Impact of Organizational Culture, Structure, and Reward on knowledge sharing behavior of the employees within presence of moderator Technological infrastructure: a case of Banking Sector of Pakistan.

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Abstract:
The objective of this paper is to investigate the key factors for promoting the knowledge sharing behavior of the employee’s especially Pakistani banking sector. These factors include organizational culture, structure, and reward for knowledge sharing within the presence of moderator technological infrastructure. Theoretical model and questioner is developed on the basis of extensive literature review, to understand the relationship between the organizational factor and knowledge sharing, the author used statistical analysis (SPSS). Data is collected from 150 employees working in the different branches of banks. This study finds that organizational culture and structure play an active role in knowledge sharing. Specially, learning and development, top management supportive culture has positive impact on knowledge sharing, while the collaborative culture has negative impact on knowledge sharing. In general, if the organizational culture having the characteristics of more learning and development, more top management supportive and less collaborative then the knowledge sharing behavior of the employees must be enhanced. Overall organizational structure has positive influence on knowledge sharing. But results suggest, if that organizational structure is more centralized and less formalized, the level of knowledge sharing increased. Technology infrastructure play a role of catalyst between the organizational factors (structure and culture) and knowledge sharing. This paper also indicate within the presence of reward for knowledge sharing, the employees are more motivated for knowledge sharing. Employees are main part of organizational performance and required proper communication of information and knowledge from the top management of the company. And information from top management of the company obtained through proper knowledge sharing system. Organization can get competitive advantage with the help of knowledge sharing. This study integrate the research of different fields and focus on knowledge sharing in banking context. The results of the paper extend the theoretical implication of organizational factors and knowledge sharing in the Pakistani context.

Keywords: Organizational Culture, Organizational Structure, Organizational Reward, Knowledge Sharing, Technological Infrastructure, Banking sector.

1: Introduction:

Today most of the organizations are engaged to get competitive advantage in their process and operations. Organizational competitive advantage is largely depend on effective Knowledge Management. According to (Liao, Chuang, & Pui-Lai, 2011) Knowledge Management is an integrated process that create, store, share and utilize knowledge within an organization. Among all the component of knowledge management, Knowledge sharing is crucial because it used to get firm’s competitive advantage(Linda & Paul, 2000; Tagliaventi, Bertolotti, & Macri, 2010).Knowledge sharing enhance performance of manufacturing sector(Epple, Argote, & Murphy, 1996) as well as services sector(Baum & Ingram, 1998) . The concept knowledge sharing referred to the transfer of experience, skills, knowledge and important information from one person or group of employees to another person or group of employees. The aim of knowledge sharing investigation is to increase the impressive flow of knowledge between the members of organization(Kogut & Zander, 1993; Tagliaventi et al., 2010). Firms must continuously increase their competencies by compiling knowledge sharing behavior of the employees within the organization(Liu, Raahemi, & Benyousef, 2011; Quadus & Xu, 2005).More satisfied employees with their jobs and those who give importance to their work(job involvement) are more willing to share knowledge, So top management of the company promote such type of activities because knowledge transfer between employees makes employees job straightforward and save employees time to perform different task(Teh & Sun, 2012b). Knowledge sharing inside the organization become common practice because it increase firm competitiveness(Linda & Paul, 2000).

Knowledge management is considered most important in all the banks because it provide the timely and effective information that are being used in all the organizational process from planning to controlling and from decision making to evaluation. Knowledge sharing helps the mangers to formulate strategic, tactical and operational planning. So that they can achieve organizational objective in effective way. The most common fields of knowledge management applications in a bank are risk management, marketing management, customer relationship management and performance measurement especially for the benefit of its stakeholders. Usually, in major banks investments in Knowledge Management systems such as Decision Support Systems, Data Warehouses and Data Mining are rapidly growing. Nowadays Modern banks investigate the importance of the value of knowledge Management in the banks business practices. The banking sector is always targeted to improve their customer satisfaction that will result in revenue.
increasing. The process of Knowledge creation, storage and dispersion becomes essential and banks assign specialized personnel to watch over and manage these critical processes. the aim of this research to find key factor to promote knowledge sharing in banking sector (Jayasundara, 2008).

Knowledge sharing has direct and positive influence on firm competitiveness and success. Hence, it is very difficult to encourage the employees to share knowledge because they consider the consequences of performing this action what they gain or what they loss. However, the problem is that how employees are motivated to share information and knowledge with other employees of the organization. Literature suggested in different perspective, that how to rewards and motivate the employees to share their knowledge. According to Omar Sharifuddin Syed-Ikhsan and Rowland (2004) a strong motivator is required to employees in organization for knowledge sharing. Top level of management must considered the significance, importance and practices of knowledge sharing while reward system designing. There must be a system in which information sharing are encouraged and rewarded. Such kind of rewards is based on group performance rather than the performance of individuals (Goh, 2002).

Different type of challenges arises when knowledge management and sharing practices has been developed and implemented within the organization. But the most dominant is organizational cultural and structure. Previous research indicates that organizational culture and structure are crucial factors for knowledge sharing (Al-Alawi, Al-Marzooqi, & Mohammed, 2007; Wang, Su, & Yang, 2011; Wiewiora, Trigunarsyah, Murphy, & Coffey, 2013; Zheng, Yang, & McLean, 2010; Zubair, Nawaz, & Raheem, 2014). Hence, all prior studies describes only the relationship between OC and OS with knowledge sharing. They neglect mediation between organizational culture and structure in Pakistani banking context. Information technology (IT) play a vital role in knowledge management. IT infrastructure means through which employees can communicate and share their information on large scale. This paper fill the gap how organizational cultures and structure impact on knowledge sharing with the mediation of technology infrastructure especially in the context of banking sector.

1.1 Problem statement

This study focus on “how the banking sector of Pakistan manage and organized its intangible assets”. Author finds out the effect of knowledge sharing with organizational and motivational factors. This research increase understanding of appropriateness of banking culture and structure for knowledge sharing. In this study organizational factors includes organizational culture and structure. Motivational factor is reward.

This research seek to answer the following questions.

Does the organizational and motivational factor have any association with knowledge sharing in banking sector?

Does the banking culture support or hinder the knowledge sharing behavior of the employees?

Does motivational factor (reward) enhance the knowledge sharing behavior of the employees?

Does banking structure support or hinder the knowledge sharing behavior of the employees?

Does the technological infrastructure moderate the relationship between organizational factors and knowledge sharing in banking context?

1.2 Objectives of the Study

1. To explore the relationship between organizational factors and knowledge sharing;

2. To investigate impact of organizational culture on knowledge sharing;

3. To find out the impact of organizational structure on knowledge sharing;

4. To investigate the impact motivational factor on knowledge sharing;

5. To explore whether the technological infrastructure moderate the relationship between organizational factors and knowledge sharing;

6. To provide suggestions in order to improve the knowledge sharing in banking sector;

1.3 Significance of the Study

Improving competitive advantage through knowledge sharing has been constantly overlook and ignored in less developing countries like Pakistan. Under the current study attempt was made to delineate the factors that enhance, facilitates and influence knowledge sharing in developing countries. The current research focus on banking sector and made contribution in Pakistani scholarly circle with in the context of banks. The limited evidences are found that focus on these variable in banking context. Organizational factors selected under the recent research based on extensive literature review. A number of factors used to enhance the knowledge sharing behavior of the employees. This research focus on three variable that having direct impact on knowledge sharing.

This paper is organized as follow:

Section 1: Introduction: Section 2: Literature Review: Section 3: Methodology: Section 4: Results: Section 5: Discussion: Section 6: Limitation.

2. Literature review

2.1 Knowledge sharing

According to Jasimuddin, Connell, and Klein (2006) knowledge sharing is crucial component for increase the competitive edge of an organization. Jasimuddin et al. (2006) finding is based on W. M. Cohen and Levinthal (1990) who demonstrate that knowledge sharing is crucial factor for any organization in order to response change and innovativeness.
The social capital theory suggests through the social interaction with others and social connection between the employees, both the tangible and intangible resources can be obtained at individual, team, and organizational level. Based on the finding of the social capital theory, it can be argued that through the social interaction between the employees, the information (knowledge) is obtained from them and used for the making effective decisions (Adler & Kwon, 2002; Kostova & Roth, 2003). Teh and Sun (2012a) define the knowledge sharing as a system of social interaction through which employees can exchange their experience, skills, and knowledge to the whole organization. (Dyer & Nobeoka, 2002) argue that the knowledge sharing is a process that stimulates the employees to knowledge exchange an order to improve learning capacity of the organization, increase competitiveness, and eventually motivate the creation and dissemination of knowledge.

“Knowledge sharing means transfer, dissemination, and exchange of knowledge, experience, skills, and valuable information from one individual to other members within an organization.”

Knowledge sharing may be formal or informal. The sharing of knowledge is done through different ways like face to face communication, written and oral or by the use of technology infrastructure. It may happen when a colleague independently or by means of his/her knowledge share his ideas with the others. It may also happened in between group members or in different organizational entities. Knowledge sharing may vary in line with the knowledge shared by him with his (supervisors, colleagues and subordinates) (Šajeva, 2014)

Knowledge sharing is an activity that exchange of the organizational experience and knowledge among the employees so they must take best actions in order to achieve innovation. (M. Z. Islam, Jasimuddin, & Hasan, 2015). Conducted the research to address the issue how to motivating the employees of organization to share knowledge, proposed that within the presence of reward and encourage knowledge sharing is greater.

2.2: Organizational culture

To ensure the effective flow of knowledge among the employees of the organization a knowledge supportive culture is required (Kazi, 2005). From the perspective of constructivist school of thought organizational culture is continuous activity of bulging and rebuilding recognition within and around the organization (Trong Tuan, 2012). Suitable and knowledge supportive culture is prerequisite for knowledge sharing and dissemination. McDermott and O’Dell (2001) conclude that organizational culture may become a resistance for knowledge sharing. Employees are resistance to change so their inspiration for knowledge sharing and commitment for leadership is effected by the organizational culture (Davenport & Prusak, 1998). Consequently, an appropriate culture should be maintained to motivate employees to share the knowledge. There is many type of culture having effect on knowledge sharing but we focus on collaboration, learning and development, top management support.

2.2.1: Collaboration

“Collaboration refers to how people in an organization actively assist and support in job-related issues”. Whole around the world it’s found that collaboration play an active role for socially contraction of knowledge (Ryan, Windsor, Ibragimova, & Prybutok, 2010), and due to the presence of knowledge management organizational practice for knowledge sharing ensure that collaboration must be institutionalized so that the knowledge sharing occur (Carmilo, Rivera-Vazquez, Ortiz-Fournier, & Rogelio Flores, 2009). So we hypothesized that:

H1: There is positive relationship between the collaboration and knowledge sharing.

2.2.2: Top management support.

“Top management support is defined as the involvement and participation of top-level management in institutional activities” (Jarvenpaa & Ives, 1991). Top management support for knowledge sharing mean the degree at which management of the organization understand the effectiveness of knowledge management and by extending this how the management is participating in knowledge sharing practices in banking sector.

One of the important variable that having effect on organizational knowledge sharing is top management support (Connelly & Kevin Kelloway, 2003): different studies found that top management support is curtail in order to creating and providing necessary resources for knowledge sharing (Lin, 2006); Mary MacNeil (2004) suggest that for the purpose of employee’s knowledge sharing top management is very important (Lin & Lee, 2004) reported that top management support for knowledge sharing is important in order to create and maintain an effective organizational knowledge sharing culture. So it’s expected that top management support having positive influence on knowledge sharing. So we hypothesized that:

H2: There is positive relationship between the top management support and knowledge sharing.

2.2.3: Learning and development.

“Learning and development orientation refers to the extent to which an organization is willing to encourage its members to learn and develop themselves for long-term success”.

This is because of that an organization is totally depends upon its employees knowledge and skills in order to produce innovation in its products and operation (Tidd, Bessant, Pavitt, & Wiley, 1998). Many researchers (Jones, Herschel, & Moeisel, 2003; Yang, 2007) suggest that there is association among knowledge sharing and learning process. Through the knowledge sharing among the employees organizations facilitate learning process. So we hypothesized that:

H3: There is positive relationship between the learning and development orientation and knowledge sharing.

2.3: Organizational structure.

Organizational structure referred to the process in which responsibilities are formally separated, categorized and coordinated. Liao, Chuang, and To (2011) define organizational structure as the formal allocation of work roles and administrative mechanism to control and integrate work activity”. As organizations are perceived as knowledge integrating institutions, high importance should be placed on designing the internal structure of a company, especially the hierarchical design to empower decision-making, standardize rules and procedures and integrate members and work (Chen, Huang, &
Hsiao, 2010). Control mechanism design the nature of coordination between the employees and also having the influence on knowledge sharing. Other structural dimension are closed related to control mechanism (Willem & Buelens, 2009). The benefits from knowledge may not be obtained until design of the organization should not address the rules related to knowledge sharing. Appropriate structure is prerequisite for knowledge sharing.

Organizational structure is classified into different dimension like, team structure, mechanistic (centralization), formalization, bureaucratic, complexity, organic (flexibility), integration and matrix(Burns & Stalker, 1994). The Mechanistic and organic structure are opposite to each other. Mechanistic structure mean there is less decentralization (all the secession taken by the top management of the company) and more complexity all activates of the company is followed the formal rules and specified procedure and according to rules, while organic structure having flexibility, followed informal rules and open communicative environment (Burns & Stalker, 1994). Therefore the difference between two structures should be the degree of centralization and formalization. Organic (flexible) structure having the less hierarchical levels as compare to bureaucratic structure so is more appropriate for knowledge sharing (Kanter, 1994). More decentralize decision-making, less hieratical level, more informal environment and task are performed to follow less official rule, open environment for communication increased knowledge sharing (Morand, 1995).(Chen et al., 2010) demonstrate that centralization and formalization effect on knowledge sharing.

2.3.1: Formalization

Formalization refer to extent at which rights and responsibilities of the employees are followed by official rules, regulation and procedures.

Chen et al. (2010) proposed that more following the rules and regulation related to job may hinder the employees mix different sources of knowledge those are used for the development of innovative product and operations. Formalization indicate that how the organization follow rules and regulation to determine the prescribes behavior (Liao, Chuang, & To, 2011). Structure of the organization is less formal means that there is fewer rules and regulation is followed by the employee for the performance of their tasks. However the employees of the organization freely communicate with other employee as a result there is increase in innovation and creativity. Previous literature (Chen et al., 2010; Z. M. Islam, 2010) suggest that there is negative relation between the formal structure and knowledge sharing. Formalization generate a control environment also decreased the flexibility of knowledge sharing. So we hypothesized that

H4: There is negative relationship between the formalization and knowledge sharing.

2.3.2: Centralization

“Centralization referred to degree at which decision are taken by the top management of the organization”. Liao, Chuang, and To (2011) demonstrate that degree at which right of decision making and activities are centrally evaluated. Centralization create an environment which is less communicative non-participative and less involvement between the participants(Damanpour, 1991). Different scholars(Chen et al., 2010; Janz & Prasampanich, 2003) concluded that centralization having negative effects and the employees of the organization are having no emotional attachment with their working environment. Due to Centralized culture all the decision are made by the upper management so there is closed environment and employees does not share valuable information and suggestion. Less centralization within the organization encourage employee to share and cooperate with each other. So we hypothesized that

H5: There is negative relationship between the centralization and knowledge sharing.

2.4: Organizational reward for knowledge sharing.

A motivational reward for productive work demonstrate the perception of organization that how much importance is given by the organization to the shape the behavior of the employees. There is two main type of reward intrinsic and extrinsic. Extrinsic reward mean any tangible(Sutton, 2006)reward bonus, salary, commission and non-financial reward like employee of the year award, giving opportunity to participate in prominent project, providing educational opportunity, promotion and job security. Intrinsic reward means internal satisfaction after performing their task. In knowledge sharing context it refers to pleasure and satisfaction after knowledge sharing. Extrinsic reward used to motivate the employees for knowledge sharing(Sajeva, 2014). However there is mix results the effect of reward on knowledge sharing.(Bock, Zmd, Kim, & Lee, 2005) Monetary reward does not effect on knowledge sharing.(Huysman & De Wit, 2002) Motinary reward having short term impact on employee’s behavior. Reward can be used as short term motivator to encourage the employees for participating in knowledge sharing but does not provide a base for knowledge sharing culture.(Ismail Al-Alawi, Yousif Al-Marzoqi, & Fraidoon Mohammed, 2007) demonstrate that reward increased the knowledge sharing behavior of thee employees. According to(Sutton, 2006) Recognition has positive influence on knowledge sharing. So we hypothesized that

H6: Organizational rewards positively influence employee knowledge sharing behavior

2.5: technological infrastructure

The use of technological infrastructure and knowledge sharing having close link, because TI allow more rapidly search and access on information, also provides an opportunity of collaboration and communication between the employees. New method and application of knowledge sharing should be developed due to the use of TI like groupware, online database, internet and virtual communities. For knowledge base economy a critical component is TI. Such technological infrastructure play an important role in knowledge management process of the organization. Technology is important component of knowledge sharing. For the purpose of creating new knowledge sharing of existing knowledge is prerequisite, and technological platform provides this facility (Doherty, Champion, & Wang, 2010; Ho, Kuo, & Lin, 2012; McDermott & O’ dell, 2001; Mentzas, Apostolou, Young, & Abecke r, 2001).

The use of information technology in knowledge sharing create new capabilities in business process(Standing & Benson, 2000).Therefore it’s thought that the technological infrastructure crucial factor in order to discover the useful knowledge(Ho et al., 2012). Internet-based system is collaborative tool that enable the employees to collaborate and work
together. Individual knowledge of the employees become organizational knowledge with the help of technology (Ryan et al., 2010). Mentzas et al. (2001) conducted a detail investigation on information technology support or hinder the knowledge management. Identifies that TI effect on knowledge management such as learning and development.

H7. Technology infrastructure moderates the relationship between collaboration and knowledge sharing.

H8. Technology infrastructure moderates the relationship between learning and development orientation and knowledge sharing.

Along with infrastructure itself, a technology infrastructure leader is required so as to play critical his contribution in in order to made the vision, attitude and behavior of the employees which is very important for the perception of innovation (Ke & Wei, 2008). Top management of the company allow knowledge provider and content owner with responsibility to create and share their own knowledge. An intranet should be categories as an application of knowledge management because it’s main part of technology infrastructure also being able to disseminate knowledge.

H9. Technology infrastructure moderates the relationship between top management support and knowledge sharing.

(Doherty et al., 2010) Shed some light the effect of TI on structure of the organization. In the structure of the organization internet is being considered to support knowledge access and share (Ruggles, 1998). Through the efficient supply and access of knowledge, the intranet-based information technology play important role in knowledge sharing (Ho et al., 2012). Technology framework emphasizes the effect of organizational structure on design, development and implementation of technology.

H10. Technology infrastructure moderates the relationship between formalization and knowledge sharing.

H11. Technology infrastructure moderates the relationship between centralization and knowledge sharing.

A comprehensive technological infrastructure is required in order to produce knowledge sharing capabilities within the organization. Knowledge is disseminated and shared between the member of the organization with the help of the technology infrastructure (Ryan et al., 2010). Technology mean all the process, system, tools, automated solutions that are used to increased development, application and of the distribution knowledge (Chong, Chong, & Lin, 2010). Technology stimulate the flow of the knowledge but appropriate knowledge sharing is visible within the presence of organizational culture and structure.

3. Theoretical frame work

4. Research methodology

The objective of this current research is to investigate how knowledge sharing practices has been implemented in banking sector. Data is collected through the self-administered Questionnaire. Data is collected from the five cites of the Punjab. The cities includes Okara, Depalpur, Pakpattan, Arifwala and Multan. The respondent of the research are managerial staff those responsible for day to day activates. Data is collected within two months Respondent are selected randomly total 180 questioner was sent 170 questioner was collected on which 10 questioner are invalid. The response rate is 96 percent. All the question are assessed on five point liker scale. To ensure the content validity, the questioner is adopted from the previous research.

There is five item are knowledge sharing and scale is adopted from the work of Ismail Al-Alawi et al. (2007). The organization culture having three dimensions, (Collaboration, top management support, Learning and development culture) and measured by 16 item and adopted from the work of Hurley and Hult (1998). Top management support having six items; there are five item of Learning and development culture, and collaboration is measured by five items. Organizational structure has two dimension centralization and formalization and measured by the nine item and scale adopted from the work of Hedlund (1999). Formalization is measured by four items and centration is measured by five items. Technological infrastructure was measured by seven item and scale is adopted from the work of Gold and Arvind Malhotra (2001). Organizational reward was measured by six item and adopted from the work of Durmusoglu, Jacobs, Zamantili Nayir, Khijii, and Wang (2014).
A hierarchical regression analysis is used to test the hypothesis (J. Cohen, Cohen, West, & Aiken, 2013). Many fields of social science has been successfully this applied model. A step by step structure like control variables, direct effect, indirect effect, is followed in the hierarchical model. Due to hierarchical regression model, it’s very easy to understand the model (Lim, Loh, & Shih, 1998).

5: Results

5.1 Demographics

The profile of the respondents include: M.com (42.7 per cent), Male (.73 per cent) and in the age group 25-30 (34 per cent). The study particularly targeted the middle- and the top-management personnel. In total, the majority of the banks were HBL (35.5 per cent). Demographic information is demonstrated in Table 4.1.

Demographics Table 4.1

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Categories</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizations</td>
<td>UBL</td>
<td>22</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>HBL</td>
<td>53</td>
<td>35.3</td>
</tr>
<tr>
<td></td>
<td>MCB</td>
<td>32</td>
<td>21.3</td>
</tr>
<tr>
<td></td>
<td>ZTBL</td>
<td>18</td>
<td>12.</td>
</tr>
<tr>
<td></td>
<td>Allied bank</td>
<td>25</td>
<td>16.7</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>110</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>40</td>
<td>0.27</td>
</tr>
<tr>
<td>Educational level</td>
<td>B.COM</td>
<td>14</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>M.COM</td>
<td>64</td>
<td>42.7</td>
</tr>
<tr>
<td></td>
<td>MBA</td>
<td>23</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>M.PHILL</td>
<td>33</td>
<td>15.3</td>
</tr>
<tr>
<td></td>
<td>OTHERS</td>
<td>16</td>
<td>10.7</td>
</tr>
<tr>
<td>Age</td>
<td>Below 25</td>
<td>39</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>25-30</td>
<td>51</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>30-35</td>
<td>44</td>
<td>29.3</td>
</tr>
<tr>
<td></td>
<td>Above 35</td>
<td>16</td>
<td>10.7</td>
</tr>
<tr>
<td>Experience</td>
<td>Below 4</td>
<td>55</td>
<td>37.7</td>
</tr>
<tr>
<td></td>
<td>4-8</td>
<td>37</td>
<td>24.7</td>
</tr>
<tr>
<td></td>
<td>8-12</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>above 12</td>
<td>43</td>
<td>27.6</td>
</tr>
</tbody>
</table>

5.2 Inter Item Reliability

The internal reliability can be tested using Cronbach’s alpha (Fornell & Larcker, 1981). Table 4.2 shows the reliability assessments for independent variables, moderating variable and dependent variable to test the internal consistency. The reliability analysis indicates the degree to which items in each set correlate with one another. The Cronbach alpha should be greater than 0.7 to indicate a strong reliability for a questionnaire content (Nunnally, 1978). In this study, the Cronbach of the majority of constructs was greater than 0.7, except formalization. The smallest Cronbach’s alpha was 0.624 which indicates a reliability (may not be stronger reliability) for our questionnaire content.

Table 4.2 (Inter Item Reliability)

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Cronbach’s Alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge sharing</td>
<td>150</td>
<td>.819</td>
<td>5</td>
</tr>
<tr>
<td>Collaboration</td>
<td>150</td>
<td>.702</td>
<td>5</td>
</tr>
<tr>
<td>Learning and development</td>
<td>150</td>
<td>.701</td>
<td>5</td>
</tr>
<tr>
<td>Top management support</td>
<td>150</td>
<td>.771</td>
<td>6</td>
</tr>
<tr>
<td>Formalization</td>
<td>150</td>
<td>.624</td>
<td>4</td>
</tr>
<tr>
<td>Centralization</td>
<td>150</td>
<td>.728</td>
<td>5</td>
</tr>
<tr>
<td>Reward</td>
<td>150</td>
<td>.761</td>
<td>6</td>
</tr>
<tr>
<td>Technology</td>
<td>150</td>
<td>.760</td>
<td>6</td>
</tr>
</tbody>
</table>
5.3 Correlation

All correlation relationships between the independent variables organizational factors (culture and structure) and motivational factor (reward) with dependent variable knowledge sharing having significant and positive within the banking context. The sign "+" represents the highly significant relationship. The sign "+" represents significant relationship.

Table 4.3 (Correlation Matrix)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Sharing</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>.369**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning and development</td>
<td>.254**</td>
<td>.676**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top management support</td>
<td>.471**</td>
<td>.426**</td>
<td>.505**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centralization</td>
<td>.454**</td>
<td>.581**</td>
<td>.464**</td>
<td>.459**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formalization</td>
<td>.442**</td>
<td>.545**</td>
<td>.463**</td>
<td>.415**</td>
<td>.550**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reward</td>
<td>.319**</td>
<td>.144</td>
<td>.183*</td>
<td>.277**</td>
<td>.208*</td>
<td>.403**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>technology infrastructure</td>
<td>.551**</td>
<td>.287**</td>
<td>.282**</td>
<td>.598**</td>
<td>.471**</td>
<td>.431**</td>
<td>.468**</td>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

5.4 Regression

Regression analysis was carried out to test the relationship of the dimensions of organizational culture, structure and reward with knowledge sharing. The first regression models involve organizational culture, organizational structure, and reward as independent variables and knowledge sharing as the dependent variable. This regression analysis was conducted to test H1 to H6. The coefficient of determination R square is 0.52. The R square indicates the fraction of total variance in the endogenous construct accounted for by those exogenous constructs (Mathieson, Peacock, & Chin, 2001). Overall, a substantial amount of variance is explained in the endogenous variable, knowledge sharing. In Table 4.3, the coefficient of determination R Square (0.52) indicates that organizational culture, structure and reward variables explain 52 per cent of the variance of knowledge sharing. The finding of the study rejects H1 and H5, while accept hypotheses H2, H3, H4 and H6

Regression summary

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Significance</th>
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<tr>
<td>Collaboration</td>
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<td>Centralization</td>
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<td>Formalization</td>
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<tr>
<td>Reward</td>
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<tr>
<td>R= .52</td>
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<td>13.17</td>
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<tr>
<td>Sing=000</td>
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5.5 Moderating effect

Technology Infrastructure (TECH) was taken into account as a moderating variable. Table IV describes the result of the hierarchical regression when technology infrastructure moderate the relationship. The coefficient of determination of R square significantly increases to 0.59 when technology infrastructure was considered as a moderating variable. Thus, the bigger the R square, the more predictive power the model implies. From the hierarchical regression, it was found that
TECH plays a role as a moderator. Therefore, from the findings of hierarchical regression, we can accept the following hypotheses.

Technology infrastructure moderates the relationship between learning and development and knowledge sharing.

Technology infrastructure moderates the relationship between top management support and knowledge sharing.

Technology infrastructure moderates the relationship between centralization and knowledge sharing.

### Hierarchical regression summary

<table>
<thead>
<tr>
<th></th>
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<th>Sig</th>
<th>R</th>
<th>Change R</th>
<th>Sig F</th>
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<tr>
<td>Learning and development</td>
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<td>Top Management support</td>
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<tr>
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<td>Reward</td>
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</table>

### 6. Discussion

This study attempts to extend our understanding of the relationship between organizational culture, structure, organizational reward and knowledge sharing by adding technology infrastructure as a moderator. We propose and test an integrated framework in which organizational culture, structure and reward are the key factors that influence knowledge sharing, and technology moderates such relationship.

The study reveals that collaboration has vital role in knowledge sharing. Collaboration having positive but insignificant influence on knowledge sharing. These results partially support the work of (Ryan et al., 2010). The results of collaboration and knowledge sharing is interpreted in the following way that the employees of the banks are believing on the principle of knowledge holding, it’s may be called as fair of loss power (Hansen, 1999). The notion explains individuals’ unwillingness to share knowledge with others as they believe their acquired knowledge is valuable and necessary for their personal benefits (e.g. job security, career progression). And technology infrastructure moderate the relation insignificantly, confirm that that employees are reluctant to share information despite the technological orientation of their banks having toward knowledge-sharing process.

However learning and development orientation having positive and significant influence on knowledge sharing. There results fully support the work of (M. Z. Islam, Mahtab, & Ahmad, 2008; Yang, 2007). Learning through sharing knowledge between organizational employees brings the benefits for an organization (Yang, 2007). Moreover, technology infrastructure plays a positive and significant role between learning and development and knowledge sharing.
Formalization has been found to have a significant negative relationship with the knowledge-sharing process. This finding fully complies with the prior studies (Z. M. Islam, 2010). The existing literature also supports the notion that formally structured organizations cannot ensure full flow of knowledge, as these organizations are driven by set goals which do not create culture for effective knowledge sharing to take place. In fact, formalization can impede the generation of new ideas. Whereas, informal setting or structure with fewer rules and regulations makes people feel less stressed, thereby creating opportunities to knowledge sharing with each other in respect to their work which creates greater flexibility and creativity. Formalization has been found to have a significant negative relationship with the knowledge-sharing process. This finding fully complies with the prior studies (Z. M. Islam, 2010). The existing literature also supports the notion that formally structured organizations cannot ensure full flow of knowledge, as these organizations are driven by set goals which do not create culture for effective knowledge sharing to take place. In fact, formalization can impede the generation of new ideas. Whereas, informal setting or structure with fewer rules and regulations makes people feel less stressed, thereby creating opportunities to knowledge sharing with each other in respect to their work which creates greater flexibility and creativity.

Reward having positive and significant impact on knowledge sharing. This finding fully comply with the previous study (Durmusoglu et al., 2014; Ismail-Alawi et al., 2007). This paper confirms others’ work (Chen et al., 2010) argue that centralization affects knowledge sharing. A positive and significant relationship is observed to affect the relationship between centralization and knowledge sharing in the presence of technology infrastructure.

7. Conclusion
The primary objective of this study was to investigate the factors, which are promoting the knowledge sharing in banking industry of Pakistan. The factors used in this study having direct relationship with the dependent variable such as organization culture (collaboration, learning and development, Top management support) organizational structure (centralization, formalization) and reward. According to literature review, these all factors having effect on the employee’s knowledge sharing activities in an organization. Our results suggest that firms should recognize the importance of knowledge management and need to put more efforts in building up the effective knowledge sharing mechanisms to promote their innovativeness and competitive advantage. Banks may create a positively supportive and innovative culture to encourage employees not only behaves in interactive ways, but are also inspired to share their different perspectives. When banking structure is less formalized and more centralized, and more integrated, employee’s knowledge sharing behavior must be increased. The banking industry required to develop a positive relationship among all employees by considering the above mentioned factor, which could promote the knowledge sharing in an organization.

The decision maker of this sector must capture this information for their success and for the improvement of banking sector performance.

8. Limitations and future work:
First, due to time limitation data was collected from the five cities of the Punjab. The results may be vary if the data is collected whole Pakistan. And banking industry is selected, it’s may be possibility that the results could be vary in other organizational context

Second, based on a sample of 150 respondents, several significant results have been obtained. However, by increasing the sample size more appropriate results should be obtain and generalizability of the research has increased.

Third, the banks under study used technology infrastructure without considering different capabilities of ITs. It is possible that differences in the features of ITs would affect the results.

Forth, Social dimension of knowledge sharing is an important area that may help understand why employees share what they know and what they are sharing.

Furthermore, the knowledge characteristics were not taken into account in the research model. Additional research is conducted to incorporate tacit and explicit knowledge in order to understand the notion of knowledge sharing.

References


Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research, 39*(5).


