



## Innovation Culture Literature Review and a Case Study at a Tech Company in Turkey

*İnovasyon Kültürü Literatür Taraması ve Türkiye'deki Bir Teknoloji Şirketinde Örnek Vaka Çalışması*

### ABSTRACT

It is essential for companies to catch up with the change in a world where the competitors of companies are increasing in every sector, in a globalizing world, and in a world where competitors are now all over the world. Therefore, companies must keep up with this change by changing their products, processes, and organizational structures. What is essential is that this change needs to be embedded in the daily life of companies as a culture.

Literature research investigated the importance of innovation culture for companies in this study. In addition, some studies that model the situation of companies for innovation culture have been examined, and their approaches have been researched. Finally, a sample modeling (Cameron & Quinn) was chosen, and the company culture was modeled with a survey of a tech company's employees in Turkey. Then the results are discussed.

**Keywords:** Innovation Culture, Case study, Cameron and Quinn, Organizational culture

### ÖZET

Şirketlerin rakiplerinin her sektörde arttığı, küreselleşen ve rakiplerin artık dünyanın her yerinde olduğu bir dünyada, şirketlerin değişime ayak uydurması şarttır. Bu nedenle şirketlerin ürünlerini, süreçlerini ve organizasyon yapılarını değiştirerek bu değişime ayak uydurmaları gerekiyor. Önemli olan bu değişimin bir kültür olarak şirketlerin günlük yaşamına yerleştirilmesidir.

Bu çalışmada inovasyon kültürünün şirketler için önemi literatür taramasıyla araştırılmıştır. Ayrıca firmaların inovasyon kültürüne yönelik durumunu modelleyen bazı çalışmalar incelenmiş ve yaklaşımları araştırılmıştır. Son olarak örnek bir modelleme (Cameron & Quinn) seçilmiş ve şirket kültürü, Türkiye'deki bir teknoloji şirketinin çalışanlarına yapılan anketle modellenmiştir. Daha sonra sonuçlar tartışılır.

**Anahtar Kelimeler:** İnovasyon Kültürü, Vaka çalışması, Cameron and Quinn, Organizasyonel Kültür

### INTRODUCTION

When the literature is examined, it is seen that there are quite a few publications on innovation and organizational culture. Unfortunately, this has also led to many definitions of innovation and culture.

First, Morento et al. (2018) mentions the word 'organization' underlines the necessity of objective, administrative-economic goals and the rational arrangement of people, processes, and resources in the same direction. Organizations are social entities that are (1) goal-directed, (2) structured and coordinated activity systems, (3) intentionally designed, and (4) connected to the outside world says Daft (2015).

Secondly, 'culture' is the company's collective collection of values, conventions, and guiding principles. When new employees come, the culture teaches them how to feel and act in certain situations. A complex system of shared beliefs, principles, symbols, and values known as organizational culture serves to set one company apart from others, promote its commercial expansion, and strengthen its long-term competitive advantage. As a result, Barney (1986) mentions that culture must be considered essential to the organization's existence [3]. Lam (2011), Tellis et al. (2007) and Vilanova and Deetoni (2007) believe that a company's culture may provide a competitive advantage.

The word "innovation" is the last. There are two definitions of innovation that are frequently referenced. The first definition originates from Schumpeter and refers to a destructive force that destroys the existing market conditions while simultaneously creating new ones through novel combinations says Iwai (1984). Innovation is also defined as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations." By OECD (2005)

Regarding the connection between innovation and culture, the literature establishes a solid link. For instance, it has been discovered that organizational levels of innovation are linked to cultures that prioritize learning and growth and participatory decision-making as Hurley and Hult (1998) mentions. It is also claimed by Aldas-Manzano et al. that due to insufficient frameworks around innovation, there is a sizable gap in existing models of market orientation. Market orientation and innovation are not separate disciplines, according to 2005 research by Aldas-Manzano et al.

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"Some techniques and strategies evaluated in the innovation scale are more frequently employed by the enterprises more oriented to the market," they write.

For doing the literature review, the Scopus database is used. The keyword combinations used is "innovation", "innovativeness", "culture", "organizational". The titles, abstracts, and keywords are reviewed. The right choice combines "innovation culture" with "organization". There are 205 articles from 1996 to 2022. The year with the most publications is 2021. This shows that this topic is trendy and research on the topic continues to increase.

This study reviews the literature on the innovation culture and the models that describe and analyze them. Subsequently, one of these models was chosen, and a survey was conducted at a company named Kariyer.net (Internet Source 1) with the participation of 20 people from 2 different departments. Finally, the results were compared with the examples in the literature, and comments were made accordingly.

## **INNOVATION AND ORGANIZATIONAL CULTURE**

### **Organizational Culture**

Organizational culture is produced by relationships between people influenced by leadership manners and a system of norms, structures, and regulations. Organizational culture is described as "a pattern of shared basic assumptions that a group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems," according to Schein (1990).

Learning is the basis of culture. It is gaining knowledge via standards, the manners of leaders, and interaction with other members. Since culture is an open system, it must be changed by including new individuals who will bring new beliefs and presumptions. A structure that can change the formed beliefs and values as they grow and that can change as they change, expresses an excellent organizational culture.

Everything a company does is influenced by its culture. It captures the core of what the business is truly like, how it operates, focuses on, and interacts with clients and employees.

There are two different opinions in the literature on the main source of organizational culture. One of them is that the culture of the relevant country feeds the corporate culture. In other words, the culture of the nation in which it was founded and which constitutes most of its employees significantly affects the corporate culture mentioned by Lau et al. (1996) and Noorderhaven and Harzing (2003).

However, many publications, especially in the last 15 years, say the opposite is true. They say that the culture of companies has become almost independent of it, as globalization has made its impact felt very quickly in the last century. The place where this is most evident is undoubtedly technology companies. Regardless of their established country, their way of doing business, human relations, management style, and communication methods with customers are similar. Let us say a software specialist working in Turkey today, for example, can easily do the same job he/she does in another country in the world tomorrow, in the same way, and with almost the same communication methods. The cultures of multinational companies have no other way of surviving. Although there are not enough studies in the literature yet, the 2020 Covid pandemic has begun to put significant pressure on organizational culture. For people who no longer work at offices and want to work from wherever they want, some difficulties arise in maintaining the culture of companies and transferring this to people. Omale et al. (2021) said that it is critical for the continuity of the companies that the managers of the companies act quickly in this regard.

### **Innovation Culture**

There are different definitions for innovation culture. As for Wu and Lin (2011) people who participate in the three main activities—creative geniuses, innovation leaders, and innovation champions—create an innovation culture. According to Ismail and Abdmajid (2007), an innovation culture is one in which fresh ideas are developed, appreciated, and supported.

Some publications state that governments are also responsible for the innovation culture. As for Gandotra (2010) government policies, strategies, business, and public sector efforts and fostering innovation and creativity can help nations compete successfully in the increasingly globalized economy of the 21st century.

The conclusion that can be drawn from these articles is that the capacity of a company to define, execute, and create new processes and products regularly makes up its innovation culture.

While advantages gained via systematic innovation capability can continue for a very long period, innovation itself doesn't stay very long. Gloet and Samson (2013) say in their article that the development of an innovative culture is required to achieve this advantage

Loreta Losane (2013) says that the five key features of an innovation culture are values, strategy, structure, behavior and communication, and leadership. Examples of these five features can be as follows.

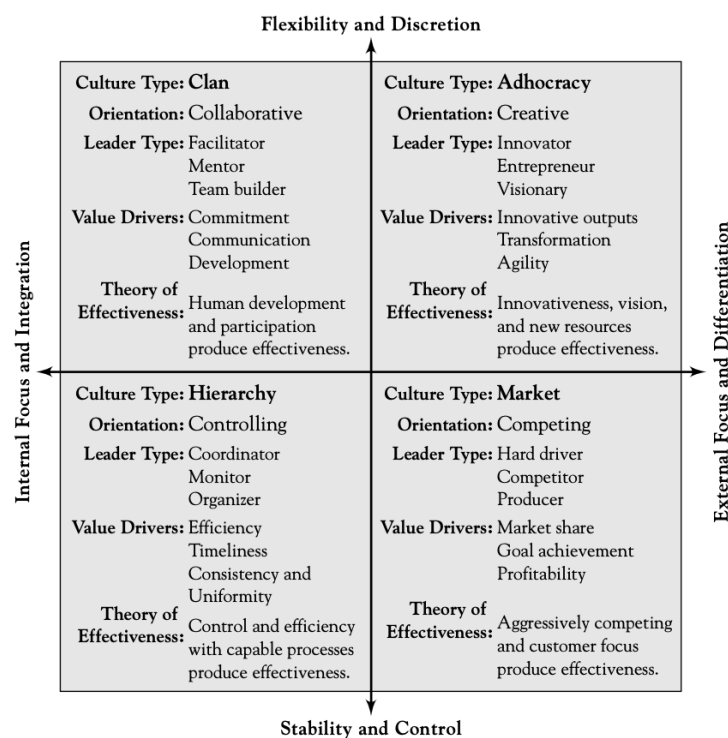
- 1- Values: freedom, trust, encouragement of creativity, risk-taking
- 2- strategy: being innovative is a strategic goal
- 3- structure: transparency, autonomy
- 4-behavior and communication: error tolerance, cooperation, openness to new ideas
- 5-Leadership: Innovation as the cornerstone of leadership, taking risks, supporting change, being a pioneer in innovation

From a literature review, it is seen that there are some methods to explain the close relationship between organization, culture, and innovation. Innovation Culture Models called "ICM" are used to diagnose organizational culture. Thus, it reveals what decision-makers should do for a more innovative organization. Some of these frequently used methods in the literature are listed below.

### 1- Cameron & Quinn

This model put forward by Cameron and Quinn (2011) provides a straightforward diagnosis of organizational culture, which is essential to starting, the gradual organizational cultural change to deal with external factors.

Efficiency, punctuality, smooth operation, and predictability are the attributes of effectiveness that are most highly regarded in a hierarchy culture, according to Figure 1. Control encourages efficiency (removal of waste and redundancy), which in turn supports effectiveness, according to the prevalent operational theory that underpins organizational performance. (Figure 1)



**Figure 1:** Cameron & Quinn's Competing Values Model.

**Source:** Cameron, Quinn, Degraff & Thakor (2006).

Cultural dimensions are composed of four-axis. These and the competing values of this model are as follows:

- a) Internal/External focus: the intensity of organizational focus: partners & customers vs organizational agents & processes.
- b) Flexibility/Stability: who takes decisions: top-down vs bottom-up.
- c) Speed of change: the speed of change: long-term vs fast.
- d) Degree of change: degree of change: incremental vs transformational.

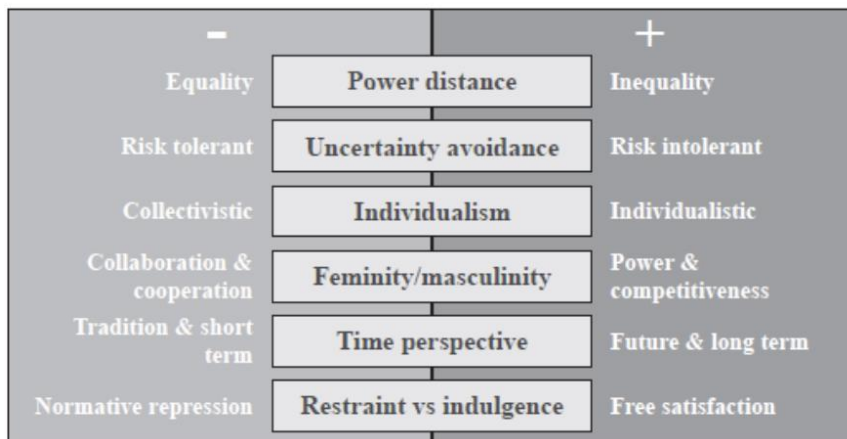
The four cultures/quadrants that make up the competing Values Map are:

- a) **Hierarchy:** The traditional strategy for demonstrating dominance. Orientation to results and optimum efficiency. Roles and positions are the foundation for rigid organization, which is then built on policies, processes, and norms.
- b) **Clan:** emphasizes adaptability, independence, teamwork, and participation—a majority of affective connections, commitment, shared ideals, and interpersonal cohesion. Look for opportunities for personal and career growth. The leader is a mentor.
- c) **Market:** centered on value exchange but with control. In terms of the market, internal and external relations are weighted. High levels of rivalry among organizational agents. Aspirations for stability and profitability. The leader is a manager
- d) **Adhocracy:** Maximum adaptability, agility, dynamism, and interdependence are characteristics of adhocracy. Empowered teams that take on new challenges using new resources and prototype techniques. The leader is an entrepreneur.

This model uses the Organizational Culture Assessment Instrument (OCAI) survey. A detailed explanation of this survey will be made in section C.

## Hofstede

Six dimensions were used by Hofstede (1984) in "Culture's Consequences: International Differences in Work-Related Values" to describe a model for national culture: power distance, collectivism, masculinity-femininity, avoiding uncertainty, future orientation, and restraint vs indulgence (Figure 2).



**Figure 2:** Hofstede's Cultural Dimensions Model

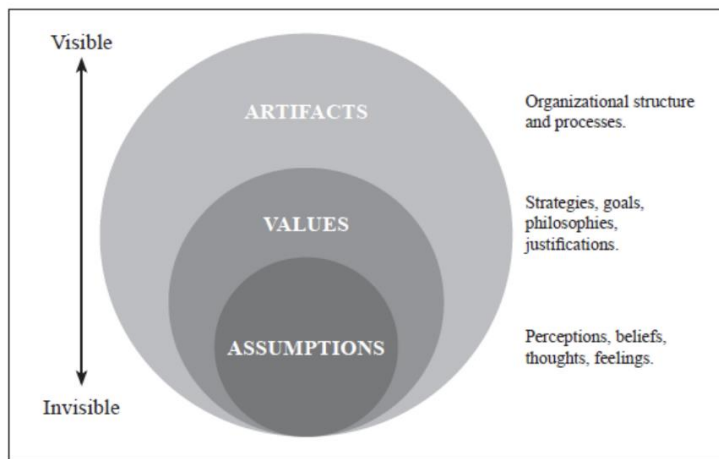
**Source:** Hofstede, (online).

## Schein

Schein (2004) suggests that a cultural phenomenon's visibility to the researcher-of-culture model is measured on a three-level scale.

These three levels are artifacts (which include outward manifestations of organizational culture such as the setting, language, dress code, and organizational structure); values (which include objectives, strategies, and philosophies); and underlying assumptions (beliefs, thoughts, feelings). (Figure 3)

The manager is a crucial component of the innovation culture in this model. Schein promotes strong leadership, excessive internal differentiation (in terms of goals and hierarchies), and geographic decentralization.



**Figure 3:** Hofstede's Cultural Dimensions Model

Source: Hofstede, (online).

### Denison

This model presented by Denison and Neale (1994) divides culture into four traits which are mission, adaptability, consistency, and involvement. On vertical axes, focusing on internal environment / external actions. On horizontal axes, focus on freedom and innovation or order and stability (Figure 4).

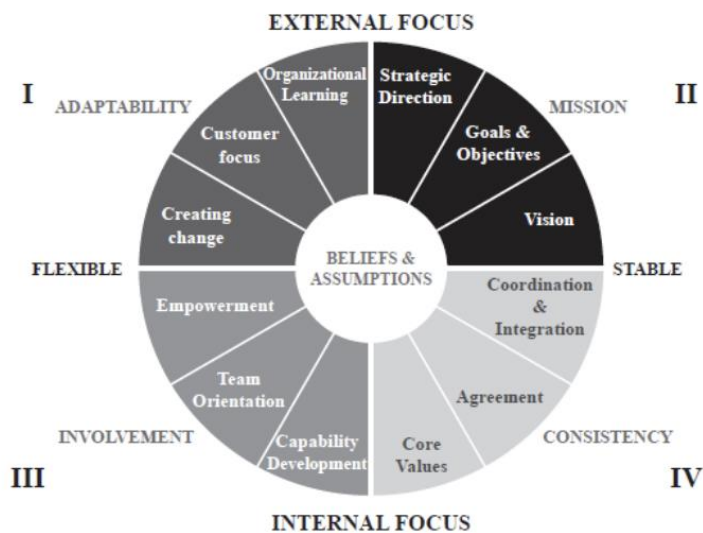


Figure 4: Denison Organizational Culture Survey.

Source: Denison Consulting, (online)

### CASE STUDY DESCRIPTION

#### The Organizational Culture Assessment Instrument (Ocai)

Organizational culture can be studied using the "Organizational Culture Assessment Instrument" (OCAI), which Kim Cameron and Robert Quinn created.

The participant is requested to distribute 100 points among four options that, by the current organization, represent the four different culture types. The effectiveness of each of the four categories of culture in the current organizational or team culture is assessed using this method. In addition, the desire for change can be measured by retaking the evaluation and dividing the 100 points between the same choices this time by what the participant would like to see in the organization. The appendix contains the questionnaire. Participants will assess the organization's six key metrics, including: dominant characteristics, organizational leadership, management of employees, organization Glue, strategic emphases, criteria of success

## Case: Kariyer.net

### Survey & Data

As a case study, it was applied to two different departments at OCAI Kariyer.net company which is the market-leading job site in Turkey Kariyer.net is the first choice for more than 16 million candidates from all industries nationwide.

Twenty questionnaires were collected in total by the service organization on a webpage designated for this case. Two extra information were gathered from the questionnaires—the department name and total years in the company. The department breakdown by experience year is shown in Table 3.1.

**Table 1: Distribution of departments by experiences year**

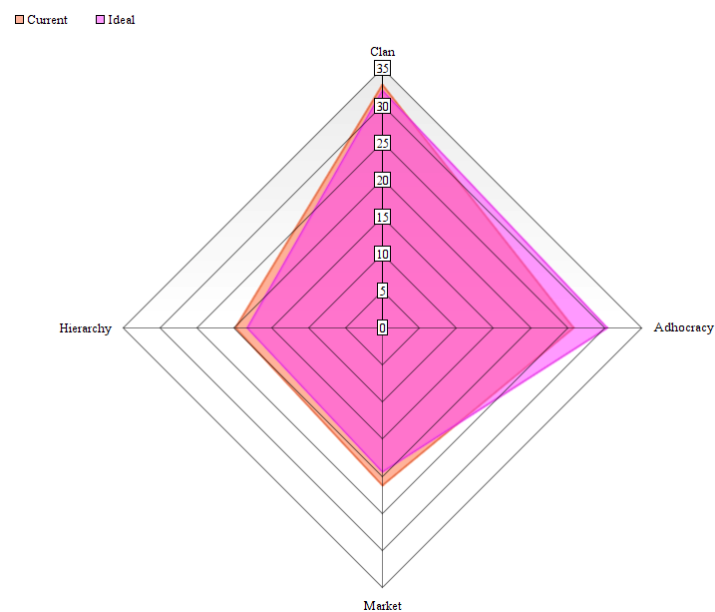
Departments	Experiences in year					Sum
	1	1_3	3_6	6_10	10_15	
Technology	6	2	1	1	0	10
Human Resources	2	2	2	2	2	10
<b>All</b>	<b>8</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>20</b>

Source: The survey

### Result

The survey results were tabulated, and the averages of the answers were given for the current and preferred state for each of the six dimensions (Table 2). In addition, the averages of the selected answer choices are provided for each dimension. Finally, the difference between current and ideal for these answers was calculated and added to the far-right column of the table.

The four cultural "archetypes" are blended to create the culture profile. The colors orange and pink stand for the preferred and contemporary cultures (Figure 5).



**Figure 5:** The current and ideal organizational culture among employees of the company

**Table 2 : Values of OCAI Dimensions**

Dimensions		Current	Ideal	Difference
Name	T	Mean	Mean	Mean
1. Dominant Characteristics	A	30,25	25	5,25
	B	26,75	34,25	-7,5
	C	27,25	27,75	-0,5
	D	14,75	13	1,75
2. Organizational Leadership	A	32,25	34,25	-2
	B	27,5	31,6	-4,1
	C	9,75	7,9	1,85
	D	30,5	26,25	4,25
3. Management of Employees	A	37,25	36,5	0,75
	B	24,5	26	-1,5
	C	17,25	15,25	2
	D	21	22,25	-1,25

<b>4. Organization Glue</b>	<b>A</b>	38	33,25	4,75
	<b>B</b>	24,75	31,25	-6,5
	<b>C</b>	20,75	24	-3,25
	<b>D</b>	16,5	11,75	4,75
<b>5. Strategic Emphases</b>	<b>A</b>	29,1	32	-2,9
	<b>B</b>	27,35	30,85	-3,5
	<b>C</b>	24,5	18,95	5,55
	<b>D</b>	19,05	18,2	0,85
<b>6. Criteria of Success</b>	<b>A</b>	29,95	31,1	-1,15
	<b>B</b>	24,1	28,25	-4,15
	<b>C</b>	27,95	22,65	5,3
	<b>D</b>	17,25	18	-0,75
<b>(A) Mean of clan</b>		32,8	32,01667	0,783333
<b>(B) Mean of adhocracy</b>		25,825	30,36667	-4,541667
<b>(C) Mean of market</b>		21,24167	19,41667	1,825
<b>(D) Mean of hierarchy</b>		19,84167	18,24167	1,6

Source: The survey

## Present

The dominant culture is the type that scored highest, in this case, clan culture (32.8 points): an enjoyable place to work where people share a lot of themselves and commitment is high. Followed by adhocracy culture (25.82 points): a dynamic, entrepreneurial, and creative place to work. Third is clan market (21.24 points): results-oriented, production, goals and targets, and competition. Lastly, the hierarchy culture is also present (19.84 points): structure, procedures, efficiency, and predictability.

Conclusion: Apparently, there is a mixture of cultures where an emphasis is placed on collaboration and commitment.

## Differences Between Present and Preferred Culture

The most significant desired difference can be seen in adhocracy culture, with an increase of 4.54 points: the focus on entrepreneurship and creativity could be considerably more. Subsequently, market culture with a decrease of 1.82 points could be less focused on results and competition. Hierarchy culture decreases by 1.60 points, and clan culture decreases by 0.7 points. The dominant culture in the preferred situation is still clan culture, but the need for change in adhocracy is considerable. Cameron & Quinn stick to the principle that urgent action is required if the difference is higher than 10 points. So there is no urgent need for change. The only significant change seems to be in adhocracy.

This can tell the top manager that people may want a bit more space for freedom and risk tolerance.

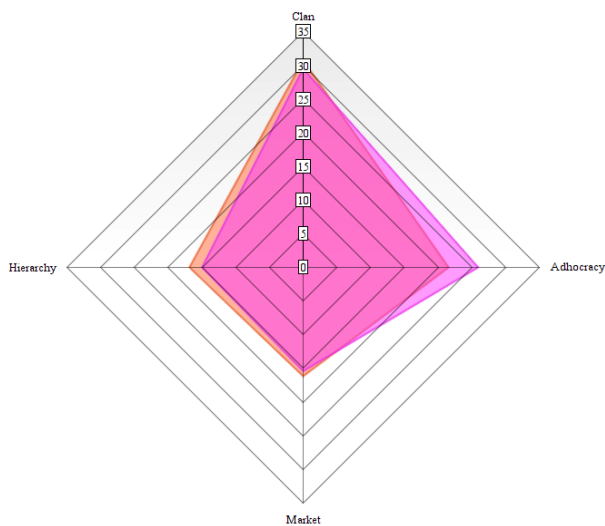
## Comparison of the results of technology and human resources departments

Half of this comprehensive study, boasting a cohort of 20 participants, is composed of dedicated employees hailing from the esteemed ranks of our human resources department, as eloquently depicted in both Tables 4 and Figure 6. Meanwhile, the other fifty percent of our research endeavor showcases the exceptional insights garnered from the industrious technology department, beautifully encapsulated in Tables 4 and gracefully illustrated in Figure 7. In the pursuit of a nuanced and in-depth analysis, we've undertaken the task of evaluating these findings separately for each department, thus affording us a richer perspective. Below tables and figures show the results of this distinction.

**Table 3:** Values of OCAI Dimensions for only the Technology Department

	<b>Current</b>	<b>Preferred</b>
<b>(A) Mean of clan</b>	30,75	29,5
<b>(B) Mean of adhocracy</b>	21,56667	25,94167
<b>(C) Mean of market</b>	16,16667	15,4
<b>(D) Mean of hierarchy</b>	16,85	14,99167

Source: The survey



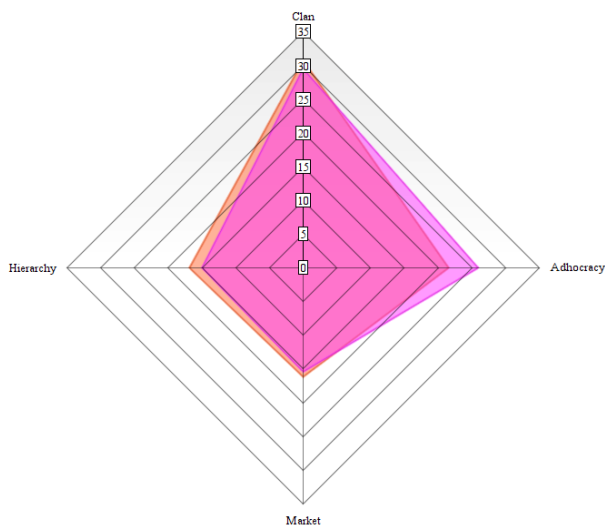
**Figure 6:** The current and ideal organizational culture among employees of the Technology Department

The results achieved by the technology department are not only in alignment with the leading outcomes but also demonstrate a remarkable level of parallelism.

**Table 4:** Values of OCAI Dimensions for only Human Resources Department

	Current	Preferred
<b>(A) Mean of clan</b>	29,85833	29,35
<b>(B) Mean of adhocracy</b>	21,50833	24,94167
<b>(C) Mean of market</b>	17,575	16,5
<b>(D) Mean of hierarchy</b>	16,78333	15,45833

Source: The survey



**Figure 7:** The current and ideal organizational culture among employees of the Human Resources Department

There is no distinguishing difference between the two results. Both seem to have produced results in line with the overall assessment. For this reason, it can be said that the results for the general are valid for both departments. So they need a little more freedom, flexibility, and agility. Both groups want leaders to be a little more visionary and entrepreneurial. In addition to these, it would be appropriate to increase the number of participants, which is 20 in total, and to make the experiment again to prove the consistency of the results.

## CONCLUSION

With this study, the literature on innovation culture in the post-1990 literature was scanned. It is shown how the organization and innovation culture interact. Accordingly, the results can be summarized as follows:

1- Innovation culture is the structure that brings innovation into the company's daily routine. This is a very supportive force for the continuity of companies.



2-The majority of organizational culture research supports pre-existing ideas and models. To compare and study innovation culture, models/concepts characterizing various cultures (Kameron & Quinn, Quinn & Spreitzer, Hofstede) are primarily used in further exploration.

3- The cultures of the companies are not related to the country they are in but to the communication structure, goals, and values they establish.

Further research topics that can contribute to the literature:

1- Do companies with a strong innovation culture perform better?

2- Do new companies have a better innovative culture than old companies?

3- What kind of threats does the rapid increase in working from home after Covid bring to the development and preservation of the innovation culture?

Finally, in the second part of the study, the model of Cameron & Quinn, one of the famous ICMs, was applied to the human resources and technology department of a company with a questionnaire in which 20 people participated. According to the results, it was seen that the participants generally wanted more visionary leaders to increase risk tolerance and encourage creativity in working conditions

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### **APPENDICES**

In this section, the titles of the tests used in the application and the options for each are included.

#### **Appendix A: Original OCAI-questionnaire**

##### **Dominant Characteristics**

The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves.

The organization is a very dynamic entrepreneurial place. People are willing to stick their necks out and take risks.

The organization is very results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.

The organization is a very controlled and structured place. Formal procedures generally govern what people do.

##### **Organizational Leadership**

The leadership in the organization is generally considered to exemplify mentoring, facilitating, or nurturing.

The leadership in the organization is generally considered to exemplify entrepreneurship, innovating, or risk taking.

The leadership in the organization is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.

The leadership in the organization is generally considered to exemplify coordinating, organizing, or smooth-running efficiency.

##### **Management of Employees**

The management style in the organization is characterized by teamwork, consensus, and participation.

The management style in the organization is characterized by individual

Risk-taking, innovation, freedom, and uniqueness.

The management style in the organization is characterized by harddriving competitiveness, high demands, and achievement.