CASE STUDY

Organizational culture and its impact on organizational productivity

S. Mohammadi*

Department of  Administrative Affairs, District 19 of Municipality of Tehran, Tehrani, Iran

BACKGROUND AND OBJECTIVES: Organizational culture is a topic that has recently emerged in management knowledge and in the domain of organizational behavior. Following new theories and research in management, organizational culture has become increasingly important and has become one of the central focus of management. The purpose of this study was to investigate the dimensions and indicators affecting organizational culture in order to improve organizational culture and productivity based on the Denison Model in District 19 of the Municipality of Tehran, Iran.

METHODS: The research method was descriptive-correlational and Denison's organizational culture questionnaire which assesses organizational culture based on four dimensions of involvement in work, compatibility, adaptability and, mission were used. Each of these four dimensions has three defined indicators. The statistical population of the study consisted of all employees of District 19 of Tehran Municipality, 148 of whom completed the questionnaire. After analyzing the data, the frame of the organizational culture of the district was formed.

FINDINGS: The results showed that the mission and involvement in work have the mean scores of 3.14 and 3.01, respectively while adaptability and compatibility showed the mean score of 3.12 and 3.07.

CONCLUSION: The municipality of District 19 in terms of its organizational missions and strategic goals needs a well-constructed plan.

ABSTRACT

DOI: 10.22034/IJHCUM.2020.03.08

©2020 IJHCUM. All rights reserved.

ARTICLE INFO

Article History:
Received 21 March 2020
Revised 28 May 2020
Accepted 16 June 2020

Keywords:
Denison Model
Organizational Culture
Productivity
Tehran Municipality

Note: Discussion period for this manuscript open until October 1, 2020 on IJHCUM website at the “Show Article.”
INTRODUCTION

Organizational culture as a new found topic paid particular attention in management knowledge and organizational behavior, recently focused as focal of management. Demographers, sociologists, and more recently psychologists and even economists have paid special attention to this new and important issue in management (Osborne, 2013). To this aim, many theories and researches were created and used to identify the role and importance of Organizational culture and management problems. A study by a group of management specialistes determined organizational culture as one of the most influential factors in the development of countries (Hogan and Coote, 2014). As many researchers believe, the success of Japan in industry and management is essentially due to their attention to organizational culture (Nahm et al., 2004). Organizational culture is collection of beliefs, assumptions, values and interaction methods which lead to exclusive social and spiritual environ of an organization (Hartnell et al., 2011; Alvesson, 2012). Organizational culture includes the organization’s expectations, experiences, philosophy, as well as the values that guide the behavior of board members contained members’ self-image, internal affairs, interaction with the outside world, and future expectations (Kasemsap, 2015). Culture is written based on attitudes, beliefs, customs, and rules developed and validated over time. Culture also includes the organization’s perspective, values, norms, systems, symbols, language, assumptions, beliefs, and habits (Needle, 2004). While the above cultural definitions indicate how structure plays a role in the workplace, other definitions emphasize employee’s behavioral components (Yilmaz, 2014) and how organizational culture directly affects employee behavior in an organization. According the above definitions, organizational culture is a complex of common assumptions that guide what happens in organizations by defining appropriate behavior for different situations (Ravasi and Schultz, 2006; Alvessson, 2012). Organizational culture influences how individuals and groups interact with each other, with customers, and with stakeholders (Hueske and Guenther, 2015). Organizational culture may also influence on employees interact with their organization (Schrodt, 2002; Ardichvili et al., 2009). To understand and manage organizational culture, the primary step is to know the prevailing culture in the organization (Rainey, 2009). Various solutions and models have been presented so far. Among the presented models, Denison et al., (2000) model has several important and basic features. Firstly, the model is very simple and clear. Simple in terms of understanding the concepts and recognizing its various dimensions. Secondly, the model is quite practical. In various companies, organizations and units, including manufacturing and services, etc., shows high practicality of Dennison Model. Thirdly, the results are completely understandable and related to various organizational issues. The results provide a good basis for changing organizational culture and its improvement and ultimately the productivity of the organization. Denison’s organizational culture model can be used as a powerful tool to understand organizational culture and the effects on various dimensions of organizational productivity. It is used in most organizations and increases efficiency by improving each indicator and characteristics of organizational culture (Denison, 2010). Denison et al., (2000) presented four components for examining and evaluating organizational culture and declared that it is essential to achieve better performance and increase productivity. The Denison model is shown in Fig. 1.

Denison et al., (2000), by research on organizational culture and organization effectiveness, described the cultural characteristics as follows:
• Involvement in work
• Compatibility
• Adaptability
• Mission
Each feature is measured by three indicators, including:

*Involvement in work*

Effective organizations empower their individuals, form organizations based on work groups, and develop human resource capacities at all levels. Members of the organization are committed to their work and feel part of the organization. People at all levels feel involved in decision-making, and it is their decisions that affect their work, and their work is directly linked to the goals of the organization.
• Empowerment: People have the authority, initiative and ability to manage their work. This creates a sense of ownership and responsibility in the organization.
• Team building: In the organization, teamwork is valued for common goals. As employees feel like managers, they are responsible at work. These organizations rely on groups to do things.
• Capacity development: The organization continuously develops employee skills in order to meet needs and stay competitive.

Compatibility (cohesion and integration)
Organizations that are often effective, are stable and integrated, and employee behavior show fundamental values. Leaders and followers are skilled at reaching an agreement (even when they have a reciprocal view) and organizational activities are well coordinated. Organizations with such characteristics have a strong and distinct culture and sufficient influence on employee behavior. This feature is examined with three indicators:
  Fundamental values: Members of the organization share a set of values that shape their identity and expectations.
  Agreement: Members of the organization are able to agree on important differences. This agreement includes both the agreement at the lower level and the ability to reach an agreement at other levels.
  Coordination and coherence: Organizational units with different functions can work very well together to achieve common goals. Organizational boundaries are not blurred by such work.

Adaptability
Organizations that are well integrated, change difficultly. Therefore, internal integration and external adaptability can be considered as the advantage and superiority of these organizations. Compatible organizations are guided by customers, they take risks, make mistakes, and have the capacity and experience to make a difference. They are constantly improving the organization’s ability to value customers. This feature is examined with three indicators:
  • Change Making: The organization is able to create ways to meet the needs of change and can recognize the environment, respond to current motivations and forecast future changes.
  • Customerism: The organization appreciates and responds to customers and seeks to secure the future in advance. In fact, customerism shows the orientation to which organizations are driven by customer satisfaction.
  • Organizational Learning: Measures the amount of environmental cues that organizations receive, translates, and interprets, and measures the opportunities it creates to encourage creativity, knowledge, and development.
Mission

It might be mentioned that the most important feature of organizational culture is its mission. The organizations that don’t know where they are and what is their current situation? They usually go astray. Successful organizations have a clear understanding of their organizational and strategic goals. Hence, they define organizational and strategic goals and outline the organization’s perspectives. This feature is examined with three indicators:

- **Strategic trend and orientation:** Clear strategic orientations show the direction of organizational goals and each individual can participate in that section.
- **Goals and objectives:** Goals are linked to the organization’s strategy, mission, and perspective, and determine the direction of people’s work.
- **Perspective:** The organization has a common perspective of the future. It expresses a fundamental value, merge the thoughts and hearts of the human resources, and simultaneously determines the direction.

Fixed-Flexible Spectrums and Internal-External Focus: As seen, Denison Model has two vertical and horizontal axes that classify the model into four parts (quarters). The vertical axis includes the amount and type of focus of organizational culture. This axis leads to internal focus on the one hand and external focus on the other. The horizontal axis also refers to the degree of flexibility of the organization, which on the one hand leads to static culture and on the other hand to flexible culture (Denison et al., 2000). In this regard, Vahidnia and Vafaei (2005) studied on an article entitled “Pathology of organizational culture in establishing the productivity cycle in organizations”.

Results show that the role of internal factors of the organization, especially the financial management of the quality system and productivity growth is very high. Although external factors are also influential, their role is less and about 15-20%. In an article entitled “Investigating the impact of organizational culture on the performance of employees of Chofa Company”, Morovati Sharifabadi (2005) used the Performance Evaluation Model and Seven Factor Model of Robbins, (2011) to evaluate performance and organizational culture, respectively. A positive correlation between organizational culture and performance was Approved. Atafar et al., (2012) in a paper entitled “Pathology of Work and Efforts Culture to Promote Productivity in Iran”, used a cross-cutting approach to investigate in line with work culture, productivity and ultimately growth. Mabaleghi and Danesh (2014) in an article entitled “Study of variables affecting organizational culture in order to improve organizational culture and productivity in the Export Guarantee Fund of Iran” examined the model in the organization. Lacas (2010) in a research entitled “Multi-model analysis of organizational culture using the improved study of Denison organizational culture in the United States” presents a field method for recognizing and improving organizational culture.

Ardakani et al., (2012) in a study entitled “Investigating the dimensions of organizational culture based on Denison Model and also based on the opinions of faculty members of Islamic Azad University, Gachsaran Branch” found that among the dimensions of organizational culture participation and adaptability showed the highest and the lowest score, respectively. Based on the average score achieved for the twelve indicators of organizational culture, team building, capacities development and fundamental values have the highest score based on the opinions of faculty members of Islamic Azad University, Gachsaran Branch. In their study, Ardalan et al., (2008) examined the relationship between organizational culture and individual-organizational unity using Denison Model in public universities in the west of the country. Results showed that all four dimensions of Denison’s organizational culture Model is dominant in the country’s western universities. Also, in this study, it was found that mission and involvement in work dimensions had the highest and the lowest correlation with organizational criteria of individual-organizational unity, respectively. Gillespie et al., (2008) evaluated the relationship between organizational culture and customer satisfaction in the building construction industry and car dealers. They have used the Denison Model to understand organizational culture. Results show that the highest and the lowest score in the building construction industry is obtained in terms of involvement in work and mission, and adaptability, respectively. Also, in case of car dealers, the highest and lowest score obtained for Adaptability and Compatibility dimensions, respectively. The environment of organizations is constantly changing. Changes in technology, such as technology-based executive activities, have led to huge leaps in
communication information, business processes, and business practices. On the other hand, the move towards globalization and access to free markets has led organizations to prepare themselves for rapid environmental change (Abolghasemi et al., 2018). Most managers, meanwhile, certainly have a broad perspective on culture and its role in creating a motivating work environment. However, they pay attention to culture as a key reason for organizational change (Schein, 2010). Today, the importance of productivity in the value chain of organizations is such that it is considered as the most effective indicator of determining the success rate of organizations and their competitive advantage. But, most organizations, especially governmental ones, have low productivity, and they certainly need to take major steps to improve the organization’s culture in order to achieve high productivity (Carmeli and Tishler, 2004). Organizational culture as an influential factor is a lever to improve productivity (Eisend et al., 2016). Basically, the purpose of addressing productivity or improving productivity in organizations is to increase competition in various business scenes and make more profit. However, it will not be achieved except by attention to the organization culture (Varizi et al., Mansouri, 2010). Given the importance of productivity in organizational and social life, to identify and study the organizational culture in the District 19 of Municipality of Tehran, was selected. In addition to research conducted in the United States, other studies in China, Russia, and Taiwan validated and supported Denison Model. The main question of the present research is what is the current situation of the District 19 of Municipality of Tehran based on the Denison Model? The research sub-questions are as follows:

- In terms of involvement in the work variable, what is the status of the organizational culture in the District 19 of Municipality of Tehran?
- In terms of adaptability variable, what is the status of the organizational culture in the District 19 of Municipality of Tehran?
- In terms of adaptability variable, what is the status of the organizational culture the District 19 of Municipality of Tehran?
- In terms of mission variable, what is the status of the organizational culture in the District 19 of Municipality of Tehran?

The main purpose of the current is to identify the organizational culture in the District 19 of Municipality of Tehran and the sub-objectives are awareness of the status of the variables, including mission, compatibility, adaptability and involvement in the work of the municipality of District 19 of Municipality of Tehran. The current study has been carried out in Tehran in 2019.

**MATERIALS AND METHODS**

This research is applicable and descriptive in terms of purpose and data collection respectively and of survey group, which examines the organizational culture of the municipality of District 19. Data were provided by a questionnaire and library study. The general questions were divided into two categories: demographic questions and attitude questions. Demographic questions are the general characteristics of respondents such as gender, age, education and work experience. Attitude Questions were used to discover the respondents’ views and opinions about the characteristics and indicators of organizational culture based on the theoretical framework of the Denison’s questionnaire. This questionnaire converts qualitative factors into small amounts using a 5-part Likert spectrum. Spss software was used for statistical analysis. In order to investigate the significant difference, t-test with hypothetical mean 3 was used to obtain the mean score. The statistical population includes 200 people, of which 148 answered the distributed questionnaire.

**RESULTS AND DISCUSSION**

The present study aims to obtain an overview of the governing organizational culture in the District 19 of Municipality of Tehran. According to the results, 60% and 40% of respondents are women and men, respectively. The highest age group is between 30 and 39 years (57%). The highest percentage of people’s educational degrees is bachelor (47%), master degree (28%), post-diploma (14%), diploma (10%) and doctorate (1%) which indicates the average level of education between individuals, respectively. The highest percentage of work experience of people with 40% is related to people with work experience between 11 and 20 years.

**Organizational culture dimensions**

Considering the Likert spectrum from 1
(completely agree) to 5 (completely disagree) and calculating the mean as a measurement index, the following information is obtained. According to the Table 1 of the average scores of dimension of the mission with an average score of 3.14 and the involvement in the work dimension with the average score 3.01 had the highest and lowest scores, respectively, from organizational dimensions.

In order to investigate the significant difference, t-test with hypothetical mean 3 was used to obtain the mean score (Table 2).

The t-test was used to investigate the significant difference between the obtained mean scores and the hypothetical mean of 3. This test showed that in terms of employees of the municipality of District 19, the dimensions of adaptability and mission in organizational culture have an unfavorable situation, and the dimensions of involvement in work and compatibility are also in a moderate position. The Pearson test was used to investigate the correlation between the dimension of involvement at work and its indicators at the error level of 0.01%. The obtained result indicates a significant relationship between the dimension of involvement in work and its indicators. Also, the empowerment index has the most relationship with the dimension of involvement at work (Table 3).

Table 4 shows a very good correlation between the integration dimension and its indicators at the error level of 0.01%, and the agreement index has the most correlation with the fundamental value.

Table 5, Correlation of compatibility and dimensions of organizational culture, The correlation between the adaptability dimension and its indicators at the error level of 0.01% is very high and the index of change making has the most correlation with the flexibility dimension.

Table 6 shows that the correlation between the mission dimension and its indicators at the 0.01% error level, is very high, and the target and mission index is the most relevant index with the mission.

**Correlation between dimensions of organizational culture**

Examining Table 7, in the correlation between the dimensions of organizational culture, the two

---

**Table 1. The average scores dimensions**

<table>
<thead>
<tr>
<th>Organizational culture indicators</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement in work</td>
<td>147</td>
<td>3.0166</td>
<td>.72751</td>
</tr>
<tr>
<td>Compatibility</td>
<td>147</td>
<td>3.0756</td>
<td>.58506</td>
</tr>
<tr>
<td>Adaptability</td>
<td>147</td>
<td>3.1247</td>
<td>.58667</td>
</tr>
<tr>
<td>Mission</td>
<td>147</td>
<td>3.1493</td>
<td>.74614</td>
</tr>
</tbody>
</table>

**Table 2. The results of One-Sample Test**

<table>
<thead>
<tr>
<th>Organizational culture indicators</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Involvement in work</td>
<td>.277</td>
<td>146</td>
<td>.782</td>
<td>.01663</td>
<td>-.1020</td>
</tr>
<tr>
<td>Compatibility</td>
<td>1.566</td>
<td>146</td>
<td>.119</td>
<td>.07559</td>
<td>-.0198</td>
</tr>
<tr>
<td>Adaptability</td>
<td>2.577</td>
<td>146</td>
<td>.011</td>
<td>.12472</td>
<td>.0291</td>
</tr>
<tr>
<td>Mission</td>
<td>2.426</td>
<td>146</td>
<td>.016</td>
<td>.14928</td>
<td>.0277</td>
</tr>
</tbody>
</table>

**Table 3. Correlation of involvement in work and dimensions of organizational culture**

<table>
<thead>
<tr>
<th></th>
<th>Empowerment</th>
<th>Team building</th>
<th>Capacities development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement in work</td>
<td>Pearson Correlation</td>
<td>.908**</td>
<td>.900**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>147</td>
<td>147</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**
The average score of organizational culture indicators in District 19 of municipality of Theran is shown in Table 8.

By examining the indicators of organizational culture, perspective has the highest score of 4.344,
Culture and productivity in organization

Table 9. The results of One-Sample Test of the organizational culture indicators

<table>
<thead>
<tr>
<th>Organizational culture indicators</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowerment</td>
<td>3.577</td>
<td>146</td>
<td>0</td>
<td>0.23469</td>
<td>0.10503, 0.36435</td>
</tr>
<tr>
<td>Team building</td>
<td>0.244</td>
<td>146</td>
<td>0.808</td>
<td>0.01701</td>
<td>-0.1209, 0.15487</td>
</tr>
<tr>
<td>Capacities development</td>
<td>-3.058</td>
<td>146</td>
<td>0.003</td>
<td>-0.2018</td>
<td>-0.3322, -0.0714</td>
</tr>
<tr>
<td>Values</td>
<td>0.105</td>
<td>146</td>
<td>0.917</td>
<td>0.0068</td>
<td>-0.1214, 0.13502</td>
</tr>
<tr>
<td>Consensus and decision making</td>
<td>2.182</td>
<td>146</td>
<td>0.031</td>
<td>0.14286</td>
<td>0.01346, 0.27225</td>
</tr>
<tr>
<td>Cooperation and coordination</td>
<td>1.733</td>
<td>146</td>
<td>0.085</td>
<td>0.0771</td>
<td>-0.0108, 0.165</td>
</tr>
<tr>
<td>Change making</td>
<td>3.058</td>
<td>146</td>
<td>0.003</td>
<td>0.18367</td>
<td>0.06497, 0.30238</td>
</tr>
<tr>
<td>Consumerism</td>
<td>1.879</td>
<td>146</td>
<td>0.062</td>
<td>0.11565</td>
<td>-0.006, 0.23725</td>
</tr>
<tr>
<td>Organizational Learning</td>
<td>1.395</td>
<td>146</td>
<td>0.165</td>
<td>0.07483</td>
<td>-0.0312, 0.18082</td>
</tr>
<tr>
<td>Strategy</td>
<td>2.876</td>
<td>146</td>
<td>0.005</td>
<td>0.21202</td>
<td>0.06632, 0.35772</td>
</tr>
<tr>
<td>Objective</td>
<td>-0.262</td>
<td>146</td>
<td>0.793</td>
<td>-0.0204</td>
<td>-0.1741, 0.13331</td>
</tr>
<tr>
<td>Perspective</td>
<td>4.344</td>
<td>146</td>
<td>0</td>
<td>0.25624</td>
<td>0.13965, 0.37282</td>
</tr>
</tbody>
</table>

Fig. 2 - Indicators Chart of Organizational culture dimensions for District 19

and Capacities development with the score of -3.058, has the lowest score in organizational culture (Table 9). According to the questionnaire items, where the number (1) is considered to be completely positive to the number 5 as completely opposite, the result showed that the numbers above 3 have determined the unfavorable situation in that indicators.

Therefore, by using the results of t-test and reviewing Fig. 1, it is found that empowerment indicators, vision, change making, strategic guidance, and agreement have an inappropriate status, and capacity development index has an acceptable status in organizational culture from the perspective of employees in the Municipality of District 19 (Fig. 2).

According to the results obtained among the four dimensions tested, the highest score of 3.14 is related to the mission dimension (Keeping in mind the the given score of the questionnaire items). According to the t-test, there is a significant difference with the mean value, and the high average of this dimension means that the municipality of District 19 is not well defined in terms of its organizational goals and strategic goals and needs to draw a roadmap for itself. Also, the adaptability dimension was 3.12, which is a sign of weakness in this dimension. In other words, this district performance in internal integration and external adaptability are not
very strong. In two other dimensions of involvement in work and compatibility is in a moderate position. That is to say, the participation of the members of the organization in the work and knowing themselves as a member of the organization are in a moderate position. Also, the stability and integrity of the organization and the adherence of employees to fundamental values are at a moderate level. Managers and employees have reached a level of skill in reaching an agreement, and organizational activities have been coordinated to the extent of solving basic problems. Also, by examining the indicators of organizational culture, it is found that empowerment indicators (people have the authority, initiative, and ability to manage their work) with an average of 3.23, perspective (the organization has a common view of the future situation) with an average of 3.25, Make a change (the organization is able to make changes to meet the needs and can recognize the environment of the institution) with an average of 3.18, strategic guidance (having clear strategic goals for organizational goals) with an average of 3.21 and agreement (members of the organization are able to Agree on a significant difference) with an average of 3.14 has an unfavorable situation and an indicator of capacity development (the organization continuously develops staff skills to meet the needs and stay in the competition scene) with the average of 2.79 has an acceptable status in the District 19 of Municipality of Tehran.

CONCLUSIONS

Nowadays, considering the inevitable evolution of organizations which operates as an open system, not a closed system, they are forced to pay more attention to organizational culture in order to survive. This study attempted to answer the main questions by collecting information using a questionnaire. The purpose of this study was to investigate the dimensions and indicators affecting organizational culture in order to improve organizational culture and productivity based on the Denison Model in District 19 of the Municipality of Tehran, Iran. The research method was descriptive-correlational and Denison’s organizational culture questionnaire which assesses organizational culture based on four dimensions of involvement in work, compatibility, adaptability, and, the mission was used. The results showed that that the mission and involvement in work have the mean scores of 3.14 and 3.01, respectively while adaptability and compatibility showed the mean score of 3.12 and 3.07. In other words, the municipality of District 19 in terms of its organizational missions and strategic goals needs a well-constructed plan in order to achieve a better performance and productivities.

Suggestions

In general, managers should pay more attention to employees and their work in order to improve and eliminate the weakness of the organization in the studied district. Also, special facilities should be considered so that employees have more cooperation in order to make changes. Also, the managers of the organization should provide appropriate solutions to improve the working methods in the organization to achieve growth, excellence and productivity. Also, according to the obtained results, suggestions for improving the organization are presented: Increase staff awareness of the organization’s goals, explanatory courses to increase employee’s collaboration to make changes in the organization, gain new skills and professional development with the help of new training methods, help colleagues when needed and participate in teamwork. Eventually, it is suggested to perform similar study in other 22 districts in order to gain an overview of the organizational culture governing the Municipality of Tehran.

AUTHOR CONTRIBUTIONS

S. Mohammadi, has performed the methodology, literature review, software analysis, result interpretation, data collection, writing original draft preparation, funding acquisition, and prepared the manuscript text and agreed to the published version of the manuscript.

ACKNOWLEDGMENT

The author is very much grateful to the personnel of District 19 of Municipality of Tehran for their participation in data gathering.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancy has been completely observed by the authors.
REFERENCES
Ardakan, S.; Dehghan, H.; Taghipour, Kh. (2012). The study of organizational culture dimensions based on the denison model for the faculty members of Islamic Azad University, Gachsaran branch. The first national conference on the study strategies to improve management, accounting, and engineering sciences in organizations. (In Persian).