Knowledge Sharing and its Impact on Employees' Motivation

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Abstract
Knowledge sharing plays a determining role in growth and development of organizations, since it is one of the elements of knowledge management process and affects employees' motivation. This survey aimed to study the impact of attitude towards knowledge sharing on employees' motivation in University of Isfahan. It was conducted using descriptive-field method and statistical population included 830 employees of the university among which one-hundred thirty (130) persons were selected as sample through random sampling method. Questionnaire of attitude towards knowledge sharing containing twenty-three questions and questionnaire of employees' motivation containing twenty-eight questions were tools of data collection. Content and face validities and thus the questionnaire were confirmed by supervisors. Also Cronbach alpha coefficient was used to confirm reliability that was obtained equal to 0.89 and 0.83 for components of attitude towards knowledge sharing and employees' motivation respectively. Descriptive statistics methods, t-test and Friedman ranking test were applied for inferential analysis of data. Findings reveal as the mutual significance level (0.000) is less than 5%, it could be perceived that mean of this item has a significant difference with test value (equal to 3). On the other hand, mean is higher than test value equal to 3 given that lower and upper limits of confidence interval are positive. As a result, research hypothesis is confirmed and employees' attitude towards knowledge sharing is effective on employees' motivation in viewpoint of respondents. Results indicate attitude towards knowledge sharing is effective on employees' motivation in the organization. If it is intended that employees share their knowledge with others well, existence of a proficient management is necessary.

Key words: knowledge, knowledge sharing, employees' motivation, obstacles of knowledge sharing
Introduction
Knowledge sharing is a competitive advantage for the organization that has become important in recent years. It is perceived that knowledge is a quality which distinguishes an individual from others. Knowledge sharing among people is conducted through trust building, organizational culture, incentives, motivation and personal values and this is useful for the organization too. Most researchers consider this issue which indicates undeniable role of attitude towards knowledge sharing in employees' motivation who want to continue their existence in current turbulent environment. Major objective of this paper was to study the impact of attitude towards knowledge sharing on employees' motivation.

In the following attitude towards knowledge sharing and employees' motivation are mentioned first and their dimensions are explained. Then the recommended model is tested in the form of a case study in University of Isfahan. Finally, discussion and conclusion are represented.

Knowledge sharing
When the new knowledge is acquired, it should be transferred to other sectors of the organization which need the new knowledge or it could be helpful there. Without this step knowledge will have a very low impact on the organization. As a result, knowledge transfer at a suitable time and place is the most important section of knowledge storage in the organization (Lee & Lee, 2008). Knowledge sharing is set of behaviors including information and knowledge exchange and helping others in this regard. It is similar to organizational citizenship behaviors that are conducted voluntarily and intentionally in organizations. Using knowledge sharing (including implicit and explicit knowledge) is one of the ways to measure knowledge management (Yusefi et al, 2011). McDermott (1999) defined knowledge sharing as below: when it is said that a person shares his/her knowledge, it means that he/she directs another person through his/her knowledge, insight and thoughts to help observe his/her status better. In addition, a person who shares his/her knowledge must know the purpose of the shared knowledge, its application as well as needs and information gaps of the knowledge receiver. It illustrates that all employees do not need to share their knowledge, because their knowledge might not be utilized or it might not be used again. Knowledge sharing has often been regarded as a process (Alvay & Lidner, 2001). It is a process among people which is not observable easily (Rio et al). Researchers have stated that employees are motivated through reward system (Davenport & Prusac, 1998).

Effective factors on knowledge sharing
The following could be stated as effective factors on knowledge sharing:

1- Trust

2- Organizational culture: culture is a key index for knowledge sharing and people must have relation with each other using a common purpose and this could be obtained through a common culture (Roska, 2005). Cultural values effective on knowledge sharing are trust, innovation, cooperation and implementation and if an organization could promote such values, then knowledge sharing would act as a positive force to enhance organizational performance (Alvay et al, 2006).
3- Incentives: reward structure in an organization is a powerful tool to affect culture and knowledge sharing. Incentives play a key role in knowledge sharing process (Bareto, 2003).

4- Motivation: Rig indicated that if organizations want to transfer knowledge successfully and obtain growth purposes and strategies, they should create a knowledge sharing culture in which there are the three following criterions: motivation, persuasion and stimulation of employees individually so that they can obtain, publish, transfer and apply the new knowledge helpfully (Rig, 2005).

Knowledge sharing culture
There are several data bases regarding knowledge management in which it has been referred that knowledge sharing should either be implemented by individuals or technology. Management authors usually indicate that knowledge sharing is normally applicable to individuals. Also they emphasize it more than technology regarding social interactions (Sweebi, 2002). Major challenge of organizations about knowledge sharing activities is how to maintain and increase value due to implicit knowledge which exists in employees, customers and foreign shareholders. Many authors have confirmed that employees' creativity is effective on developing collective knowledge of the organization and have mentioned effectiveness of affairs related to knowledge dissemination in the organization is directly related to creating the new knowledge and sharing it in the organization through the interaction between implicit and explicit knowledge (Nonako & Takuchi, 1995).

Concept of motivation
The term motivation was first adopted from the Latin term move that means movement. Why a special behavior is conducted is called motivation. In other words, an individual does not conduct any behavior for which there is no motivation or need as a stimulus. Individual's motivation such as conscious or subconscious arise from his/her needs. Therefore, in defining motivation it could be stated that motivation or need is an internal state and shortage or deprivation that persuades individuals to conduct a series of activities (Seyyed Javadin, 2008: 455).

Motivation is a chain behavior that is occurred due to need or deprivation and shortage, then it creates demand and is led to tension and action towards a purpose that the behavior to attain purpose is its result. Sequence of this process might be led to satisfaction of needs. Thus, motives encourage and stimulate the individual to conduct an action while motivation reflects a general need. Status of reward and punishment in all researches regarding motivation is still proposed as strong motives and money is regarded as a tool to grant rewards but it is not the only motivational factor (Seyyed Javadin, 2008: 455).

Motivation is the result of interaction of a series of variables and factors. It is an intention to try and realize purposes of the organization so that these attempts are directed towards satisfying some personal needs.

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**Figure 1 - motivational process (Moghimi, 1999)**

- Reduction of tension
- Satisfied needs
- Movement
- Tension
- Unsatisfied needs
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Conceptual model of the survey
Conceptual model of the survey has been proposed based on theoretical principles as is shown in figure (2).

![Figure 2: The proposed model (by researchers)](image)

**Research hypotheses**

**Primary hypothesis**
Employees' attitude towards knowledge sharing is effective on employees' motivation in University of Isfahan.

**Secondary hypotheses**

- 1- Objective of knowledge sharing is effective on employees' motivation in University of Isfahan.
- 2- Opportunity of knowledge sharing is effective on employees' motivation in University of Isfahan.
- 3- Motivation of knowledge sharing is effective on employees' motivation in University of Isfahan.
- 4- Stimulus for knowledge sharing is effective on employees' motivation in University of Isfahan.
- 5- Obstacles of knowledge sharing for the individual are effective on employees' motivation in University of Isfahan.
- 6- Obstacles of knowledge sharing for others are effective on employees' motivation in University of Isfahan.
Methodology
The present survey was conducted using descriptive-field-correlational methodology in which qualitative and quantitative data were studied. Research variables were divided into two groups: independent and dependent. Independent variables included components of employees' attitude towards knowledge sharing and the dependent variable was employees' motivation. Questionnaire of attitude towards knowledge sharing containing 23 questions and questionnaire of employees' motivation containing 20 questions were tools of data collection and Likert scale was used in order to respond to the questions. Content and face validities and thus the questionnaire were confirmed by supervisors. Similarly, Cronbach alpha coefficient was used to confirm reliability that was obtained equal to 0.89 and 0.83 for components of attitude towards knowledge sharing and employees' motivation respectively. Analysis methods in this survey included descriptive and inferential statistics methods.

Characteristics of the statistical population and statistical sample
Statistical population of the survey included managers and employees of University of Isfahan who were 830 persons and simple random sampling method was used for sampling. The sample under study was equal to 130 persons using the formula to determine sample volume of the limited population.

\[ n = \frac{z^2s^2}{d^2} \]

\[ n = \frac{(1.96)^2 \left( \frac{0}{1216} \right)}{\left( \frac{0}{06} \right)^2} = 129.8 \cong 130 \]

Findings
Kolmogroff-Smirnoff test was used to test normality of data distribution. Significance level is higher than \( \alpha \) level, i.e, 5% in order to utilize t-test for data related to the above six hypotheses and the primary hypothesis. On the other hand, obtained critical amounts for Kolmogroff-Smirnoff test are lower than critical amount of table (1.96). Therefore, there are no strong evidences at significance level 95% to reject the null hypothesis and hence it is accepted. So data of all hypotheses have normal distribution.

H0: data have normal distribution.
H1: data do not have normal distribution.

Table 2- Kolmogroff-Smirnoff test to study data normality

<table>
<thead>
<tr>
<th>Major hypothesis</th>
<th>Objective of knowledge sharing</th>
<th>Opportunity for knowledge sharing</th>
<th>Motivation for knowledge sharing</th>
<th>Stimulus for knowledge sharing</th>
<th>Obstacles of knowledge sharing for the individual</th>
<th>Obstacles of knowledge sharing for others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>Kolmogroff-Smirnoff statistic</td>
<td>1.48</td>
<td>1.45</td>
<td>1.15</td>
<td>1.18</td>
<td>1.40</td>
<td>1.22</td>
</tr>
</tbody>
</table>
One-sample t-test

T-test was used to identify effective factors on employees' motivation. It is assumed that if the average of indexes related to each one of the seven factors of the model is higher than 3, that factor is effective on employees' motivation.

Testing the primary hypothesis

H0: Employees' attitude towards knowledge sharing is not effective on employees' motivation in University of Isfahan.

H1: Employees' attitude towards knowledge sharing is effective on employees' motivation in University of Isfahan.

It could be defined as below in the form of a statistical hypothesis:

\[
\begin{align*}
H_0: \mu & \leq 3 \\
H_1: \mu & > 3
\end{align*}
\]

Table 3- results of testing the primary hypothesis

<table>
<thead>
<tr>
<th>Employees' attitude towards knowledge sharing</th>
<th>Test statistic (t)</th>
<th>Degree of freedom</th>
<th>Mutual significance level</th>
<th>Difference among means</th>
<th>Confidence interval</th>
</tr>
</thead>
</table>
| Primary hypothesis                            | 17.70              | 129               | 0.000                     | 0.805                 | Upper limit        \\
|                                              |                    |                   |                           |                       | Lower limit        |
|                                              |                    |                   |                           |                       | 0.75               \\
|                                              |                    |                   |                           |                       | 0.89               |

Analysis: as the mutual significance level (0.000) is less than 5%, mean of this item has a significant difference with test value (equal to 3). On the other hand, given that upper and lower levels of confidence interval are positive mean is higher than the test value equal to 3. As a result, research hypothesis is confirmed and employees' attitude towards knowledge sharing is effective on employees' motivation in viewpoint of respondents.

Testing secondary hypothesis one (objective of knowledge sharing)

H0: Objective of knowledge sharing is not effective on employees' motivation in University of Isfahan.

H1: Objective of knowledge sharing is effective on employees' motivation in University of Isfahan.

It could be defined as below in the form of a statistical hypothesis:

\[
\begin{align*}
H_0: \mu & \leq 3 \\
H_1: \mu & > 3
\end{align*}
\]
Table 4 - results of testing the secondary hypothesis one

<table>
<thead>
<tr>
<th>Objective of knowledge sharing</th>
<th>Test statistic (t)</th>
<th>Degree of freedom</th>
<th>Mutual significance level</th>
<th>Difference among means</th>
<th>Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis one</td>
<td>12.17</td>
<td>129</td>
<td>0.000</td>
<td>0.29</td>
<td>Upper limit 0.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower limit 0.80</td>
</tr>
</tbody>
</table>

Analysis: as the mutual significance level (0.000) is less than 5%, mean of this item has a significant difference with test value (equal to 3). On the other hand, given that upper and lower levels of confidence interval are positive mean is higher than the test value equal to 3. As a result, research hypothesis is confirmed and objective of knowledge sharing is effective on employees' motivation in viewpoint of respondents.

Testing secondary hypothesis two (opportunity of knowledge sharing)

H0: Opportunity of knowledge sharing is not effective on employees' motivation in University of Isfahan.
H1: Opportunity of knowledge sharing is effective on employees' motivation in University of Isfahan.

It could be defined as below in the form of a statistical hypothesis:

\[ \begin{align*} 
    & H_0: \mu \leq 3 \\
    & H_1: \mu > 3 
\end{align*} \]

Table 5 - results of testing secondary hypothesis two

<table>
<thead>
<tr>
<th>Opportunity of knowledge sharing</th>
<th>Test statistic (t)</th>
<th>Degree of freedom</th>
<th>Mutual significance level</th>
<th>Difference among means</th>
<th>Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis two</td>
<td>16.45</td>
<td>129</td>
<td>0.000</td>
<td>1.21</td>
<td>Upper limit 0.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower limit 1.15</td>
</tr>
</tbody>
</table>

Analysis: as the mutual significance level (0.000) is less than 5%, mean of this item has a significant difference with test value (equal to 3). On the other hand, given that upper and lower levels of confidence interval are positive mean is higher than the test value equal to 3. As a result, research hypothesis is confirmed and the null hypothesis is rejected. It means that opportunity of knowledge sharing is effective on employees' motivation in viewpoint of respondents.
**Testing secondary hypothesis three (motivation of knowledge sharing)**
H0: Motivation of knowledge sharing is not effective on employees' motivation in University of Isfahan.
H1: Motivation of knowledge sharing is effective on employees' motivation in University of Isfahan.
It could be defined as below in the form of a statistical hypothesis:

\[
\begin{align*}
    &H0: \mu \leq 3 \\
    &H1: \mu > 3
\end{align*}
\]

Table 6- results of testing secondary hypothesis three

<table>
<thead>
<tr>
<th>Motivation of knowledge sharing</th>
<th>Test statistic (t)</th>
<th>Degree of freedom</th>
<th>Mutual significance level</th>
<th>Difference among means</th>
<th>Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis three</td>
<td>16.13</td>
<td>129</td>
<td>0.000</td>
<td>1.22</td>
<td>1.26 (Upper limit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.18 (Lower limit)</td>
</tr>
</tbody>
</table>

Analysis: given that upper and lower levels of confidence interval are positive average amount is higher than 3. As a result, research hypothesis is confirmed and motivation of knowledge sharing is effective on employees' motivation in viewpoint of respondents.

**Testing secondary hypothesis four (stimulus for knowledge sharing)**
H0: Stimulus for knowledge sharing is not effective on employees' motivation in University of Isfahan.
H1: Stimulus for knowledge sharing is effective on employees' motivation in University of Isfahan.
It could be defined as below in the form of a statistical hypothesis:

\[
\begin{align*}
    &H0: \mu \leq 3 \\
    &H1: \mu > 3
\end{align*}
\]

Table 7- results of testing secondary hypothesis four

<table>
<thead>
<tr>
<th>Stimulus for knowledge sharing</th>
<th>Test statistic (t)</th>
<th>Degree of freedom</th>
<th>Mutual significance level</th>
<th>Difference among means</th>
<th>Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis four</td>
<td>7.89</td>
<td>129</td>
<td>0.000</td>
<td>0.45</td>
<td>0.87 (Upper limit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.98 (Lower limit)</td>
</tr>
</tbody>
</table>
Analysis: given that upper and lower levels of confidence interval are positive mean is higher than the test value equal to 3. As a result, research hypothesis is confirmed and null hypothesis is rejected. It means that stimulus for knowledge sharing is effective on employees' motivation in viewpoint of respondents.

**Testing secondary hypothesis five (obstacles of knowledge sharing for the individual)**
H0: Obstacles of knowledge sharing for the individual are not effective on employees' motivation in University of Isfahan.
H1: Obstacles of knowledge sharing for the individual are effective on employees' motivation in University of Isfahan.

It could be defined as below in the form of a statistical hypothesis:

\[
\begin{align*}
H_0 & : \mu \leq 3 \\
H_1 & : \mu > 3
\end{align*}
\]

<table>
<thead>
<tr>
<th>Table 8- results of testing secondary hypothesis five</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstacles of knowledge sharing for others</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Hypothesis five</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Analysis: given that upper and lower levels of confidence interval are positive mean is higher than the test value equal to 3. As a result, research hypothesis is confirmed and null hypothesis is rejected. It means that obstacles of knowledge sharing for the individual are effective on employees' motivation in viewpoint of respondents.

**Testing secondary hypothesis six (obstacles of knowledge sharing for others)**
H0: Obstacles of knowledge sharing for others are not effective on employees' motivation in University of Isfahan.
H1: Obstacles of knowledge sharing for others are effective on employees' motivation in University of Isfahan.

It could be defined as below in the form of a statistical hypothesis:

\[
\begin{align*}
H_0 & : \mu \leq 3 \\
H_1 & : \mu > 3
\end{align*}
\]

<table>
<thead>
<tr>
<th>Table 9- results of testing secondary hypothesis six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstacles of knowledge sharing</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Hypothesis six</td>
</tr>
</tbody>
</table>

www.hrmars.com/journals
for others | level | means | Upper limit | Lower limit |
--- | --- | --- | --- | --- |
Hypothesis six | 16.23 | 129 | 0.000 | 0.69 | 0.59 | 0.74 |

Analysis: given that upper and lower levels of confidence interval are positive mean is higher than the test value equal to 3. As a result, research hypothesis is confirmed and null hypothesis is rejected. It means that obstacles of knowledge sharing for others are effective on employees' motivation in viewpoint of respondents.

**Test for ranking hypotheses**

In order to rank effective factors on employees' motivation in University of Isfahan. Friedman test was used. Results of this test are shown in the following table.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Elements (hypotheses)</th>
<th>Mean of ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Objective of knowledge sharing</td>
<td>5.99</td>
</tr>
<tr>
<td>2</td>
<td>Opportunity for knowledge sharing</td>
<td>5.65</td>
</tr>
<tr>
<td>3</td>
<td>Obstacles of knowledge sharing for the individual</td>
<td>5.40</td>
</tr>
<tr>
<td>4</td>
<td>Obstacles of knowledge sharing for the organization</td>
<td>4.80</td>
</tr>
<tr>
<td>5</td>
<td>Stimulus for knowledge sharing</td>
<td>4.76</td>
</tr>
<tr>
<td>6</td>
<td>Motivation for knowledge sharing</td>
<td>3.85</td>
</tr>
</tbody>
</table>

Given to the obtained results, objective of knowledge sharing has the highest impact on employees' motivation in University of Isfahan.

**Discussion and conclusion**

According to findings, attitude towards knowledge sharing is highly effective on employees' motivation in the university. It means that whatever the component of attitude towards knowledge sharing is enhanced in employees, employees' motivation is increased too. Based on accomplished analyses it is recommended to the university to consider purposes of the organization in its perspective and managers try to harmonize personal purposes of individuals with purposes of the organization. Also managers should always emphasize significant values and their institutionalization in the organization. Attitude towards knowledge sharing in employees has a positive and significant impact on employees' motivation using the fact that it could be used as a strategic tool to implement objectives and ideal of the organization. Role of motivational mechanisms which create attitude towards knowledge sharing and its impact on employees' motivation should not be ignored in this regard. Objective of the present survey was to study attitude towards knowledge sharing and its impact on employees' motivation in the organization. Existence of knowledgeable employees is a competitive advantage for an organization. This survey showed that attitude towards knowledge sharing is effective on employees' motivation. If it is intended that employees share their knowledge well with others, existence of a proficient management is essential. Successful managers always eliminate problems using positive thinking and motivation. They can provide
the possibility of creativity and innovation for all forces of the organization by assigning affairs to their colleagues and creating motivation and motive in them and thus enhance organizational productivity. Therefore, not only managers and employees of University of Isfahan but also other organizations can enhance employees' knowledge sharing using appropriate methods like creating an opportunity for knowledge sharing in the organization, creating motivation for knowledge sharing, eliminating obstacles of knowledge sharing for the individual, eliminating obstacles of knowledge sharing for others and finally enhance employees' motivation in the organization.

References