly, scholars argued that employees could perform better and learn effectively when organizations understand employees’ emotions and manage them through different measures (Fineman 1993, Rafaeli, & Worline, 2001). Finally, it is argued that for being innovative, organizations need to use team system or an integrated system instead of relying on old ways of planning and old techniques (Olson et al., 2001; Peterson et al., 1995). Teamwork significantly affects innovativeness and that is proved correct for Pakistani SMEs too through this study. Teamwork also plays an important role in the advancement of organizational learning (Marquardt, 1996; Swieringa & Wierdsma, 1992) because it upgrades the sharing of information and knowledge between members of a team or between different teams. This provides support to dynamic capability perspective that act as a base for the effect of teamwork on organizational learning and innovativeness. DCP states that integration of competencies is very important and every organization should integrate its competencies for better management (Teece, Pisano, & Shuen, 1997).

This research provides important guidelines for practitioners. It suggests management of SMEs in Pakistan to focus on knowledge management processes for promoting learning and addressing innovation. SMEs must focus on identifying important and relevant knowledge and information from inside as well as outside the organization for being well informed. This would enhance their learning and ultimately innovativeness. They must also understand and manage emotional part of their labour and design emotion management programs and strategy for improving emotional capability among employees. Further, for SMEs being small size organizations, it could be easier to practice teamwork compared to large enterprises; and they must organize their workplace around philosophy of teamwork for better learning. Teamwork would provide employees opportunities to share their views and ideas, coordinate better, solve problems easily, share more, learn together, and innovate collectively. These measures could improve SME innovativeness which could be one of the leading factors behind their success.

6. Limitations and Future Research
There are number of limitations of this research. This study was conducted in Pakistan only, so the main limitation is the limited generalizability of findings across other countries. Secondly, the findings could not be easy generalized over large scale enterprises; and one must be cautious in applying the findings to SME types (or sectors) which were not included in this research. Sole reliance on questionnaires instead of interviews, and study’s cross sectional design could also be a limitation. However, due to broad nature of the variables used in this study such as learning and innovativeness, there is a further room to look for more antecedents as may be pertinent to other sectors and countries. Longitudinal research design could also be more revealing.

References


pressure control, proteinuria, and the progression of renal disease the modification of diet in renal disease study. *Annals of Internal Medicine, 123*(10), 754-762.


