# The Mediating Role of Psychological Safety in the Effect of Organizational Culture on Innovation: A Research in Hotel Enterprises

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## ABSTRACT

The purpose of this research is to determine the effect of organizational culture types on innovation and to reveal the mediating role of psychological safety in this relationship. This research was carried out with 445 people working in four-star and five-star hotel enterprises, which allowed the research, operating in Turkey. Within the scope of this research, organizational culture was examined over four types of organizations: clan, adhocracy, hierarchy and market. As a result of the analysis, it can be seen that clan, adhocracy and market culture positively affect organizational innovation. However, when psychological safety is included in the model as a mediating variable in the relationship between clan and adhocracy, the analysis shows that psychological well-being is partial in the relationship between clan culture and innovation, and it is fully mediated in the relationship between adhocracy and innovation.

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## I.    INTRODUCTION

After the concepts of 'efficiency' in the 1950–1960s, 'quality' in the 1970–1980s and 'flexibility' in the 1980–1990s, today the concept of 'innovation' has become the focal point of global competition (Janszen, 2000, p. 3). Innovation is the key driving force of economic development and it plays a crucial role in competition at both national and firm levels (Tellis, Prabhu and Chandy, 2009). Innovation emerges as a result of various preliminary organizational factors or elements (Wolfe, 1994). Organizational culture is an important element of innovation, which influences the behaviour of employees and helps employees accept innovation as a core value of the organization (Hartmann, 2006). Innovation, which creates a competitive advantage for organizations (Tutar, Kocabay and Aric, 2007, p. 196), draws its energy from new knowledge and experiences (Egrican, 2009, p. 9). Organizational culture is of great importance in transforming these new knowledge and experiences into innovative processes, products and organizational structures that benefit the organization. In their study, Fis and Wasti (2009) stated that the most important variable that affects the success and failure of the innovation process is organizational culture. Organizational culture, which employees accept without questioning and which separates an organization from other organizations, constitutes subcultures by the similarities and differences within itself. According to a plethora of research studies, while some culture types positively affect innovation, some affect it negatively (Amabile, Conti, Coon, Lazenby and Herron, 1996; Arad, Hanson and Schneider, 1997; Cotterman et al., 2009; Jaskyte, 2004; Jaskyte and Kisieliene, 2006; Kimberly and Evanisko, 1981; Llorens, Ruiz and Garcia, 2005; Lock and Kirkpatrick, 1995; Martins and Terblanche, 2003; Naronja-Valencia, Jimenez-Jimenez and Sanz-Valle, 2015; Saraph, Benson and Schroeder, 1989). In this study, it is aimed to determine how the clan, adhocracy, market and hierarchy subcultures defined in Cameron and Quinn's (2006) 'Competitive Values' model affect innovation. In order to maintain their competitive advantage, organizations are required to adapt to changing environmental conditions and continue to learning. Organizational learning is the acquisition of development and sharing of knowledge needed by organizations to gain a competitive advantage (Jashapara, 1993). Organizational learning takes place in environments where employees feel psychologically safe. The process of transforming knowledge into innovation that makes today's organizations successful requires an organizational culture in which learning is supported. It is believed that the concept which directs this process is that which makes employees feel psychologically safe in their learning environment. In the process of transforming information into innovation, what makes today's organizations successful is an organizational culture in which learning is supported. In an organizational culture where learning is supported, the variable that will help employees engage in innovative activities is thought to be psychological security. In this sense, it is important to determine how psychological safety perceptions guide the relationship between cultural structures of organizations that are aware of their basic abilities and aim to transform these abilities into competitive advantages and innovations.

Over the decades, tourism has experienced continued growth and deepening diversification to become one of the fastest-growing economic sectors in the world. Tourism, in the year 2018 with 1.7 trillion USD, was the world's third-largest export category after chemicals and fuels, and it was ahead of automotive products and food. This global spread of tourism in industrialised and developed states has produced

economic and employment benefits in many related sectors – from construction to agriculture or telecommunications (World Travel Organization, 2019). The contribution of tourism to economic well-being depends on the quality and revenues of the tourism offer.

Tourism firms operate in different sectors such as transportation, accommodation, leisure or financial intermediation. Innovation behaviour and organizational culture of tourism firms also differ from each other. The hotel industry is dissociated from others due to its homogeneity that provides an important part of tourism services (Orfila-Sintes and Mattsson, 2009, p. 381). However, the reason why the hotel industry was chosen for this study is the fact that tourism is an important and extremely competitive sector characterised by consistent transformation (WTO, 2004). In this sense, the most basic way to achieve a sustainable competitive advantage in the hotel industry is based on differentiating its activities, processes and products through innovation (Hassan, Shaukat, Nawaz and Naz, 2013, p. 244). Furthermore, the hotel industry is labour-intensive and people-oriented. Employees play an important role in the production and presentation of products and customer satisfaction. They are the key factors in creating a difference and being innovative in a hotel enterprise in an intensely competitive environment. For these reasons, examining the factors such as organizational culture and psychological safety that affect employees and innovations in hotel enterprises is important for success and competitiveness.

Turkey has long been one of the world's most popular tourist destinations. The total visitor arrivals for 2018 reached a record of 45.6 million, representing a remarkable 21.7% growth over 2017, with US$ 25.2 billion flowing into the national economy (Turkish Statical Instutite, 2019). To meet the requirements of the growing inbound and outbound tourism, the hotel industry, with 4,761 hotel enterprises, plays an important role in Turkish tourism (Association of Turkish Travel Agencies, 2019). It is, therefore, the aim of this study to determine the effect of organizational culture types on innovation and to reveal the mediating role of psychological safety in this relationship in the Turkish hotel industry.

## II.    CONCEPTUAL FRAMEWORK

### A.    Organizational Culture

Organizations are established by people and operate in the community. Therefore, organizations form both an element of culture and a separate culture within themselves (Karaman, 2005, p. 72). This culture, which is related to the organizational environment, created by organizations and shaped by organizational practices, is called organizational culture (Oudenhoven, 2001). In the management literature, organizational culture is defined as the forms of understanding, norms and values that are a part of organizational life and shared by members of the organization (Beyer and Trice, 1987, p. 6). According to Schein (1990, p. 113), organizational culture is a set of values and beliefs that a particular group develops while analysing the problems of internal integration and external harmony and which is accepted by employees. Deshpande and Webster Jr (1989, p. 4) define the organizational cultures as, 'a model of common values and beliefs that helps individuals understand the organizational functioning and thus introduces them to the norms of behaviour within the organization'. In organizations with a strong

organizational culture, employees have certain ideologies that are strengthened by the cultural patterns and sharing of employees in order to solve different problems and uncertainties. Therefore, the shared values are of great importance in overcoming uncertainties, developing common emotions and establishing successful collaborations in a changing environment (Erkmen, 2010, p. 160).

Culture, in its various manifestations, has a significant influence on human behaviour (Li, Zhang, Xiao and Chen, 2015, p. 35). Individuals are influenced by culture in different ways and levels. The ability of individuals to behave differently in the same society and organizational culture comes to the fore in the field of management as an issue that needs to be explained. Cultural theory or grid–group analysis may help to explain different behaviours within a particular organization as it allows for cultural differences within a society and because all types can exist in one society. Although cultural theory comes from anthropological ideas on the concept of risk, other disciplines have developed a theory on how culture affects behaviour (Fisher, 2009, p. 42). Grid–group theory is relevant to the prediction of both attitudes and behaviour (Chai, Dorj and Sherstyuk, 2018). Originated by the social anthropologist Douglas (1978), the grid–group analysis is proposed as a model, or mapping the links, that exists between culture and behaviour with inclusive emphasis on occupational culture and behaviour. The fundamental idea of grid–group cultural theory is that what people do or want is culturally biased. Grid–group theorists claim that culture can be classified into two dimensions of sociality: through individuation in the group dimension and through social incorporation in the grid dimension (Douglas, 1982). The grid dimension measures the 'degree to which an individual's choices are constrained within a social system by imposed prescriptions such as role expectations, rules, and procedures'. In a strong grid environment, individuals are highly constrained by the organization. The group dimension 'represents the degree to which people value collective relationships and the extent to which they are committed to the larger social unit'. A strong group environment seeks to preserve the integrity of the organization above even that of the members (Harris, 2005). Douglas (1982) argues that these elements combine to produce four 'worldviews' that structure the organizations and perceptions within societies: hierarchy–oversight (high grid, high group), individualism–competition (low grid, low group), egalitarianism/enclave–mutuality (low grid, high group) and fatalism–contrived randomness (high grid, low group). Thompson et al. (1990, p. 97) states that these four dimensions of Group–Grid Cultural Theory help to shape the values and behaviours of individuals.

It can be seen that organizational culture is explained with different models in the literature (Cameron and Freeman, 1991; Deal and Kennedy, 1982; Denison and Mishra, 1995; Douglas, 1982; Handy, 1995; Harrison, 1972; Hofstede, 1980; Kilmann, 1985; Ouchi, 1988; Peters and Waterman, 1995; Quinn, 1988).

In this study, Cameron and Quinn's (2006) culture model was used to determine the effects of organizational culture on innovation. This culture model consists of four subdimensions: clan, adhocracy, hierarchy and market. In their model, Cameron and Quinn (2006) evaluated each culture type according to the dominant characteristics, leadership type, organizational bond and strategic emphasis elements. The characteristics of these elements differ depending on the type of culture. In the clan culture, the dominant characteristics within the organization are commitment, participation, group work and a sense of family. In this culture, leaders are consultants and facilitators. The bond within the organization is loyalty, tradition and interpersonal loyalty. The concepts of human

resources development, employee loyalty and morale are given importance strategically within the organization. In the adhocracy culture, the dominant characteristics within the organization are entrepreneurship, creativity and adaptability. In this culture, leaders are entrepreneurial, innovative, risk-taking people. The bond within the organization is formed by entrepreneurship, flexibility and risk assistance. Innovation, growth and new resources are emphasised strategically within the organization. In the hierarchy culture, orders, rules, regulations and uniformity draw attention as the dominant characteristics within the organization. In this culture, leaders play the role of coordinators and managers. Bonds within the organization consist of rules, policies and processes. Strategic stability, predictability and problem-free activities are given importance within the organization. Finally, in the market culture, the dominant characteristics within the organization are competitiveness and achievement. In this culture, leaders are determined and tend to succeed. The bond within the organization is goal orientation, production and competition. Strategic importance is given to the concepts of competitive advantage and market superiority within the organization (Deshpande, Farley and Webster, 1993).

## B.      Innovation

The concept of innovation was first introduced by an economist, Joseph Schumpeter (1976), from an entrepreneurial perspective. He described innovation as an essential driver of competitiveness and economic dynamics. According to him, innovation is a 'process of industrial mutation that incessantly revolutionises the economic structure from within, incessantly destroying the old one, incessantly creating a new one'. He also believed that innovation is the centre of economic change causing gales of 'creative destruction'. Considering the economic benefits that innovation will provide to the enterprises in the following years, the concept was defined as 'introducing, developing, utilising and commercialising an idea of a new process according to the new product, new service or business models in the current market' (Gamal, Salah and Elrayyes, 2011, p. 7). To this end, the Organization for Economic Cooperation and Development (OECD) and the European Statistical Office (Eurostat) (2005, pp. 50–51) have prepared a publication called the Oslo Guide in order to establish a common set of principles for collecting and interpreting innovation-related data. Accordingly, innovation is the realisation of new products, services, processes, marketing methods and organizational methods that companies have developed for the first time or adapted from other enterprises.

Innovation, which is a very important concept for micro-enterprises, also seems to be strongly related to entrepreneurship (Gasse and Tremblay, 2011, p. 213). Innovation has benefits such as increase in the market share of the enterprise, compliance with global business requirements, competitive advantage, cost advantage, growth of the enterprise, increase in productivity and increase in profitability level (Toraman, Abdioglu and Isguden, 2009, p. 103). In an environment where competition is stiff, economic uncertainties are intense and technology has a fast pace of change, and innovation comes forward as a new product, service or business style that enables them to exist in the market or achieve a competitive advantage (Lipit, 2006, p. 73; Nochur, 2009). However, innovation is a means of change that a business can use to adapt to its environment (Damanpour, 1987).

It is possible to consider the factors affecting innovation activities in organizations as internal and external. The organic or mechanical status of organizations which means the culture that is prevalent in the organization and shared by employees and the attitude of the top management and human resources which have an important effect on the organization's innovative activities are considered as internal factors. However, the market in which the organization operates, the type and quality of the product that it produces and the power of competitors and customers can be counted as external factors (Tidd and Bessant, 2014, p. 71).

## C.    Psychological Safety

The phenomenon of psychological safety, which was discovered by the pioneering researchers in the 1960s, has started to gain the necessary attention in the field since the 1990s. It is thought that the concept will become an important theoretical and practical phenomenon in the near future due to the needs of today's modern organizations regarding learning and innovation (Schein and Bennis, 1965). Psychological safety explains the perception of the consequences of interpersonal risk-taking in a particular context, such as the workplace, and expresses the individual's perception of showing his/herself, without fear of suffering negative consequences regarding his/her image, status and career (Edmondson, 1999). Similarly, the concept is defined by Kahn (1990) as a sense of self-expression and use without fear of negative consequences on image, status or career. Samra et al. (2012) stated that the study areas that are created to prevent the deterioration of psychological health as a result of neglect, careless or conscious behaviours that the individual will encounter in the work environment can be associated with psychological safety.

Many conceptual and empirical studies focusing on understanding the effects of psychological safety on individuals, teams and organizations try to understand and explain the perception of psychological safety (Edmondson and Lei, 2014). For example, it has been observed that employees, who exhibit a participatory behaviour with the phenomenon of psychological safety, respond less to change, participate in the decision-making process, offer new ideas and apply advanced working methods (Yener, 2014). There are also interactions where individuals, who feel psychologically safe, will perceive that they are not at interpersonal risk and will be willing to try new ways of doing new and different jobs and increase their individual job performance (Ning and Jin, 2009). Again with psychological safety, it can be said that employees will tend to exhibit the 'voice behaviour', which is defined as the expression of new ideas and opinions in order to improve their organization, and they will express themselves freely (Cheng, Chang, Kuo and Lu, 2014; Detert and Burris, 2007; Head, 2019; Liang, Farh and Farh, 2012). In many research studies, it was determined that individuals do not want to work in environments where they do not feel that their speech and ideas are safe (Detert and Edmondson, 2011; Milliken et al., 2003; Ryan and Oestreich, 1998) and, in parallel with this, they tend to quit (Yener, 2014).

However, the presence of psychological safety in the organization appears to reduce employees' learning anxiety (Schein, 1985, pp. 298–299) and increase their knowledge sharing behaviour (Collins and Smith, 2006; Siemsen, Roth, Balasubramanian and Anand 2008). It was also determined that employees in these organizations are less resistant to change (Edmondson, 2003; Eggers, 2011) and they

contribute to developing new products and services by taking initiative (Baer and Frese, 2003).

In comprehensive researches, it was seen that psychological safety has positively contributed to the learning abilities of organizations and teams (Bunderson and Boumgarden, 2010; Carmeli, 2007; Carmeli, Brueller and Dutton, 2009; Carmeli and Gittell, 2009; Edmondson, 1999; Tucker et al., 2007), and learning behaviour was observed to play a mediating role between team psychological safety and team performance (Edmondson, 1999). Baer and Frese (2003), on the other hand, found that psychological safety and initiative climate have a positive interaction with the firm performance criteria, thus long-term change is supported and there are positive reflections on the process innovations. Similarly, Carmeli and Gittell (2009) stated that psychological safety mediates the link between high-quality relationships and learning from failures in organizations.

## D.    Research Hypotheses

Today's global market understanding, research and development costs and efforts are insufficient alone. In addition to these activities, an organizational culture that supports innovation and creativity is needed (O'regan, Ghobadian and Gallear, 2006). At this point, it is very important for organizations to have an organizational culture that supports their innovative activities, which can be defined as value-creating innovation, for sustainable competition (Griffin, 1999, p. 40; Westwood and Low, 2003, p. 9).

The effect of organizational culture, which shapes the basic vital activities of organizations and creates an identity for employees, has helped to increase the number of researches on this subject in recent years. Many studies in the literature try to determine the relationships between organizational culture and innovation (Ahmed, 1998; Buschgens et al., 2013, p. 777; Claver, Llopis, Garcia and Molino, 1998; Dobni, 2008; Dombrowski, Kim, Desouza and Braganza 2007; Hurley and Hult, 1998; Jimenes-Zarco et al., 2012; Jucevicius, 2007; Obenchain and Jahnson, 2004; Jassawalla and Sashittal, 2002; Wan, Ong and Lee, 2000; Westwood and Low, 2003, p. 9). What is not clear enough on the subject is which culture type develops or prevents innovation. However, the effect of organizational culture on innovation develops depending on the content of the culture (Jaskyte and Kisieliene, 2006).

Considering the globalising market conditions, the formation of a strong organizational culture adopted for the entire organization can also mean competitive advantage for enterprises (Krasulja et al., 2013, p. 169–173). Organizational culture, which is defined as the whole beliefs, values and principles that are shared by all employees and accepted without question, may differ from different perspectives (Danisman, Hinings and Slack, 2006). While some of the subcultures created by these differences have positive relationships with innovation, some can create different effects. In this sense, Jones et al. (2000) revealed in their study which characteristics have potential in terms of innovation within the frame of cultural dimensions. These are high individuality, low power distance, weak uncertainty avoidance and high and moderate masculinity.

Cameron and Freeman (1991) addressed culture types from two perspectives: internal–external orientation and flexibility–stationarity. Externally driven cultures are expected to encourage innovation more than internally driven cultures in obtaining

knowledge from the market and seeing the available opportunities better (Kimberly and Evanisko, 1981; Saraph, Benson and Schroeder, 1989). On the other hand, it is clear that innovation requires a culture that focuses on flexibility and this is supported by many studies (Arad, Hanson and Schneider, 1997; Jaskyte, 2004; Jaskyte and Kisieliene, 2006; Lock and Kirkpatrick 1995; Martins and Terblanche, 2003).

Companies that encourage their employees to work on personal projects have higher innovation characteristics that can be associated with an adhocracy culture (Cotterman et al., 2009). Lau and Ngo (2004) examined and revealed the effect of adhocracy culture on innovation in their study on many industrial enterprises. A study on companies in Spain revealed that hierarchical cultures prevent innovation, while adhocracy culture promotes innovation (Naronja-Valencia, Jimenez-Jiménez and Sanz-Valle, 2015). While the hierarchy culture that supports internal focus and control, in general, restricts the ability of innovation, the culture of adhocracy emphasising external focus and flexibility contributes to the development of innovation (Obenchain, 2002; Obendhain and Johnson, 2004).

In the studies on clan and market culture, a full consensus could not be achieved. It is thought that clan culture will encourage innovation with its structure supporting the teamwork (Llorens, Ruiz and Garcia, 2005) and participation (Amabile, Conti, Coon, Lazenby and Herron, 1996). However, how much an organization with an internally driven structure and far from the needs of the market can be related to innovation is also discussed (Lucas and Ferrell, 2000; Jaskyte and Kisieliene, 2006).

It is thought that the externally driven market culture will support innovation by providing new ideas from the market and becoming familiar with the needs of the customers (Hartnell, Ou and Kinicki, 2011; Lucas and Ferrell, 2000; Reid and Brentani, 2004; Salavou, Baltas and Lioukas, 2004). However, the pro-control and stability policies of companies with a market culture can be seen as an obstacle to innovation.

Again, Yildirim and Karabey (2016) determined that hierarchy organizational culture has a negative effect on product, process, strategy and market innovation that are organizational innovation types.

In this sense, determining the effects of the clan, adhocracy, market and hierarchy subcultures, defined by Cameron and Quinn (2006) in the 'Competitive Values' model, on innovation are important. In this sense, the first hypothesis of this research is as follows:

$H_1$: *The cultural structure of the organization significantly affects innovation.*
$H_{1a}$: *Clan culture is effective in innovation.*
$H_{1b}$: *Adhocracy culture is effective in innovation.*
$H_{1c}$: *Hierarchy culture is effective in innovation.*
$H_{1d}$: *Market culture is effective in innovation.*

In the study conducted by Kahn (1990), the factors that determine psychological safety in the work environment are gathered in four main groups: interpersonal relations, intra-group and inter-group dynamics, management styles and processes, and organizational norms. As reported by Kahn (1990), human relationships based on flexibility and trust and supportive, flexible and enlightening management concepts increase psychological safety. Again, Kahn (1990) found in his research that employees feel more safe when they have control over their jobs. However, organizational norms,

which consist of thought and behavioural patterns about how employees should act in the system, contribute to psychological safety. May, Gison and Harter (2004) stated that the determinants of psychological safety are supervisory relationships, colleague relationships and behavioural norms, which can be counted as elements of organizational culture, as well. Again, Yener (2014) stated that psychological safety is influenced by a number of variables including organizational culture. For example, Mathieu, Gilson and Ruddy (2006) found a relationship between empowering work teams and the safety climate in their research. In their study, Nembhard and Edmondson (2006) revealed that psychological safety increases when leaders actively reduce the position differences between themselves and the lower-level staff. Faraj and Yan (2009) found that in software development teams, increased decision-making autonomy for designing teams' activities is associated with psychological safety. Singer et al. (2015) found that psychological safety increased when leaders established mutual support, acceptance and respect relationships in the work environment. In the above-mentioned researches, it is seen that these factors that make up the organizational culture affect psychological safety.

Organizational culture ensures the occurrence of psychological safety among employees, creating an environment where employees and employers contribute to the process to a high degree. In line with all these explanations, the second hypothesis of this research is as follows:

*$H_2$: The cultural structure of the organization affects psychological safety in a significant way.*
*$H_{2a}$: Clan culture is effective on psychological safety.*
*$H_{2b}$: Adhocracy culture is effective on psychological safety.*
*$H_{2c}$: Hierarchy culture is effective on psychological safety.*
*$H_{2d}$: Market culture is effective on psychological safety.*

Psychological safety consists of five learning-oriented behaviours: asking for help, innovative behaviour and innovation, knowing the boundaries, talking about errors and concerns, and feedback (Edmondson, 2003). According to Edmondson (2003), who has made significant contributions to the definition and development of the concept, the concept of innovation, which is closely related to the production and sharing of knowledge, is affected by psychological safety. Employees in a company that does not threaten them personally and provides supportive education are more likely to propose new ideas than an employee who feels they will be censored, attacked, mocked or punished when they suggest a new idea (West, 1990, p. 312). Again, Kark and Carmeli (2009) found that psychological safety stimulates the feelings of vitality, and these feelings of vitality make positive contributions to creative work. Ucok (2016) stated that employees who feel comfortable and safe take more risks for new ideas and propositions. Kessel, Kratzer and Schultz (2012) stated that high psychological safety perceived in the team is an important determinant of creative team performance. Baer and Frese (2003), who examined psychological safety with an organizational perspective, found that psychological safety positively affected organizational and innovation process performance. However, Yuan and Woodman (2010) stated that the lack of psychological safety prevents innovative behaviours. Edmondson and Nembhard (2009), on the other hand, demonstrated that psychological safety is particularly important in environments

where research activities are vital. In this context, the third hypothesis of this research is as follows:

*H₃: Psychological safety affects innovation in a significant and positive way.*

It is known that organizational culture has an effect on innovation in organizations (Hurley and Hult, 1998, p. 43–47). Organizations' ability to compete is strengthening in parallel with the importance given to knowledge and innovation. In innovation, new ideas should be spread to all units, the staff should be innovative and risk-taking individuals and a creative environment should be created (Steele and Murray, 2004, p. 320). In this sense, cultural structures, that open and flexible organizations have, in which employees can express their new thoughts and ideas without fear will contribute to the formation of a positive psychological safety concept. When employees feel safe in the organization, they can express their ideas and thoughts that will create a competitive advantage and added value for the organization without fear of being criticised, snored or ostracised. The concept of psychological safety to be created within the organization is manifested by innovative activities that can be expressed as the emergence of innovations creating competitive advantage and added value for the organization. At this point, it is thought that the concept of psychological safety guides the relationship between the cultures the organizations have, the subcultures that make up these cultures and innovation. In this literature review, there is no study to determine what role psychological safety plays in the effect of organizational culture, which contributes to and directs organizations sustainability, competitiveness and creates added value on innovation. In this context, whether psychological safety has a mediating role in the effect of organizational culture on innovation constitutes the problematic factor of this research. The last hypothesis created for research purposes is as follows:

*H₄: Psychological safety plays a mediating role between the organization's cultural structure and innovation.*
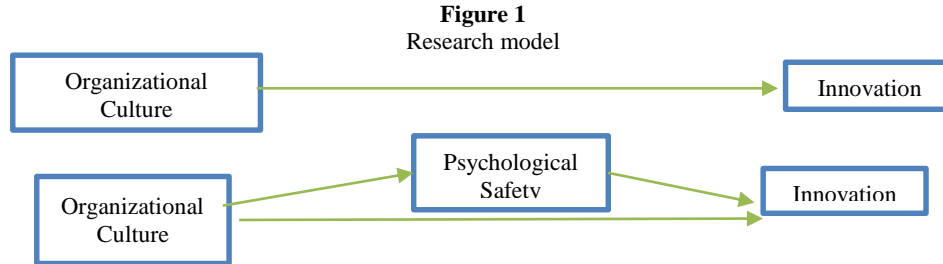*H₄ₐ: Psychological safety plays a mediating role between clan culture and innovation.*
*H₄ᵦ: Psychological safety plays a mediating role between adhocracy culture and innovation.*
*H₄ᵧ: Psychological safety plays a mediating role between hierarchy culture and innovation.*
*H₄ₐ: Psychological safety plays a mediating role between market culture and innovation.*

The research model created according to Baron and Kenny's (1986) 'Mediating Variable Approach' is shown in Figure 1.

**Figure 1**
Research model



### III.    RESEARCH METHODOLOGY

The purpose of this study is to reveal the relationships between organizational culture types and firm innovation level and the effects of different types of organizational culture on innovation, especially for (labour-intensive) hotel enterprises. Relational screening model was adopted in the research for these purposes. In the descriptive study, the data were collected using the survey method. The survey form consists of four parts. In the first part, there are items for measuring the employees' perception of organizational culture; in the second part, their perception of psychological support; in the third part, the perception of company innovation; and in the fourth part, demographic information questions.

In this study, the scale prepared by Deshpande, Farley and Webster (1993), by taking into account the 'Competitive Values Model' of Cameron and Freeman (1991) and Quinn (1988), was used to evaluate employees' perceptions of organizational culture. The scale is dimensioned to four types of organizational culture: clan, adhocracy, hierarchy and market. Organizational culture types are measured according to four criteria: 'dominant characteristics, leadership style, organizational commitment means and strategic emphasis'. For each criterion, there are four different expressions suitable for the relevant organizational culture type and participants were asked to distribute 100 points between these expressions, considering the situation in their company. In this sense, the scale consists of 16 expressions.

In measuring psychological safety, the 5-item 'Psychological Safety' section of the Learning Organization Scale put forward by Garvin et al. (2008) in their article titled 'Is Yours a Learning Organization' was used. The items of the scale were translated from English, which is its original language, to Turkish, by translating and retranslating. Items 2 and 5 in the scale were reverse statements and these statements were included in the analysis by reverse coding before analysis. The scale was rated as a 5-point Likert type and answer options were (1) strongly disagree, (2) disagree, (3) undecided, (4) agree and (5) strongly agree.

'Firm Innovation Scale', created by Calantone, Cavusgil and Zhaob (2002), was used to measure firm innovation. The scale consists of six items and one dimension. The response categories of the scale items were subjected to a 5-point Likert rating (1 = strongly disagree, … , 5 = strongly agree). Before the data were collected, a pilot practice was carried out on 56 employees of a five-star hotel in Turkey and the scale was finalised.

The employees of four-star and five-star hotels operating in Adana, Mersin and Hatay (three metropolitan municipalities in Turkey) constituted the study population of

this research. According to the 2017 data of the Ministry of Culture and Tourism, there were 14 five-star and 36 four-star hotel enterprises in all these provinces. There are no statistics for employees who work in the hotel enterprises in Turkey. In this sense, there is no clear data about the size of the population. However, when the literature was examined, it indicated that there were 0.59 employees per bed for five-star enterprises in Turkey, while there were 0.38 for the four-star enterprises (Agaoglu, 1992, p. 114).

Based on these figures, $2350 + 2592 + 792 \times 0.59 = 3383$ employees for five-star enterprises in Adana, Mersin and Hatay, and $2559 + 2669 + 945 \times 0.38 = 2234$ for four-star ones (5728 employees in total) numerically refer to the study population of this research. Based on this, the sample volume that can represent the study population best was calculated as 361 employees, taking into account $\alpha = 0.05$ significance level and $\pm$ 0.05 sampling error (Bartlett, Kortlik and Higgins, 2001, p. 46). Of the 600 distributed questionnaires, 445 utilisable questionnaires were obtained. The data collected from the sample were subjected to frequency, factor, correlation and regression analysis in a computer environment.

## IV.    FINDINGS

It is seen that 60% of the participants are male, 27.2% are between the ages of 26 and 35 years and 27% have a high school education. Again, it is determined that 64% of the participants work in the personnel position and 41.6% of them have continued their activities in the accommodation enterprises, where the research was carried out, for 1–5 years. Finally, it is seen that 60.4% of the accommodation enterprises in which the study took place are not chain but independent hotels and 57.5% of them are in the status of four-star enterprises.

**Table 1**
Demographic Features

| Experience | N | % | Working Process | N | % |
|---|---|---|---|---|---|
| Less than 1 year | 16 | 3.6 | Less than 1 year | 36 | 8.1 |
| 1-5 | 59 | 13.2 | 1-5 | 168 | 37.8 |
| 6-10 | 132 | 29.7 | 6-10 | 125 | 28.1 |
| 11-20 | 136 | 30.6 | 11-20 | 105 | 23.5 |
| More than 20 years | 102 | 22.9 | More than 20 years | 11 | 2.5 |
| Education Level | N | % | Title | | |
| High School | 85 | 19.1 | Employee | 218 | 49 |
| Associate | 120 | 27 | Chief | 168 | 37.8 |
| Undergraduate | 113 | 25.4 | Manager | 59 | 13.2 |
| Graduate | 127 | 28.5 | | | |
| Gender | | | Hotel Status | | |
| Female | 241 | 54.2 | Chain | 163 | 36.6 |
| Male | 204 | 45.8 | Independent | 282 | 63.4 |

The relationship between organizational culture, psychological safety perception and innovation, which are the variables of this research, and the standard deviation and mean values of these relationships are given in Table 2.

**Table 2**

Mean, Standard Deviation and Correlation Values

|  | Mean | S.D. | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1.Clan | 33.37 | 9.74 | 1 | | | | | |
| 2.Adhocracy | 24.17 | 6 | 0.12 | 1 | | | | |
| 3.Hierarchy | 22.38 | 2.41 | 0.87** | 0.20** | 1 | | | |
| 4.Market | 19.85 | 6.19 | 0.82** | 0.42** | 0.53** | 1 | | |
| 5.Psychological Safety | 3.78 | 6.89 | 0.29** | 0.30** | -0.46** | 0.10 | 1 | |
| 6.Innovation | 3.29 | 0.62 | 0.30** | 0.29** | 0.14 | 0.48** | 0.51** | 1 |

* indicates that the relationship is significant at %5 level; ** indicates that the relationship is significant at 1% level ($p < 0.01$; $p < 0.05$).

When Table 2 is analysed, a moderately significant and positive relationship is found between innovation and clan culture ($r = 0.30$; $p < 0.01$), adhocracy culture ($r = 0.29$; $p < 0.01$) and market culture ($r = 0.48$; $p < 0.01$), but no significant relationship is found between innovation and hierarchy culture ($r = 0.14$; $p > 0.05$). While there is a positive relationship between psychological safety and clan culture ($r = 0.29$; $p < 0.01$) and adhocracy culture ($r = 0.30$; $p < 0.01$), there is a negative relationship between psychological safety and hierarchy culture ($r = -0.46$; $p < 0.01$). No significant relationship can be detected between psychological safety and market culture. Finally, a positive and significant relationship is found between psychological safety and innovation ($r = 0.51$; $p < 0.01$).When the averages of organizational cultures are analysed, it is seen that the most common organizational culture type is clan culture (33.37), followed by adhocracy (24.17), hierarchy (22.38) and market culture (19.85). While the average of psychological safety level perceived in the organization is 3.78, the average of innovation is calculated as 3.29.

In this research, different hypotheses have been developed to determine the mediating role of psychological safety in the effect of organizational culture types on innovation. A four-stage regression analysis proposed by Baron and Kenny (1986) was carried out to test the hypotheses. The analyses carried out to test the hypotheses formed in this direction and the findings are given in Table 3.

**Table 3**

Findings of Hierarchical Regression Analysis

|  | Dependent Variable | Independent Variable | β | t | Sig. | $R^2$ | F | Sig. |
|---|---|---|---|---|---|---|---|---|
| 1. Condition X-->Y | Innovation | Clan ($H_{1a}$) | 0.301 | 2.942 | 0.004 | 0.090 | 8.655 | 0.004 |
| | | Adhocracy($H_{1b}$) | 0.292 | 2.848 | 0.005 | 0.085 | 8.110 | 0.005 |
| | | Hierarchy ($H_{1c}$) | 0.140 | 1.315 | 0.192 | 0.019 | 1.729 | 0.192 |
| | | Market ($H_{1d}$) | 0.487 | 5.204 | 0.000 | 0.237 | 27.077 | 0.000 |
| 2. Condition X-->M | Psychological Safety | Clan ($H_{2a}$) | 0.293 | 2.863 | 0.005 | 0.086 | 8.198 | 0.005 |
| | | Adhocracy($H_{2b}$) | 0.304 | 2.981 | 0.004 | 0.093 | 58.885 | 0.004 |
| | | Hierarchy ($H_{2c}$) | -0.465 | -4.903 | 0.000 | 0.217 | 24.041 | 0.000 |
| | | Market ($H_{2d}$) | 0.990 | 0.929 | 0.356 | 0.010 | 0.863 | 0.356 |
| 3. Condition M-->Y | Innovation | Psychological Safety ($H_3$) | 0.505 | 5.451 | 0.000 | 0.255 | 29.709 | 0.000 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mediation Effect | Innovation | Clan ($H_{4a}$) | 0.225 | 2.545 | 0.000 | | | |
| | | Psychological Safety | 0.495 | 5.261 | 0.000 | 0.285 | 18.906 | 0.000 |
| | Innovation | Adhocracy($H_{4b}$) | 0.153 | 1.583 | 0.117 | | | |
| | | Psychological Safety | 0.458 | 4.755 | 0.000 | 0.276 | 16.365 | 0.000 |

In the first stage of the analysis, the effect of organizational culture types, which is an independent variable, on the innovation which is dependent variable was examined. Considering the relationships, it is seen that clan culture ($\beta = 0.301$; $p < 0.01$), adhocracy culture ($\beta = 0.292$; $p < 0.01$) and market culture ($\beta = 0.487$; $p < 0.01$) have significant and positive effects on innovation, while hierarchy culture does not have any significant effect on innovation. Thus, $H_{1a}$, $H_{1b}$ and $H_{1d}$ hypotheses are accepted, whereas the $H_{1c}$ hypothesis is not.

In the second stage, the effect of organizational culture types, which is independent variable, on the psychological safety, which is the mediating variable, was examined. As a result of the analysis, clan culture ($\beta = 0.293$; $p < 0.01$) and adhocracy culture ($\beta = 0.304$; $p < 0.01$) have significant positive effects on psychological safety, but hierarchy culture ($\beta = -0.465$; $p < 0.01$) was found to have a significant negative effect on psychological safety. Finally, it was found that market culture has no significant effect on psychological safety. Thus, $H_{2a}$, $H_{2b}$ and $H_{2c}$ hypotheses are accepted, but the $H_{2d}$ hypothesis is not.

In the third stage, the effect of psychological safety, which is the mediating variable, on innovation was examined, and it was found that psychological safety ($\beta = 0.505$; $p < 0.01$) has a significant positive effect on innovation; so the $H_3$ hypothesis is accepted.

In the fourth and last stage, the mediating role of psychological safety in the effect of organizational culture types on innovation was examined. In the first stage, it was seen that the hierarchy culture had no effect on innovation, and in the second stage, market culture had no effect on psychological safety.

Since this does not meet the conditions suggested by Baron and Kenny (1986), in the last stage, the mediating role of psychological safety in the effect of clan culture and adhocracy culture on innovation, which provided only the previous conditions, was tested. With the inclusion of psychological safety, which is the mediating variable in the effect of clan culture ($\beta = 0.301$; $p < 0.01$) on innovation, the effect of clan culture ($\beta = 0.225$; $p < 0.01$) on innovation decreased but the relationship remained significant. This shows that psychological safety has a 'partial mediating' role in the effect of clan culture on innovation. It was found that the relationship between adhocracy culture and innovation became meaningless with the inclusion of psychological safety, which is the mediating variable in the effect of adhocracy culture on innovation ($\beta = 0.304$; $p < 0.01$), in the model. This indicates that psychological safety has a 'full mediating' role in the effect of adhocracy culture on innovation. Thus, $H_{4a}$ and $H_{4b}$ hypotheses are accepted, but $H_{4c}$ and $H_{4d}$ hypotheses are not.

## V.    CONCLUSION

Increasing competition in today's conditions, rapid change in customer needs and developing technology have forced organizations to innovate. However, the need for innovation is also clear in dealing with increasing costs, protection from the threat of substitute goods and ensuring sustainability. In this sense, it is important to reveal the determinants of innovation and the factors that affect innovation. In this study, it is examined how different types of organizational culture affect innovation and is aimed to reveal the mediating role of psychological safety in this relationship, which explains the beliefs of the employees about how to get answers in cases such as asking questions about the subject, reporting an error, asking for feedback and putting forward a new idea.

As a result of the analyses carried out to realise the purpose of this research, it is seen that clan culture, adhocracy culture and market culture, which are among the culture types of the organization, positively affect innovation. On the other hand, it is determined that the hierarchy culture did not have a significant effect on innovation. The culture type that is expected to encourage innovation, as it emphasises on external orientation and flexibility, is basically the culture of adhocracy. The adhocracy culture, which expresses entrepreneurship, creativity, flexibility, risk-taking and adaptation, reveals a cultural structure that includes the basic elements of innovation. It is known that in this cultural structure, where flexibility, tolerance and trust have a great place, innovative activities are supported. Flexibility, which is one of the important conditions for innovation, refers to the fact that the number of rules and norms is low or no. Again, employees working in flexible structures can introduce new and different creations by concentrating on their work without fear of being judged and criticised by their colleagues, managers and environment. The presence of tolerance, which constitutes another condition, helps employees, who get free of the fear of making mistakes, scolding or dismissal, to succeed in innovating. In this sense, it is seen that the results of this study are in parallel with the literature.

In the scope of this study, another type of organizational culture that has a significant relationship with innovation is market culture. Market culture refers to enterprises that know customers' needs and strive to have an important place in the market. Enterprises that want to maintain their market leadership must follow innovation by following customer demands. Therefore, as a result of the study, it is understandable that the market culture positively affects innovation. When previous studies are examined, it can be seen that similar results are achieved in many studies, although there is no full consensus.

Finally, it is determined that the clan culture also positively affects innovation. Due to its structure, clan culture consists of large and important networks among employees. In clan culture, where trust and loyalty are extremely important, participation in decisions, agreement and teamwork are indispensable characteristics. Clan culture finds itself a place in organizations where common values are shared, teams work, a sense of unity is high and employees have opportunities to improve themselves. In this sense, the presence of team members working in harmony with each other and aspiring to develop may be a reason for the clan culture to increase innovation. In hierarchical structures, where logic and rationality are prioritised and central and formal structures are valued, the lack of support, flexibility and participation in decisions, which are the main determinants of innovation, come forward. The fact that this structure, surrounded

by orders, rules and standards, does not match the libertarian structure of innovation supports the conclusion of this research. The intensity of close supervision and evaluation in this organizational culture is an obstacle to the employees' innovative activities.

The results of the research indicate a significant relationship between psychological safety, which is the mediator variable, with the dimensions of clan, adhocracy and hierarchy. As mentioned earlier, human relations are important in clan and adhocratic organizational structures that are more flexible in nature, prone to teamwork and are supported by creativity. In these structures, which are shaped with trust and bonds, the interests of the team and the organization are prioritised by moving away from individuality. Studies have shown that psychological safety is higher in the organizations where the 'we consciousness' is felt more intensely.

According to the results of this research, there is a negative relationship between hierarchical structures and psychological safety. Accordingly, it can be said that the hierarchical organizational structure, which indicates the existence of formal structures where rules, standards and orders are prioritised, negatively affects psychological safety. The intensity of close supervision and evaluation existing in the hierarchical organizational culture is an obstacle to the psychological safety perceptions of the employees. According to Nembhard and Edmondson (2006), hierarchy, degree of authority and dignity given to individuals based on their position in a social system reduce psychological safety.

Finally, no significant relationship between market culture and psychological safety is found. In organizations where market culture is dominant, there is a kind of strict, success-oriented and demanding management approach. Within the framework of this structure, the concept that employees attach value to is to 'win'. It is possible to say that individual success and strength will gain importance in such a management framework, while teamwork and harmony will not find a place for themselves. This situation is not compatible with psychological safety, which means that team members believe that they are safe in taking risks.

As a result of the analysis, the fact that the market, which is a subdimension of the organizational culture, does not have an effect on the psychological safety and the hierarchy subdimension does not affect innovation shows that the necessary conditions for the mediation test are not created. On the other hand, with the inclusion of psychological safety as a mediating variable, a partial mediating role in the relationship between clan culture and innovation and a full mediating role in the relationship between adhocracy culture and innovation are determined. Accordingly, the prevalence of clan and adhocracy culture in organizations can affect their innovative activities according to their psychological safety perception. Clan and adhocracy culture increase innovative activities through psychological safety. The full mediation here shows that the effect of organizational culture on innovation is all over psychological safety. At this point, it can be said that in organizations where clan or adhocracy culture is dominant, innovative activities will increase with the high psychological support perceptions of employees.

In line with these results, it can be thought that the cultural dimensions of clan and adhocracy are related to the concepts of innovation and psychological safety. In addition to this direct relationship, it can be seen that psychological safety plays a mediating role in the relationship between clan and adhocracy culture dimensions and innovation. Accordingly, it is possible to say that the psychological safety perception that will occur in adhocracy and clan cultures, which are flexible organizational structures where the

organizational pressure, control and evaluations decrease with getting free from the fear of being criticised, judged and dismissed, and the innovative activities that come into existence with the effect of psychological safety will increase. According to the results of this study, it is possible to come up with innovative products, processes and methods within the framework of the current sample only with the psychological safety perception to be created in cultures based on trust and human relationships, such as clan and adhocracy. With future researches, it will be seen whether these results of this research will be supported.

It should be noted that this study, which sheds light on the relationship between organizational culture and innovation, not only provides important information to the literature and practitioners, but also includes various constraints. The abstract structures of the concepts of organizational culture and psychological safety, which are research variables, require the use of questionnaire technique in collecting data. Again, the fact that the research sample consists of hotel enterprises operating in Turkey can be counted among the limitations of the research. Therefore, the inability to generalise the obtained data is another limitation of the research. In this sense, it can be said that a simultaneous and comparative study will provide more satisfying information.

This study measures the organizational culture based on the Competitive Values model. It is among the suggestions of the research that different models can also be used in the measurement of organizational culture of hotel enterprises. Among these models, 'Group- Grid Cultural Theory', with its dynamic and different structure, can make a significant contribution to the understanding of the organizational culture in hotel enterprises.

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