INFLUENCE OF KNOWLEDGE QUALITY AND TEAM CLIMATE ON TEAM PERFORMANCE

Yeşim Can (a)*, Hakan Kitapçı (a)
* Corresponding author
(a) Gebze Technical University, 41400, Kocaeli, Turkey

Abstract

Nowadays, the success of organizations depends on the capacities of the intangible values rather than tangible assets. Using of knowledge in all business processes is gaining importance in time. For this reason, the acquisition of knowledge, sharing among the members of the organization, development, and management should be seen as a strategic activity in business activity. The aim of this study investigate the role of knowledge quality and team climate on team performance. The data were obtained from a total of 78 employees, 1 senior, 1 middle manager, 10 team managers, 4 project managers, and 62 experts in a private company who operating in the banking sector. The analysis results revealed that there is a positive and significant relationship between knowledge quality and team performance, but there is no significant relationship between team climate and team performance. The findings of this research provide direction of the executives by demonstrating empirical evidence.

© 2019 Published by Future Academy www.FutureAcademy.org.uk

Keywords: Knowledge quality, team climate, performance, team performance.
1. Introduction

Globalization and rapid change of the world spark off diversity difficulties in the business world.
One of the most important difficulties is a competitive environment which constantly increasing. In an increasingly competitive environment, the use of knowledge in all business processes is becoming increasingly important. The success of today’s businesses is more dependent on the capacities of abstract values than on material assets. In this sense, conscious investors continuously improve their performance by producing quality products and services. In another aspect, technology, services, products, processes, roles and relationships have also changed in line with customer expectations. In this context, acquiring, developing and sharing knowledge among members of the organization has become a strategic activity.

In recent decades, the widespread use of teamwork in organizations has increased substantially in consequence of excessive competition (Zhang, Luo, Liao, & Peng, 2015) and knowledge quality gains importance both academician and practitioners in order to manage organizations (Lee, Strong, Kahn, & Wang, 2002). The quality of the knowledge provides many advantages for business such as improve products or services, develop novel applications, raise sales, and decrease costs (Kyoon Yoo, Vonderembse, & Ragu-Nathan, 2011). The quality of knowledge can be divided into two parts in terms of organizations’ benefits: effect on organizational activity and effect on external decisions related to organization. Knowledge quality assists expand the investment efficiency (Elaoud & Jarboui, 2017). As the quality of knowledge increases, more investment opportunities arise for managers (Biddle & Hilary, 2006; Chen, Hope, Li & Wang, 2011). The effect of knowledge quality on investment efficiency and opportunities can be handled as an external decisions related to organization. Moreover, knowledge quality effects on trust and distrusting beliefs (McKnight, Lankton, Nicolaou & Price, 2017) and affects organization performance.

It can be concluded that the effect of knowledge quality on trust, distrusting beliefs and organization performance are organizational activity decisions.

Teams are the basic active unit of organizations (Gil, Rico, Alcover, & Barrasa, 2005). Studies which concerning team in organizations suggest that teamwork is significant for achieving organization’s objective and increasing performance. Studying together in teams involves knowledge sharing and professional improvement in the field of work (Leicher & Mulder, 2016) and teams provide optimal circumstances for stimulating creativity and performance through social and psychological power (Panuwatwanich, Stewart, & Mohamed, 2008). Consequently, centering upon teams and constituting the required condition for them is one way of that performance could be improved in organizations.

In perspective Total Quality Management, some concepts such as organizational structure, culture, and climate have been considered important to be successful organizations. (Detert, Schroeder, & Mauriel, 2000; Douglas & Judge, 2001). Otherwise, teamwork has become a fundamental ingredient to facilitating organizational success (Ragazzoni, Baiardi, Zotti, Anderson, & West, 2002). Although team climate and knowledge quality has a great importance for organization, there are few studies on this subject in Turkey. In this reasons, the aim of this study is to investigate the relationship between team climates, knowledge quality and team performance in organization.
2. Literature Review and Theoretical Framework

2.1. Team Climate and Team Performance

In organizational science history, organizational climate studies have taken an important place and a variety of definitions has been proposed to explain the term of organizational climate (Glick, 1985). In order to understand organizational climate, firstly these two concepts must be explained: team and team climate. Teams are consisted in consequence of social interaction processes (Acuña, Gómez, & Juristo. 2008) and to feel a member of team is important for organization. Teams affects organizational performance (Baer & Frese, 2003) in that organizations are made up of teams. Existing literature emphasizes the ascending pertinent of teams inside contemporary organizations Basaglia, Caporarello, Magni, & Pennarola, 2010). The utilizing of teams raises the level of attendance in organisations, which is known to increase the efforts, loyalty, encourage for creativity, and attachment for employees, but influential team working agilities need a team atmosphere or “climate” which enables productive performance (Ragazzoni et al., 2002). For this reason, team climate is an important ingredient of organizations.

Team climate can be defined as the shared sense, feelings or beliefs of the team’s work approach and practices (Acuña, Gómez, & Juristo. 2008). Team climate; increase the obedience of employees, which they work in team. In this way, team climate relates the group with whom they interact to conduct work-related duties (Kinnunen, Feldt, & Mauno, 2016). Team climate provides many advantages for the organization such as creating trust among team members each other, sharing the same mission at work and achieving harmony coordination (Lee & Idris, 2017).

Organizational climate has described as the character of an organisation that separates one organization from others (Srivastav, 2010). Organizational climate is acknowledged as a significant structure in organizational behaviour and strategic human resource management. Moreover, it is one of the most important antecedents of person’s attitudes and behaviours in business (Ahmad, Jasimuddin, & Kee 2018; Srivastav, 2010). Behaviours and priorities of the team members shape their performance (Bamel, Rangnekar, Stokes, & Rastogi, 2013). Before creating an organizational climate, it is necessary to create a team climate. Because teams are the basic ingredients of organizations (Gil, Rico, Alcover, & Barrasa, 2005).

For a long time, team climate has been regarded as one of the most powerful component of social influence, which affects personal treatment in the team atmosphere (Hulsheger, Anderson, & Salgado, 2009). However, there is scarce research demonstration to find out team climate aspects that constitute team engagement (Sharma & Bhatnagar, 2017). According to Liang, Xue, Ke, & Wei, (2010), team climate significantly affects individuals’ perceptions, beliefs, and usage of technology. Xue, Bradley, and Liang (2011) empirically investigated the relationship between team climate and information sharing behaviour at organization. They found out that there is a significant relationship them.

In this study team climate refers the shared perceptions of working practices. By taking the lead from extant literature, it can be proposed that team climate has important linkage with team performances. Thus, the study hypothesizes that:

H1: Team climate positively relates to team performance.
2.2. Knowledge Quality and Team Performance

From far in the past, since the classical Greek era, philosophers have tried to define knowledge. These endeavors have led to the dawn of epistemological debates (Alavi & Leidner, 2001). However, since then there has been no consensus of knowledge definition. Knowledge is defined as a production, which is constituted from raw material — information (Shin, Holden, & Schmidt, 2001). According to Zack (1999), knowledge as meaningfully orchestrated conglomeration of information. Shin et al. (2001) state that knowledge is an information, and information is a raw material. Knowledge is an important element for organizations. Organizations continue their activities in the direction of the knowledge they obtain and make their decisions about the external environment. Therefore, it can be said that knowledge is of great importance for the organization and determines its future decisions. Moreover, knowledge-based perspective of the organization has emerged in the global strategic management (Alavi & Leidner, 2001).

Quality is a basic business competence, which augments a firm’s efficiency. However, there is no consensus in the literature on the definition of quality. From a one point of view, quality is defined to assessment according to established standards. From another point of view, quality is defined by convenience to customer expectations (Nelson, Todd, & Wixom, 2005). According to the research, for the long-term success of the business and to sustainability; quality of products and services is the core important determinant (Anderson & Zeithaml, 1984). Over the past decades, attention have focused on product and service quality. In recent times, attention has shifted from quality of service and product to quality of information (Kyyoon Yoo et al., 2011).

Recently, quality of knowledge has gained an important status in order to ensure competitive advantage and to adapt for changing environmental conditions with organization (Lee et al., 2002). Despite the importance of knowledge, substantially the quality of knowledge used effectively depends on its quality (Rao & Osei-Bryson, 2007) and knowledge quality affects innovation, which helps organization to produce new service or product increase sales and augment profits. It improves problem-solving capability and efficiency. Moreover, it helps organizations to improve performance (Kyyoon Yoo et al., 2011).

Studies, which investigate the relationship between knowledge management and organizational performance is start-up phase (Yu et al., 2007). Lee and Choi (2003) investigated the relationships between knowledge enablers and organizational performance by elaborating on the significance of knowledge processes. Their study proposed empirical results to make a contact knowledge management enablers and processes with organizational performance.

For the strategic management of knowledge resources, organizations should evaluate the role of quality of knowledge on organization performance (Gold, Malhotra, & Segars, 2001). According to Yu, Kim & Kim, (2007), knowledge quality effects on user knowledge satisfaction. It is known from previous research that satisfaction affects performance (Hatane, 2015; Gul, Usman, Liu, Rehman, & Jebran, 2018; Farooqui and Nagendra, 2014). It can be said that knowledge quality affects team performance. Therefore, we hypotheses that:

H2: Knowledge quality positively relates to team performance.
3. Research Method

3.1. Sample and Data Collection

We collected data through survey to test the proposed hypotheses. In total, 78 employees who are studying in a private company operating in the banking sector completed the questionnaire. The distribution of respondents according to their position within the company is as follows: 1 senior, 1 middle manager, 10 team managers, 4 project managers and 62 experts. Table 1 shows demographic characteristics of the sample.

In the sample, 67.9% were female, whereas 32.1% male. The majority of them (51.3%) were single. It is seen that most of the participants had a bachelor degree when the education status of the participants is examined (79.5%), and followed master (11.5%), then upper secondary education (11.5%).

Table 01. Demographics of respondents (n=78)

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Categories</th>
<th>#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>25</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>53</td>
<td>67.9</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>40</td>
<td>51.3</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>38</td>
<td>48.7</td>
</tr>
<tr>
<td>Education</td>
<td>Upper secondary education</td>
<td>7</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>62</td>
<td>79.5</td>
</tr>
<tr>
<td></td>
<td>Master</td>
<td>9</td>
<td>11.5</td>
</tr>
<tr>
<td>Position in Organization</td>
<td>Expert</td>
<td>62</td>
<td>79.5</td>
</tr>
<tr>
<td></td>
<td>Project Manager</td>
<td>4</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Team Manager</td>
<td>10</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td>Senior Manager</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Mid-level Manager</td>
<td>1</td>
<td>1.3</td>
</tr>
</tbody>
</table>

3.2. Measures

3.2.1. Knowledge quality

Knowledge quality was measured by the extent to which internal knowledge quality, contextual knowledge quality and operable knowledge quality. Items for knowledge quality were adopted from Yoo, Vonderembse & Ragu-Nathan, (2011).
3.2.2. Team Climate

We measured team climate with four dimensions: support from the organization, goal achievement, innovation and enabling formalization. The items were selected from González-Romá, Peiró & Tordera, (2002); Patterson, Warr & West, (2004); Poulton & West, (1999); West. Smith, Feng, & Lawthom, (1998).

3.2.3. Team Performance

Team members' perceived team performance was measured by a 2-item scale. One item was selected and adapted from John and colleagues’ study (Jehn, Northcraft, & Neale, 1999): ‘How well do you think your work team performs?’ Respondents answered using a 5-point scale (1 = very badly, 5 =very well).

3.3. Analysis

The results of the factor analysis are shown in table 2. 82% of the total variance is explained. Each variable was found to be positively and highly correlated and the most appropriate factor structure was reached. The smallest factor load is .582 and the highest factor load is .866.

Table 2. Factor Analysis Result

<table>
<thead>
<tr>
<th>In my business team;</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team members feel they are supported by the business.</td>
<td>.685</td>
</tr>
<tr>
<td>You can say that the company is interested in the members of the team.</td>
<td>.803</td>
</tr>
<tr>
<td>Human resources management is carried out with team members by taking into consideration</td>
<td>.784</td>
</tr>
<tr>
<td>Generally, new ideas and methods are being tested.</td>
<td>.582</td>
</tr>
<tr>
<td>New ideas are putted into practice to work and improve results.</td>
<td>.731</td>
</tr>
<tr>
<td>The development of new methods, products or services is often recommended.</td>
<td>.654</td>
</tr>
<tr>
<td>The knowledge and skills of Team members are utilized to develop new work, new services or new products.</td>
<td>.761</td>
</tr>
<tr>
<td>Team members work hard to reach team goals.</td>
<td>.866</td>
</tr>
<tr>
<td>Team members want to get a better performance.</td>
<td>.794</td>
</tr>
</tbody>
</table>

| Norms and procedures in my business team; |
| Helps our team work better. | .805 |
| It helps to find the best way to do our job. | .853 |
| Facilitates relationship between team members. | .825 |
| It helps us to understand the relationship between our colleagues | .817 |

| Information owned by my team; |
| is reliable | .769 |
| is objective | .769 |
| is believed | .796 |
| is current knowledge | .789 |
Corresponding Author: Yeşim Can
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

is contemporary
is without error
is complete
Information owned by my team;
It adds value for decision making.
It adds value to team operations.
Provide competitive advantage to our team
It's about our tasks
It is suitable for our Works.
Information owned by my team;
is available information.
is adaptable knowledge.
is expandable information.
is applicable to our tasks
is increase effective actions
is provides responsiveness to conditions
How well do you think your work team performs?

Explained total variance: 82%

3.4. Correlation Analysis
When the correlation results between the variables are examined, there is a positive and statistically significant relationship between the quality of knowledge and team performance at p < 0.01 level. Table 3 shows that there is a significant correlation between team performance and team climate (r = 0.596, p < 0.01). In addition to this, there was a significant correlation between team performance and knowledge quality (r = 0.696, p < 0.01), team climate and knowledge quality (r = 0.770, p < 0.01).

Table 03. Correlation Analysis Result

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>CrA.</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Team performance</td>
<td>3.82</td>
<td>.75</td>
<td>** ***</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Team Climate</td>
<td>3.42</td>
<td>.66</td>
<td>.88</td>
<td>.596(**)</td>
</tr>
<tr>
<td>3</td>
<td>Knowledge Quality</td>
<td>3.65</td>
<td>.66</td>
<td>.94</td>
<td>.696(<strong>) .770(</strong>)</td>
</tr>
</tbody>
</table>

** P<0.001, *** One item

3.5. Regression Analysis
Multiple regression analysis was used to test hypotheses. The regression analysis results are shown in Table 4.

Table 04. Regression Analysis Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Team Performance</th>
<th>B</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Climate (H1)</td>
<td></td>
<td>0.148</td>
<td>1.146</td>
<td>.256</td>
</tr>
<tr>
<td>Knowledge Quality (H2)</td>
<td></td>
<td>0.582</td>
<td>4.517</td>
<td>.000**</td>
</tr>
<tr>
<td>Model F</td>
<td>R²</td>
<td>Sig.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>36.529</td>
<td>.0493</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

**P<0.01
When Table 4 is examined, the model in which the knowledge quality and team climate effects on the team performance of employees are investigated is statistically significant ($F = 36.529; p < 0.01$). The explanation power of the model is calculated as $R^2 = 0.493$. Regression analysis showed that knowledge quality ($\beta = 0.582, p < 0.01$) has a statistically significant and positive effect on team performance. However, the team climate was not statistically significant ($\beta = 0.148, p > 0.01$) on team performance. The hypothesis $H_2$ developed in the form of "Knowledge quality positively affects team performance" was accepted. On the other hand, the hypothesis $H_1$ developed as "Team climate affects team performance positively" is not supported.

4. Conclusion and Discussions

Knowledge quality is perceived today as one of the essential requirements of organizations and plays a role in improving the institutional performance of enterprises. The success of organizations depends on the quality of information. Employees are increasing their team performance with this information.

The main purpose of the study is to examine the quality of knowledge and the impact of team climate on team performance. The hypothesis $H_2$ developed in the form of "Knowledge quality positively affects team performance" was accepted. According to the researches, knowledge management is very important in total quality management (Kahreh, Shirmohammadi, & Kahreh, 2014) and the relationship between product quality knowledge and performance is known from previous research (Claycomb, Dröge, & Germain, 2002). In parallel with previous research, this research investigate the relationship between knowledge quality and team performance. As a result of the analysis, we found that knowledge quality positively affects team performance. Thus, employees' perception of knowledge quality motivates and improves team performances. On the other hand, the hypothesis $H_1$ developed as "Team climate affects team performance positively" is not supported. Although team climate has been regarded as one of the most powerful component of social influence (Hulsheger, Anderson, & Salgado, 2009), it is surprising that the relationship between the two variables is not supported. This result is probably due to the sample of the research. However, it can be said that only strong climates have an impact on team performance according to our results.

The extent of team performance depends on the level of knowledge quality. Information shared at the individual level and in groups will create "snowball effect". As information is shared, it will multiply and create surplus value, which will contribute to the success and continuity of the organization.

The selection of the study sample from the banking sector is a limitation of our work. Therefore, a similar study can be done for any other sector in the future, such as manufacturing industry, automotive sector or service industry. In future studies, the effects of other Principles of Total Quality Management on different factors such as firm performance or organizational justice can be examined.

References


