Feasibility study of knowledge management establishment in Tehran district 8 municipality

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Abstract

The present research seeks an answer to this question that whether knowledge management establishment in district 8 Municipality is possible or not? The present research theoretical framework for knowledge management section is Gold organizational capabilities model as well as Chuang model. The present research is a practical descriptive survey. The required data is collected through a library research as well as questionnaire. The population comprises of all managers as well as employees working in Municipality, district 8 in Tehran and the sample size is equal to 216 individuals. According to the results from the data analysis, Municipality in district 8 enjoys a desirable level higher than average in technology, human resources, organizational culture, knowledge learning, knowledge transformation and maintaining knowledge while regarding the components such as organizational structure and applying knowledge it enjoys a level below average which is not desirable.

Keywords: knowledge management, Feasibility study, municipality.
Background of the Study

Entering knowledge organizations arena has changed the orientation of many organizations toward focusing on knowledge-based products and services such that knowledge plays an important role in individuals and organizations activities. Mirkamali (2010) believes that knowledge is a set of data, information, facts, beliefs, thoughts and judgments which are appeared in individuals’ mind through different methods such as analysis, reasoning, insight, learning, reading, listening and their correct usage leads to an effective decision and action among organizations.

The expression of knowledge city is used for strategic explaining in knowledge-based development. This comes true through internal interaction of a city knowledge broker as well as interaction with other cities knowledge brokers and it brings about a constant flow of knowledge. In order to have a developed society based on knowledge, components such as sharing, city infrastructures, appropriate city design as well as communication and information technology networks must be paid attention.

As there have been important actions for improving urban services performance in all 22 districts of Tehran municipalities especially district 8 as the pilot district in recent years that has been selected by urban management but it yet is very far from global standards.

The researcher believes that although there have been several activities in different domains in Tehran municipality, urban management system has not been efficient enough due to problems such as not holism and not performing it in urban management, many trials and errors in managers’ decisions, lack of fair distribution of information among all employees, lack of a comprehensive system for on time and accurate conveying of opinions among experts and managers. Therefore, the researcher believes that there should be fundamental measures for solving this problem one of these important measures is implementing knowledge management since all procedures such as attraction, maintenance, improvement, training, application, etc. have all become knowledge-based due to implementing knowledge management and as a result, effectiveness, efficiency of urban services activities have had significant growth.

So according to the mentioned points, the researcher tries to implement this in Tehran, district 8 municipality and he is seeking an answer to this question that whether establishing knowledge management in district 8 municipality is possible or not? Since success in competitive markets depends on knowledge quality and knowledge outcome which organizations use for performing key activities.

Theoretical Foundations

Knowledge City

“Knowledge city” is a concept and subcategory of knowledge-based development and it refers to all cultural, economical and social aspects of city life. This concept can be defined as follows:
“The concept of knowledge city is used for strategic explanation in knowledge-based development which aims at promoting and non-stop supporting of knowledge management process governing a city. This comes true through knowledge brokers’ internal interactions of one city as well as interactions with knowledge brokers of other cities and brings about knowledge continuous stream. A successful setting of this strategy, coherent pictorial shaping, advanced communication networks, urban infrastructures, as well as citizens’ education level enhances these interactions continuously.”

The term “knowledge broker” refers to any identity or institution such as human, organization, company, university, Technology Park, research center, etc which manage knowledge.

Ergazakis et al. (2004) show the concept of knowledge city in their study as shown in figure 1.

![Figure 1. Concept of knowledge city](source)

Ergazakis et al. (2004)

Knowledge city is performed through interactions between one city knowledge brokers and other cities knowledge brokers which attempt to establish knowledge management. In order to have a knowledge-based developed city different components of knowledge sharing culture, urban infrastructure, and appropriate city design and communication and technology information networks must be paid attention.
Knowledge Management

Knowledge management presented its theoretical basis through Peter Drucker thoughts in U.S and presenting annual reports of Scandia Company in Sweden in 1994 as well as publishing Knowledge Creation book in Japan in 1995 (Rading, 2004, P.2). According to the definition presented by knowledge, it is felt that knowledge management concept is paradoxical.

In the past information and knowledge were assumed to be synonyms. Accordingly at first many believed that knowledge management is a repetitive concept of information system and data management. Knowledge management must be studied as an organizational and integrated managerial plan which is designed based on an organization strategic goals, it must pay attention to business processes and must acquire the most benefits from new technology. In the past years many definitions have been proposed for knowledge management each of which reveals one aspect of this complex concept. Here some of the most well-known definitions are provided:

Knowledge management controls organization resources and capabilities so that the organization is capable of learning and adapting to varied environment. Knowledge management also facilitates continuous processes of learning and as a result, it makes sure that the need for imposing up-to-down fundamental changes has been reduced (TarafZadeh, 2005, P.2).

Generally, knowledge management is a combination of leadership, interpersonal interaction, organizational culture and information technology and these components are related to each other and none of them are able to present an effective program of knowledge management alone (Bath, 2000).

The Research Model and Hypothesis

The present research model is retrieved from Gold organizational capabilities model and Chuang model which recognize and evaluate organizational capability for performing these activities. The recognized capabilities in this model include knowledge infrastructure capabilities (culture, structure, technology and human resources) as well as knowledge process capabilities (acquiring knowledge, transforming knowledge, applying knowledge and maintaining knowledge).
Main hypothesis: district 8 municipality enjoys a desirable knowledge management implementation.

- District 8 municipality enjoys a desirable level of knowledge infrastructure
capabilities for establishing knowledge management.

- District 8 municipality enjoys a desirable level of knowledge management establishment.
- District 8 municipality enjoys a desirable level of structure for establishing knowledge management.
- District 8 municipality enjoys a desirable technology level for establishing knowledge management.
- District 8 municipality enjoys a desirable level of human resources for establishing knowledge management.
- District 8 municipality enjoys a desirable level of knowledge processes capabilities for establishing knowledge management.
- District 8 municipality enjoys a desirable level of knowledge learning for establishing knowledge management.
- District 8 municipality enjoys a desirable level of knowledge transformation for establishing knowledge management.
- District 8 municipality enjoys a desirable level of knowledge deployment for establishing knowledge management.
- District 8 municipality enjoys a desirable level of knowledge maintenance for establishing knowledge management.

Research Methodology

The present research is a practical descriptive survey. The data is collected through a library research as well as questionnaire. The research population including all managers and employees of district 8 municipality in Tehran which are estimated to be 488 people (142 female and 346 male). The samples are selected randomly and the sample size estimated to be 216 people using Cochran formula.

Findings

One sample t tests, Friedman test and variance analysis are used for confirming data description and generalizing the research results to the population from which the samples are selected and the results are presented in the following table.

Table 1. Kolmogorov Smirnov Test value results for testing variables normality

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kolmogorov Smirnov Test value</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational culture</td>
<td>1.177</td>
<td>.125</td>
</tr>
<tr>
<td>Organizational structure</td>
<td>1.327</td>
<td>.059</td>
</tr>
<tr>
<td>Technology</td>
<td>1.819</td>
<td>.058</td>
</tr>
<tr>
<td>Human resource</td>
<td>1.388</td>
<td>25.0</td>
</tr>
<tr>
<td>Knowledge learning</td>
<td>1.243</td>
<td>.091</td>
</tr>
<tr>
<td>Knowledge transformation</td>
<td>1.297</td>
<td>.069</td>
</tr>
<tr>
<td>Knowledge application</td>
<td>.973</td>
<td>.301</td>
</tr>
<tr>
<td>Knowledge maintenance</td>
<td>1.207</td>
<td>.109</td>
</tr>
<tr>
<td>Infrastructure capabilities</td>
<td>.757</td>
<td>.615</td>
</tr>
</tbody>
</table>
Process capabilities | .522 | .948

As Kolmogorov Smirnov value of all variables is significant, it can be said that the variables distribution is normal.

- District 8 municipality enjoys a desirable level of knowledge management implementation.

For testing the statement, one sample t test is used which its results are presented in table 2.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge management implementation</td>
<td>7.656</td>
<td>215</td>
<td>.000</td>
<td>.26783</td>
</tr>
</tbody>
</table>

The table results indicate that t value ($t_{ob}= 7.656$) with (df=215) degrees of freedom at ($a=0.001$) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of knowledge management implementation which is more than average.

- District 8 municipality enjoys a desirable level of knowledge infrastructure capabilities for establishing knowledge management.

or testing the statement, one sample t test is applied and the results are presented in table 3.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge infrastructure capabilities</td>
<td>7.050</td>
<td>215</td>
<td>.000</td>
<td>.28588</td>
</tr>
</tbody>
</table>

The reported results indicate that t value ($t_{ob}=7.050$) with degrees of freedom of (df=215) at ($a=0.001$) level is significant. Therefore, the null hypothesis is rejected based on lack of difference between sample mean and base mean and it can concluded that district 8 municipality enjoys a desirable level of knowledge infrastructure capabilities for establishing knowledge management which is higher than average.

- District 8 municipality enjoys a desirable level of culture for establishing knowledge management.
For testing the statement, one sample t test is applied and the results are presented in table 4.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture for</td>
<td>10.630</td>
<td>215</td>
<td>.000</td>
<td>.48457</td>
</tr>
<tr>
<td>establishing knowledge management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table results indicate that t value ($t_{ob}= 10.630$) with (df=215) degrees of freedom at ($a=0.001$) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of culture for establishing knowledge management which is more than average.

- District 8 municipality enjoys a desirable level of structure for establishing knowledge management.

For testing the statement, one sample t test is applied and the results are presented in table 5.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure for</td>
<td>1.397</td>
<td>215</td>
<td>.164</td>
<td>.07500</td>
</tr>
<tr>
<td>establishing knowledge management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table results indicate that t value ($t_{ob}= 1.397$) with (df=215) degrees of is not significant. Therefore, null hypothesis is not rejected based on lack of difference between sample mean and base mean.

- District 8 municipality enjoys a desirable technology level for establishing knowledge management.

For testing the statement, one sample t test is applied and the results are presented in table 6.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology for</td>
<td>4.017</td>
<td>215</td>
<td>.000</td>
<td>.20525</td>
</tr>
<tr>
<td>establishing knowledge management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The table results indicate that t value \( t_{ob} = 4.017 \) with (df=215) degrees of freedom at \( a=0.001 \) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of technology for establishing knowledge management which is more than average.

- District 8 municipality enjoys a desirable level of human resources for establishing knowledge management.

For testing the statement, one sample t test is applied and the results are presented in table 7.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human resources for establishing knowledge management</td>
<td>8.200</td>
<td>215</td>
<td>.000</td>
<td>.37870</td>
</tr>
</tbody>
</table>

The table results indicate that t value \( t_{ob} = 8.200 \) with (df=215) degrees of freedom at \( a=0.001 \) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of human resources for establishing knowledge management which is more than average.

- District 8 municipality enjoys a desirable level of knowledge processes capabilities for establishing knowledge management.

For testing the statement, one sample t test is applied and the results are presented in table 8.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge process capabilities</td>
<td>7.333</td>
<td>215</td>
<td>.000</td>
<td>.24978</td>
</tr>
</tbody>
</table>

The table results indicate that t value \( t_{ob} = 7.333 \) with (df=215) degrees of freedom at \( a=0.001 \) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of knowledge process capabilities which is more than average.

- District 8 municipality enjoys a desirable level of knowledge learning for establishing knowledge management.
For testing the statement, one sample t test is applied and the results are presented in table 9.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge learning for establishing knowledge management</td>
<td>3.054</td>
<td>215</td>
<td>.003</td>
<td>.14815</td>
</tr>
</tbody>
</table>

The table results indicate that t value ($t_{ob}= 3.054$) with (df=215) degrees of freedom at (a=0.001) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of knowledge learning for establishing knowledge management which is more than average.

- District 8 municipality enjoys a desirable level of knowledge learning for establishing knowledge management.

For testing the statement, one sample t test is applied and the results are presented in table 10.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge transformation for establishing knowledge management</td>
<td>11.607</td>
<td>215</td>
<td>.000</td>
<td>.41601</td>
</tr>
</tbody>
</table>

The table results indicate that t value ($t_{ob}= 11.607$) with (df=215) degrees of freedom at (a=0.001) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of knowledge transformation for establishing knowledge management which is more than average.

- District 8 municipality enjoys a desirable level of knowledge transformation for establishing knowledge management.

For testing the statement, one sample t test is applied and the results are presented in table 11.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge deployment for establishing knowledge management</td>
<td>-1.151</td>
<td>215</td>
<td>.251</td>
<td>-.06481</td>
</tr>
</tbody>
</table>

The table results indicate that t value ($t_{ob}= -1.151$) with (df=215) degrees of freedom at (a=0.001) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of knowledge deployment for establishing knowledge management which is more than average.

- District 8 municipality enjoys a desirable level of knowledge deployment for establishing knowledge management.
The table results indicate that $t$ value ($t_{ob} = -1.151$) with (df=215) degrees of freedom is not significant. Therefore, null hypothesis is not rejected based on lack of difference between sample mean and base mean.

- District 8 municipality enjoys a desirable level of knowledge maintenance for establishing knowledge management.

For testing the statement, one sample t test is applied and the results are presented in table 12.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>T</th>
<th>Degrees of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge maintenance for establishing knowledge management</td>
<td>7.037</td>
<td>215</td>
<td>.000</td>
<td>.36204</td>
</tr>
</tbody>
</table>

The table results indicate that $t$ value ($t_{ob} = 7.037$) with (df=215) degrees of freedom at ($a=0.001$) is significant. Therefore, null hypothesis is rejected based on lack of difference between sample mean and base mean. It can be concluded that district 8 municipality enjoys a desirable level of knowledge maintenance for establishing knowledge management which is more than average.

**Conclusion**

The first funding of the present research indicates that district 8 municipality enjoys a desirable level of knowledge management implementation and it is more than average. The results are compatible with the previous research done by Salahi Sanandaj (2011). The second finding indicates that district 8 municipalities enjoy a desirable level of knowledge infrastructure capabilities which is more than average. The results are compatible with the results from previous studies such as Sanandaj (2011). The third finding indicates that district 8 municipalities enjoy a desirable level of culture for establishing knowledge management which is more than average. The results is compatible with those of Mohammadi (2010), Salahi Sanandaj (2011), Salavati (2009), Rasaian (2008). The fourth findings indicate that district 8 municipality does not enjoy a desirable structure for establishing knowledge management and it is less than average. The results are compatible with that of Babazade (2007), Naji (2011) and North (1998).

The fifth finding indicates that district 8 municipality enjoys a desirable technology for establishing knowledge management and it is higher than average. The results are compatible with that of Babazadeh (2007), Salahi Sanandaj (2011) and Davenport(1998).

The sixth finding indicates that district 8 municipality enjoys a desirable level of human resources for establishing knowledge management which is higher than average. The result is compatible with that of Mohammadi (2010), Babazadeh (2007).
The seventh finding indicates that district 8 municipality enjoys a desirable level of knowledge process capabilities for establishing knowledge management which is higher than average. The result is compatible with that of Salahi Sanandaj (2011) and Mohammadi (2010).

The eighth finding indicates that district 8 municipality enjoys a desirable level of knowledge learning for establishing knowledge management which is higher than average. The results are compatible with that of Salahi Sanandaj (2011) and Mohammadi (2010).

The ninth finding indicates that district 8 municipality enjoys a desirable level of knowledge transformation for establishing knowledge management which is higher than average. The result is compatible with that of Salahi Sanandaj (2011) and Mohammadi (2010).

The tenth finding indicates that district 8 municipality does not enjoy a desirable level of knowledge deployment for establishing knowledge management which is less than average. The results are compatible with that of Kermanighoreishi (2005) and Naji (2011).

The eleventh finding indicates that district 8 municipality enjoys a desirable level of knowledge maintenance for establishing knowledge management which is higher than average. The result is compatible with that of Salahi Sanandaj (2011) and Mohammadi (2010).

It is suggested that:

- Knowledge management clearly supports knowledge role in organization success.
- Education while working and learning is valuable and should be paid attention.
- Organization overview must be clarified.
- Organization overall objects must be clarified.
- Organization employees are well aware of knowledge importance in organization success.
- Employees must participate more in decision making and organization management method must be collaborative.
- Organization structure facilitates organization success.
- Organization structure must be based individuals’ performance and based on updated knowledge.
- Sensitive/secret information must be limited in the organization.
Knowledge must be recorded through electronic tools and techniques in organization.

Data and information must be selected and organized before recording.

Knowledge must be able to be kept in personal reference file.

Knowledge must be recorded in forms of documents such as official manuals, working measures, organizational standards, learnt lessons, …

Investment for creating software and hardware platforms for keeping the knowledge.

Creating record banks for keeping ideas, experiences, success, failures, methods and personal information.

Improving security of keeping and maintaining information for preventing from stealing them.

Procedures for distributing knowledge in the whole organization.

Organization must create processes for exchanging knowledge between individuals.

Imitating from successful organizations.

Recognizing knowledge requirements of each organization precisely and continuously for learning knowledge for on time fulfillment.

Organization must create processes for comparing knowledge resources with issues and challenges.

Organization must be able to apply knowledge in varied competitive conditions.

Organization must enjoy processes for applying knowledge for comparing it with strategic path.

Organization must enjoy processes for applying knowledge for improving efficiency.

Organization must enjoy processes for applying knowledge for solving new problems.

Organization must create processes for using knowledge for service development.

Holding meetings for employees for how to make knowledge practical.
• Utilizing material and spiritual motivations for encouraging employees in applying knowledge.

• Close monitoring over implementing projects to make sure the organization previous successful experiences have been utilized and its weak points and failures in the past will not be repeated in the present and future projects.
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