

# Organizational culture and organizational learning: does high performance work systems mediate?

Organizational  
culture and  
organizational  
learning

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## Abstract

**Purpose** – The primary purpose of this study is to examine the effect of organizational culture (OC), that is, group, developmental, hierarchical and rational culture on organizational learning (OL) of employees in electricity distribution companies of Isfahan province. Further, the role of the high-performance work system (HPWS) as a mediator between OC and OL has also been explored.

**Design/methodology/approach** – Questionnaire survey method has been used for data collection, and data analysis was completed through a two-stage partial least squares structural equation modeling technique. At the first stage, the measurement model was examined for construct validity and reliability, whereas at the second stage, the structural model and by implication the research hypotheses were tested.

**Findings** – Results indicate that OC positively affects OL. Further, HPWS act as a mediating variable between OC and OL.

**Originality/value** – The findings contribute to the existing literature by demonstrating the mediating role of HPWS in the relationship between OC and learning.

**Keywords** Organizational culture, High-performance work system, Organizational learning, Competing values framework

**Paper type** Research paper

## 1. Introduction

Nowadays, knowledge-intensive companies are dependent on learning to deal with the variable environment they are encountering with. Learning requires organization to harness the knowledge, skills, abilities, opportunities and willingness of employees to learn. According to the declarations of researchers, organizational learning (OL) can lead to competitive advantage but cannot be easily replicated, imitated and transferred because it is multidimensional and idiosyncratic and competitive (Perez Lopez *et al.*, 2005). In other words, to be able to survive and gain an edge in such a challenging environment, firms need to be continuous learning, to create, share, disseminate and institutionalize tacit knowledge which is rare and valuable (Cho *et al.*, 2013; Lee *et al.*, 2011; Chahal *et al.*, 2016).

Organizational culture (OC) is believed to be the most significant input to effective OL because corporate culture determines values, beliefs and work systems that could encourage or impede both learning (knowledge creation) and knowledge sharing (Liao *et al.*, 2012; Ahmadi *et al.*, 2019). However, empirical studies that examine the relationship between OC and OL are relatively scant (Cho *et al.*, 2013), and the study of how learning atmospheres are



fostered by OC may be useful. Moreover, in the past few decades, researchers also have examined the human resource (HR) systems of organizations and related these systems to measures of OL (Chahal *et al.*, 2016; Hu *et al.*, 2016; Lee *et al.*, 2011; López-Cabrales *et al.*, 2011; Perez Lopez *et al.*, 2005). It has been argued that there are a number of HR activities that are particularly relevant to the promotion of learning (Hu *et al.*, 2016; Lee *et al.*, 2011). Nevertheless, it is still not clear how HR systems affect the specific organizational capabilities like OL that contribute to improved firm performance.

In today's competitive environment, companies cannot move in line with new approaches such as globalization, 4th generation technologies, sustainable supply chain and modern business ecosystems only by relying on traditional resources; and maintaining the competitive advantage has forced the firms to recruit and retain talented, skilled and flexible employees to create core competencies as an alternative to these traditional resources. As a result, organizations have moved toward the application of integrated and complete HR management systems (Shahriari *et al.*, 2018). Managers today do not deal separately with the various components of HR management, such as recruitment, selection, training and payment systems. But all of these activities are integrated into a coherent system aimed at strengthening employee performance. This has led to the emergence of high-performance work systems (HPWS) that maximize the fit between the organization's social system and the technical system (Jiang and Liu, 2015). The literature on HPWS includes HR operations that, in coordination with each other, lead to increased individual and organizational performance (Shahriari *et al.*, 2017).

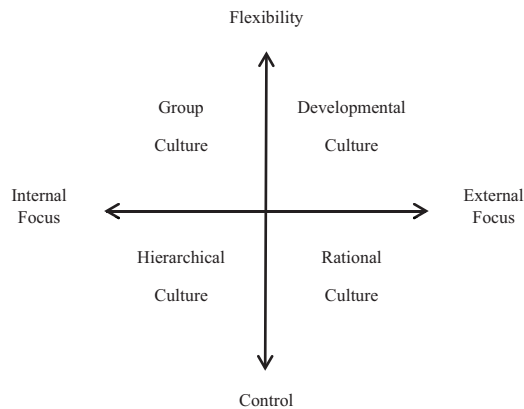
In addition to OC, the impact of high-performance systems on improving OL has been confirmed in previous research. But there is a need to study how different types of OC can affect OL. And an important question is whether, in different types of OC, OL reinforced by the creation of high-performance systems? For the reasons mentioned above, the focus of the current study is on the relationships among OC, HPWS and OL. Investigating the role of HPWS as a mediator in the relationship between OC and OL can be considered as an innovation of this research. So, we first review the OC, HPWS and OL, literature and propose a series of hypotheses. Details on sampling, measurement and the analysis approach are presented in the section of methodology, followed by the data analysis and findings. Then, after analyzing the practical and theoretical intricacies of the findings, the paper is concluded in the final section.

## 2. Conceptual background and framework

### 2.1 Organizational culture

OC can be defined as the combination of values emphasized by an organization (Cho *et al.*, 2013). Schein (2010) perceived OC as a pattern of basic assumptions invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration. This pattern which has various variations has shown great results so that new members consider that as a valuable and correct solution to deal with different kinds of problems. Based on the competing values framework, OC can be categorized in a two-dimensional space. In the first dimension, flexibility is handled versus control while the focus of the second dimension is on intra-organizational or extra-organizational activities (Cameron and Quinn, 2011; Denison and Spreitzer, 1991). Figure 1 shows the dimensions that comprise the CVM.

The main focus of the group culture is on flexibility, intra-organizational activities and changes. This kind of culture attempts to establish a family-like space in the organization and authenticates values such as trust, belonging and involvement of members (Cho *et al.*, 2013). Developmental culture also emphasizes flexibility but is externally focused. The main



**Figure 1.**  
Competing values  
framework (CVM)

focus of this culture is placed on creativity, growth, flexibility, resource acquisition and change. Also, it tends to adapt external environments (Cho *et al.*, 2013; Škerlavaj *et al.*, 2007). Rational culture is externally oriented but focused on control, task efficiency and goal realization. So, its main stimulating factors are addressing and achieving well-defined goals and making a competitive environment in the organization (Cho *et al.*, 2013). The hierarchical culture emphasizes stability; however, the focus is on the internal organization. Therefore, as factors such as internal evaluation, coordination, uniformity and efficiency are very important for this culture, it attempts hardly to execute regulations (Cho *et al.*, 2013; Denison and Spreitzer, 1991; Škerlavaj *et al.*, 2007).

### 2.2 High-performance work systems

In recent years, management practices including various HRs have significantly changed owing to the new challenges such as privatization/deregulation, globalization, technological advances and competition. These environmental challenges are the reason making the organizations take advantage of HPWSs that enhance sustained competitive advantage (Chahal *et al.*, 2016; Shahriari *et al.*, 2018). HPWSs are composed of distinct but interrelated HR practices that can facilitate employee involvement, skill enhancement and motivation (Seong, 2011; Ahmadi *et al.*, 2018). These systems are described internally consistent and coherent HR management system that is focused on solving operational problems and implementing the firm's competitive strategy (Armstrong, 2008). The relationship between firms' investments in HPWS to enhance human capital and overall organizational effectiveness is well documented in the resource-based (RBV) view of the firm literature (Patel and Conklin, 2012). The resources that are rare, valuable, inimitable and non-substitutable lead to this theory's premise so that firms can take advantage of their competitive prominence (Barney, 1991). In this regard, the concept of HPWS assumes that employees are a primary source of competitive advantage and are difficult to imitate (Seong, 2011; Jose-Luis *et al.*, 2013). HPWSs enfold three different kinds of practices including collaboration or discretion-based works, the practices supporting or focusing on skill developments and the motivating and commitment-based compensations (Pichler *et al.*, 2014). The approaches to HPWS are very close to those of research models on high-involvement work practices and high-performance HR practices (HPHRP). Many researchers have examined specific organizational practices that offer competitive advantage included HPWS. Although there is different perspective of several authors in

describing features and management practices in HPWS, the main focus of HPWS is to create an effective organization based on employee involvement, commitment and empowerment (Ahmadi *et al.*, 2018). Although researchers do not fully agree on the same set of HPWS practices, these practices can be summarized in five general HR categories: selection, training, career development, motivational practices and job security (Shahriari *et al.*, 2018).

The HPWS practices in this research are adopted from Escribá-Carda *et al.* (2017), because the listed practices in the study (training and development, pay for performance, career development, participation in decision-making processes and job security) cover three categories mentioned in the previous paragraph, and the other two are among the most essential “motivational practices” (Shahriari *et al.*, 2018). The only general category that does not exist in the practices of the applied model in this study is “selection.” Given that most of the companies surveyed in this study are governmental companies and recruit through comprehensive government recruitment programs, they are less discreet in changing their recruitment methods, so the chosen model seems to be appropriate for this study.

### *2.3 Organizational learning*

OL can be defined as firms’ efforts and abilities to preserve or improve their performance according to their previous experiences (Lee *et al.*, 2011). OL can be considered as a process through which individuals, groups, teams, communities and the organization itself learn (Chahal *et al.*, 2016). As Sinkula *et al.* (1997) said, if we accept the proposition that organizations are cognitive enterprises, then it is important to examine the process of OL using a cognitive framework. According to cognitive framework, OL can be defined as the process of changing shared mental models of an organization, its markets and competitors. In this regard, OL includes three dimensions: commitment to learning, shared vision and open-mindedness (Liao *et al.*, 2012). Commitment to learning implies an organization’s will to propagate a learning culture. However, open-mindedness is related to the unlearning notion. Institutions are involved with the first unlearning step once they challenge long-held practices, expectations and views vigorously. Unlearning is at the core of institutional change, and openness is an institutional quality, which can be essential to emerging unlearning attempts. The difference between shared vision and two other mentioned dimensions is that it has influence on the direction of learning not the intensity of learning (Sinkula *et al.*, 1997).

It’s worth noting that the advancement of organizational knowledge is OL’s final result that shows itself in databases, theories used, formalized routines and procedures and formal cultural models guiding behavior (Jimenez-Jimenez *et al.*, 2008; Chahal *et al.*, 2016; Hu *et al.*, 2016). OL is important because what the organization learns is necessary for the organization to understand the market (Cho *et al.*, 2013).

### *2.4 Organizational culture and organizational learning*

As OC can be used as a standard of interpretations and cognition, it is possible that the effectiveness of OL and behavior is influenced by that (Liao *et al.*, 2012; Martín-de Castro *et al.*, 2011). According to David and Fahey (2000) OC affects OL in four ways. First, culture makes presumptions about the priority and importance of each knowledge. Second, culture provides some kind of space to relate levels of knowledge (individual, group and organization). Third, a social interaction context can be made by culture. And fourth, culture can create or adopt new knowledge. In this regard, the impact of OC on OL varies with the type of OC (Lee and Wen-Jung, 2005). Then an organization can promote and reinforce an

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environment that enables learning through its cultural framework (Joseph, 2009). Therefore, the following hypothesis is proposed:

*H1.* OC is positively associated with OL.

Several researchers have examined the relationships between types of OC and OL dimensions (Rijal, 2010; Martín-de Castro *et al.*, 2011; Cho *et al.*, 2013; Liao *et al.*, 2012; Lucas and Kline, 2008; Joseph, 2009). According to literature, group and developmental culture which are characterized by flexibility and change (Cameron and Quinn, 2011; Schein, 2010), may increase the OL (Martín-de Castro *et al.*, 2011; Cho *et al.*, 2013). Therefore:

*H1-a.* Group culture is positively associated with OL.

*H1-b.* Developmental culture is positively associated with OL.

On the other hand, hierarchical culture emphasizes the achievements of norms and formal procedures and control. In fact, these are the major obstacles against learning and barricade autonomy, communication, continual change orientation, risk-taking and empowerment (Martín-de Castro *et al.*, 2011). Moreover, rational culture emphasizes continuous self-development and competition among members (Schein, 2010). Therefore, the organizations using rational culture can attain competitive advantages and acknowledge the capabilities of their members by learning. Thus, the hypothesized relationships between hierarchical and rational culture and OL are stated as follows:

*H1-c.* Hierarchical culture is negatively associated with OL.

*H1-d.* Rational culture is positively associated with OL.

### *2.5 Organizational culture and high-performance work systems*

HR system is often associated with OC. Deal and Kennedy (1988) believe that it is the organizational functioning shared values and norms that differentiate prosperous firms from other ones. It should be noted that the employees' behavior and performance can be considerably affected by a robust OC (Hartog and Verburg, 2004). Researchers generally agree that a supportive OC is needed for HR systems to result in advantage-creating capabilities (Seong, 2011; Chan *et al.*, 2004). As the experiences and information shared among an organization's employees create behavioral norms and as an HR system provides employees with information and influences their behaviors and experiences, such a system can help to create and preserve cultures. So, it can be concluded that an organization's HR plays a vital role in the creation of the norms supporting an organizational function (Cabrera and Bonache, 1999). Through rituals, heroes, routines and managerial values, OC, directly and indirectly, influences investment and resource allocation decisions. Thus, without the support of a necessary culture, HR systems will not function to their fullest performance potential (Chan *et al.*, 2004). In view of this, it is proposed the following hypothesis for the study:

*H2.* OC is positively associated with HPWS

Moreover, group culture attempts to establish a family-like environment for staff. However, the entrepreneurial behaviors of staff and their commitment to development and innovation are the main focus of developmental culture. In fact, such cultures encourage staff to take risks and achieve new resources for innovation, according to the strategy and objectives of the firm. On the other hand, a hierarchical and rational cultures cause organizations to insist on procedures, rules

and regulations (Wei *et al.*, 2008; Denison and Spreitzer, 1991). Thus, the hypothesized relationships between types of OC and HPWS are stated as follows:

- H2-a.* Group culture is positively associated with HPWS.
- H2-b.* Developmental culture is positively associated with HPWS.
- H2-c.* Hierarchical culture is positively associated with HPWS.
- H2-d.* Rational culture is positively associated with HPWS.

### *2.6 High-performance work systems and organizational learning*

OL can be explained from three different viewpoints, namely, organization, group and individual (Bennet and Shane Tomblin, 2006; Perez Lopez *et al.*, 2005; Lee *et al.*, 2011). For the most part, researchers generally agree that organizations learn only through individuals who learn (Lee *et al.*, 2011; Norashikin *et al.*, 2009). Individual learning does not guarantee OL, but without it no OL occurs (Perez Lopez *et al.*, 2005). Thus, according to literature, individuals play a fundamental role in the development of OL (Chahal *et al.*, 2016; López-Cabrales *et al.*, 2011; Shahriari *et al.*, 2017). Also, it is proposed that some traditional personnel functions in HR systems can be retouched to promote learning (Perez Lopez *et al.*, 2005). So, HR systems can influence the learning capacity of the organization by developing the organization-specific competencies or facilitating them. In this regard, it is possible that some complex social relationships and tacit organizational knowledge are created based on the company's history and culture (Renzi *et al.*, 2006; Zhai *et al.*, 2013). Accordingly, in some firms, HR systems have been extended to enfold the facilitation of group, individual and OL (López-Cabrales *et al.*, 2011; Perez Lopez *et al.*, 2005). Using literature relevant to HPWS and OL, it can be assumed that there is some evidence showing HPWSs are particularly relevant to the promotion of learning (Chahal *et al.*, 2016; Escribá-Carda *et al.*, 2017; Norashikin *et al.*, 2009; Panayotopoulou *et al.*, 2003; Zhai *et al.*, 2013; Renzi *et al.*, 2006). In addition, reviewing HPWS practices confirms its impact on OL, recruiting and selecting proper talents, improving job content and employee skills, placing employees who have managerial competence in management positions and empowering employees for the organizational responsibilities and activities will cause that OL to be enhanced by paying attention to employees "career planning." So creative and Innovative employees are maintained in the organization. If these employees have enough "motivation," they properly analyze organizational internal and external problems and help the organization to learn better and raise its effectiveness (Mansouri and Sohaili, 2015). And if they have "job security," they will have greater motivation to collaborate in team works and exchange knowledge among coworkers and thus help to promote learning in the organization. Moreover, they will better focus on improving themselves, their teams and the organization (Bartol *et al.*, 2009). Therefore, the following hypothesis is proposed:

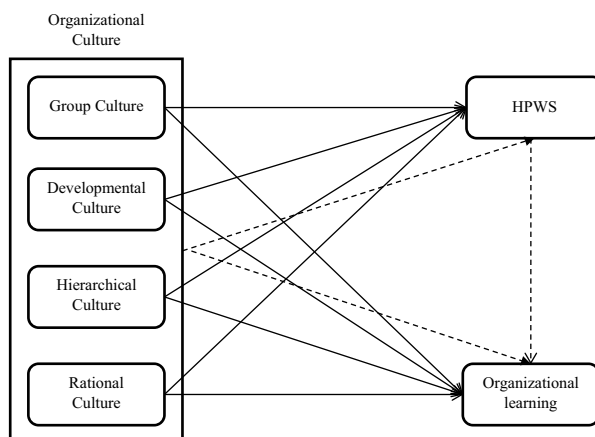
- H3.* HPWS is positively associated with OL.

To describe the effect of the OC on OL and HPWS, a conceptual model is proposed (Figure 2). The model is developed based on the literature review of related researches and their suggestions.

## **3. Methodology**

### *3.1 Data collection and sample*

A questionnaire survey approach is applied in this research to test the hypotheses, electricity supply firms in Isfahan were targeted for data collection. In total, 12 firms in this



**Figure 2.**  
Research model

industry including Isfahan Power Distribution Company, two combined cycle power plant, two gas power plant, one solar power plant, one EPC, one maintenance company and four subcontractor were selected. Managers of these firms were considered as the participants. A total number of 155 people included in the research and a number of 112 of them were proposed as sample ones according to Cochran’s sampling techniques. After excluding questionnaires with missing data, 100 usable questionnaires (89%) obtained for final analysis. The summary of demographic information is shown in [Table 1](#).

### 3.2 Measures

In this study, a five-point Likert scale is used to measure the given constructs. In fact, to show their agreement, respondents should select an anchor ranging from “1 = disagree strongly” to “5 = strongly agree.” All constructs are measured using items based on the literature.

**3.2.1 Organizational culture.** This study measures OC as a single construct, made up of the four dimensions: group culture (GC) (five items), developmental culture (DC) (four items), hierarchical culture (HC) (three items) and rational culture (RC) (four items). This measure was based on the scales developed by [Cho et al. \(2013\)](#).

Variable	Characteristics	Frequency	(%)
Age	< 30	15	15
	30 – 40	31	31
	40 – 50	35	35
	50 – 60	19	19
Education	Under bachelors	7	7
	Bachelors	46	46
	Masters	39	39
	Ph. D	8	8
Years of employment	Less than 5	13	13
	Between 5 and 10	27	27
	Between 10 and 15	45	45
	Between 15 and 20	15	15

**Table 1.**  
Sample characteristics

*3.2.2 High-performance work systems.* A scale that includes 17 items was validated using our sample. Five key HR practices are represented by five subscales: training and development (T&D) (four items), pay for performance (PFP) (four items), career development (CD) (three items), participation in decision-making processes (PDM) (four items) and job security (JS) (two items). This measure was based on the scales developed by [Escribá-Carda et al. \(2017\)](#).

*3.2.3 Organizational learning.* This study measures OL as a single construct, made up of the three behavioral dimensions: commitment to learning (CL) (four items), shared vision (SV) (three items) and open-mindedness (OM) (three items). This measure was based on the scales developed by [Cho et al. \(2013\)](#).

### *3.3 Data analysis*

Over a two-phase partial least squares structural equation Modeling (PLS-SEM) method, data analysis was completed with Smart PLS 3.2 software ([Hair et al., 2016](#)). For construct validity and reliability, at the initial phase, the measurement model was investigated; whereas in the second phase, the structural model and the study hypotheses by implication were examined. The PLS-SEM method application primarily is owing to its robustness with minor and average samples, as well as its suitability for making predictions with non-normal data ([Hair et al., 2016](#)). Furthermore, it's worth noting that as forecasting problems need a suitable SEM method, the PLS-SEM procedure is the best for exploratory–confirmatory studies ([Hair et al., 2016](#)). Thus, the PLS-SEM method is a great option for causal theory building and testing. According to the aforementioned reasons, and as the size of the sample used for conducting exploratory–confirmatory analyses in this paper is medium (leading to the causal theory testing), it seems that the PLS-SEM is the best method to ensure the model estimation stability. Also, another reason for selecting PLS-SEM is that the prediction is prior to covariation here ([Hair et al., 2016](#)).

As PLS-SEM is capable to deal with both formative and reflective constructs and hierarchical component models (HCMs), it is appropriate for our study. According to the fact that there is a general construct with several subdimensions in the HCMs, by taking advantage of a second-order model, additional information can be found on the subdimensions and more general construct becomes part of the structural model. Also, the number of relationships can be reduced in the structural model by an easier to grasp and more parsimonious PLS path model ([Hair et al., 2016](#)). As all constructs in our structural model were multidimensional, they were operationalized as “reflective–formative” higher-order components. Each dimension was measured by its reflective indicators, while their relationship with the constructs was indicated as formative. In the end, the “repeated indicators approach” was used in association with the “two-step approach” to build the final HCM measurement model.

## **4. Results**

The measurement model results are provided in [Table 2](#). All loading elements are above the suggested value of 0.70; Cronbach's alpha and composite reliability (CR) are above 0.80, and average variance extracted (AVE) values are above 0.50, signifying that the research constructs converge. By computing the CR and Cronbach's alpha values, the results demonstrate an efficient internal consistency for the items and constructs. Also, the formative factors for multicollinearity were tested through the variance inflation factors (VIFs) calculation for the items existing in the formative construct. According to the results, as the VIFs of the indicators were less than 3.3, there is enough construct validity for the formative indicators.



Construct	No. of items	VIF	Loadings	Cronbach's alpha	CR	AVE
OC				0.936	0.954	0.839
GC	5	1.285	Min: 0.778 – Max: 0.881	0.879	0.912	0.675
DC	4	2.958	Min: 0.837 – Max: 0.886	0.921	0.945	0.826
HC	4	2.154	Min: 0.781 – Max: 0.829	0.823	0.883	0.653
RC	3	2.216	Min: 0.734 – Max: 0.813	0.785	0.765	0.569
HPWS				0.925	0.946	0.781
CD	3	2.989	Min: 0.915 – Max: 0.922	0.906	0.941	0.842
JS	2	1.535	Min: 0.758 – Max: 0.771	0.702	0.741	0.502
PDM	4	2.508	Min: 0.756 – Max: 0.853	0.839	0.893	0.676
PFP	4	2.377	Min: 0.732 – Max: 0.912	0.868	0.910	0.717
T&D	4	1.542	Min: 0.719 – Max: 0.861	0.827	0.885	0.659
OL				0.933	0.957	0.882
CL	4	2.131	Min: 0.813 – Max: 0.842	0.852	0.900	0.692
SV	3	2.703	Min: 0.854 – Max: 0.909	0.847	0.907	0.766
OM	3	2.699	Min: 0.834 – Max: 0.860	0.796	0.880	0.710

**Table 2.**  
Construct validity

To assess the construct validity in this research, [Fornell and Larcker \(1981\)](#) approach was applied to define the discriminant validity through the cross-loading criterion existed amongst research constructs. The correlations between the latent constructs of the research are demonstrated as off-diagonal values in [Table 3](#). The diagonal values are also reflected as square values of AVEs (italic values in [Table 3](#)). As [Fornell and Larcker \(1981\)](#) established, therefore, the discriminant validity exists between the research constructs.

Furthermore, the cross-loading attests the discriminant validity between the research constructs as stated. A comparison of the loadings in the columns, shown in [Table 4](#), reveals that loadings of each indicator (by itself) are higher (illustrated as italic values) than all of its cross-loadings with other constructs in all detected cases. To end, according to the heterotrait–monotrait ratio criterion, discriminant validity was further proved in [Table 5](#) in which all values are lower than the threshold of 0.90 ([Hair et al., 2016](#)).

Also, the structural model was measured once the research measurement model was assessed and validated. We evaluated the quality of the structural model by using the R-square of the dependent variables and the Stone–Geisser Q-square test for predictive relevance. The results are shown in [Table 6](#).

Moreover, to assess the research reflective constructs in a structural model, [Hair et al. \(2016\)](#) approach was adopted. By running bootstrapping with samples of 2,000, the study also scrutinized the significance between the relationships parallelly with assessing the structural relationships entailed the path coefficients ([Hair et al., 2016](#)). To assess the significance level of the path coefficients existed between the variables, *t*-statistics have been applied, as shown in [Table 7](#). The relationship they characterize, as hypothesized in

Construct	DC	GC	HC	HPWS	OL	RC
DC	0.897	–	–	–	–	–
GC	0.686	0.822	–	–	–	–
HC	0.156	0.224	0.876	–	–	–
HPWS	0.562	0.626	0.244	0.787	–	–
OL	0.802	0.637	0.177	0.648	0.939	–
RC	0.792	0.749	0.242	0.649	0.869	0.756

**Table 3.**  
Fornell–Larcker  
criterion

Q. no.	GC	DC	RC	HC	CD	JS	PDM	FPF	T&D	CL	SV	OM
Q1	0.881	0.782	0.659	0.713	0.752	0.596	0.722	0.759	0.719	0.752	0.702	0.773
Q2	0.795	0.701	0.667	0.716	0.711	0.635	0.756	0.745	0.696	0.792	0.681	0.662
Q3	0.784	0.736	0.628	0.688	0.710	0.541	0.663	0.693	0.673	0.623	0.721	0.715
Q4	0.778	0.693	0.598	0.725	0.704	0.595	0.724	0.690	0.692	0.704	0.754	0.733
Q5	0.866	0.716	0.640	0.655	0.736	0.596	0.765	0.727	0.752	0.766	0.713	0.752
Q6	0.781	0.857	0.639	0.728	0.746	0.636	0.747	0.744	0.730	0.697	0.759	0.751
Q7	0.738	0.863	0.660	0.661	0.788	0.558	0.706	0.764	0.752	0.671	0.733	0.720
Q8	0.730	0.851	0.716	0.673	0.776	0.563	0.731	0.772	0.714	0.674	0.725	0.743
Q9	0.776	0.880	0.646	0.678	0.766	0.652	0.763	0.765	0.810	0.753	0.776	0.747
Q10	0.603	0.607	0.807	0.567	0.473	0.492	0.625	0.525	0.498	0.551	0.548	0.560
Q11	0.652	0.593	0.734	0.612	0.627	0.456	0.663	0.637	0.550	0.617	0.540	0.600
Q12	0.637	0.640	0.813	0.591	0.603	0.490	0.636	0.580	0.567	0.531	0.600	0.574
Q13	0.615	0.623	0.577	0.789	0.563	0.516	0.668	0.551	0.565	0.548	0.580	0.640
Q14	0.182	0.392	0.392	0.781	0.324	0.156	0.256	0.515	0.695	0.184	0.156	0.190
Q15	0.801	0.741	0.671	0.829	0.757	0.682	0.787	0.766	0.748	0.755	0.797	0.780
Q16	0.747	0.726	0.616	0.797	0.711	0.607	0.684	0.728	0.701	0.685	0.722	0.720
Q17	0.819	0.793	0.656	0.738	0.915	0.618	0.766	0.853	0.789	0.780	0.793	0.773
Q18	0.822	0.822	0.652	0.756	0.922	0.658	0.771	0.852	0.793	0.746	0.815	0.816
Q19	0.781	0.808	0.633	0.696	0.916	0.590	0.737	0.848	0.750	0.764	0.811	0.769
Q20	0.542	0.657	0.612	0.690	0.625	0.758	0.605	0.612	0.731	0.701	0.607	0.726
Q21	0.698	0.677	0.545	0.671	0.762	0.771	0.686	0.627	0.684	0.722	0.701	0.664
Q22	0.778	0.771	0.635	0.675	0.718	0.640	0.853	0.808	0.737	0.720	0.741	0.727
Q23	0.760	0.751	0.614	0.700	0.742	0.566	0.804	0.756	0.689	0.701	0.759	0.740
Q24	0.723	0.725	0.607	0.710	0.678	0.465	0.756	0.686	0.677	0.681	0.729	0.691
Q25	0.442	0.290	0.221	0.015	0.655	0.458	0.847	0.332	0.690	0.738	0.506	0.675
Q26	0.643	0.620	0.666	0.664	0.659	0.503	0.656	0.732	0.629	0.616	0.626	0.631
Q27	0.650	0.683	0.655	0.707	0.673	0.572	0.633	0.760	0.661	0.724	0.715	0.732
Q28	0.460	0.623	0.672	0.655	0.731	0.694	0.653	0.755	0.704	0.747	0.647	0.719
Q29	0.739	0.731	0.652	0.664	0.654	0.638	0.842	0.912	0.735	0.761	0.707	0.718
Q30	0.636	0.706	0.547	0.612	0.661	0.529	0.643	0.630	0.813	0.598	0.665	0.656
Q31	0.784	0.789	0.597	0.708	0.764	0.619	0.738	0.779	0.846	0.738	0.747	0.730
Q32	0.740	0.766	0.608	0.705	0.754	0.617	0.757	0.738	0.861	0.686	0.748	0.745
Q33	0.620	0.530	0.424	0.521	0.547	0.408	0.588	0.555	0.719	0.602	0.579	0.529
Q34	0.771	0.680	0.595	0.697	0.732	0.605	0.754	0.727	0.719	0.842	0.744	0.713
Q35	0.771	0.678	0.577	0.670	0.690	0.554	0.699	0.693	0.630	0.813	0.629	0.673
Q36	0.686	0.612	0.566	0.593	0.615	0.505	0.663	0.634	0.604	0.835	0.581	0.595
Q37	0.721	0.736	0.578	0.673	0.718	0.589	0.764	0.769	0.733	0.837	0.704	0.674
Q38	0.744	0.725	0.566	0.736	0.784	0.627	0.767	0.794	0.764	0.723	0.854	0.767
Q39	0.746	0.765	0.632	0.733	0.739	0.641	0.710	0.739	0.708	0.686	0.861	0.744
Q40	0.790	0.780	0.646	0.721	0.782	0.646	0.756	0.776	0.754	0.699	0.909	0.770
Q41	0.740	0.691	0.632	0.679	0.715	0.537	0.712	0.702	0.666	0.664	0.685	0.834
Q42	0.759	0.717	0.572	0.746	0.702	0.599	0.731	0.713	0.732	0.700	0.782	0.834
Q43	0.738	0.743	0.656	0.664	0.749	0.606	0.713	0.720	0.691	0.659	0.729	0.860

**Table 4.**  
Cross loadings

Construct	DC	GC	HC	HPWS	OL	RC
DC	–	–	–	–	–	–
GC	0.791	–	–	–	–	–
HC	0.165	0.244	–	–	–	–
HPWS	0.687	0.649	0.523	–	–	–
OL	0.781	0.735	0.187	0.637	–	–
RC	0.673	0.600	0.626	0.211	0.692	–

**Table 5.**  
Discriminant  
validity –  
heterotrait–monotrait  
ratio

this work, was also investigated. The structural relationships recognized by this study together with outcomes gained through hypothesis testing is demonstrated in Table 7. All main hypotheses are proven to be significant. It can be concluded that OC can be declared as a mean to enhance OL and HPWS among electricity supply companies of Isfahan province. Results show that group, rational and developmental culture have significant positive effects on OL, whereas the effects of hierarchical culture on OL are not significant. Except hierarchical culture, all three other cultures (group, developmental and rational) have significant positive impacts on HPWS. Furthermore, the results show that HPWS does indeed mediate the relationship between OC and OL. As the  $\beta$  value of the indirect path of OC-HPWS-OL, which is the multiple of two direct  $\beta$  value of the OC-HPWS and HPWS-OL paths, is greater than the  $\beta$  value of the direct path of OC-OL ( $0.519 > 0.425$ ), then it can be concluded that OC has a significant indirect effect on OL through HPWS ( $P < 0.001$ ,  $T$ -value = 5.089). Through the analysis of the indirect paths of types of OC and OL, as it is shown in Table 7, group, developmental and rational culture have a positive indirect effect on OL through HPWS. Then it can be concluded that HPWS does positively mediate the relationship between types of OC and OL.

### 5. Discussion

This study examines the relationships between OC, HPWS and OL. We propose that OC facilitates the OL both directly and indirectly through HPWS. Alternatively, HPWS may facilitate the cultivation of certain types of culture, which, in turn, have positive effects on OL. From an empirical analysis, OC in electricity supply industry companies of Isfahan

**Table 6.**  
Structural model assessment

Construct	$R^2$	$Q^2$
HPWS	0.883	0.657
OL	0.936	0.778

**Table 7.**  
Result of hypothesis testing

Hypothesis	Path	Beta	Standard error	$T$ -value
<i>H1</i>	OC → OL	0.425	0.109	3.890*
<i>H1-a</i>	GC → OL	0.306	0.109	2.799*
<i>H1-b</i>	DC → OL	0.161	0.070	2.589*
<i>H1-c</i>	HC → OL	-0.056	0.031	1.839
<i>H1-d</i>	RC → OL	0.155	0.052	2.971*
<i>H2</i>	OC → HPWS	0.939	0.014	7.179**
<i>H2-a</i>	GC → HPWS	0.462	0.088	5.231**
<i>H2-b</i>	DC → HPWS	0.368	0.093	3.823**
<i>H2-c</i>	HC → HPWS	0.042	0.040	1.042
<i>H2-d</i>	RC → HPWS	0.163	0.053	3.072**
<i>H3</i>	HPWS → OL	0.547	0.107	5.123**
	OC → HPWS → OL	0.529	0.099	5.089**
	GC → HPWS → OL	0.205	0.046	4.485**
Indirect effects	DC → HPWS → OL	0.198	0.077	2.489*
	HC → HPWS → OL	0.019	0.934	0.350
	RC → HPWS → OL	0.073	0.029	2.486*

Notes: \*\* $P < 0.01$ ; \* $P < 0.05$

province is positively related to OL and HPWS, whereas HPWS is positively associated with OL. This outcome are consistent with previous empirical researches of [Martín-de Castro et al. \(2011\)](#), [Liao et al. \(2012\)](#), [Cho et al. \(2013\)](#), [Rijal \(2010\)](#), [Hu et al. \(2016\)](#), [Perez Lopez et al. \(2005\)](#), [Chahal et al. \(2016\)](#) and [Wei et al. \(2008\)](#); but it does not support hypotheses *H1-b*, *H1-c* and *H2-c*. Hypothesis *H1-c* is inconsistent with that of [Martín-de Castro et al. \(2011\)](#) and [Liao et al. \(2012\)](#), whereas the others were not empirically tested before. Moreover, the study also provides evidence for the positive link between OC and OL suggested in the literature ([David and Fahey, 2000](#)) and for the [Lee and Wen-Jung \(2005\)](#) proposition that the impact of OC on OL varies with the type of OC. According to our results, the types of OC which encourage OL are group and rational culture, whereas hierarchical and developmental culture are not associated with OL.

According to our findings, there is a meaningful relationship among HPWS, OC and OL. Despite the previous studies that see OC as a mediator or moderator and do not take into account the direct effect of that on the adoption of HR systems, we demonstrated that OC is an antecedent of HPWS. So, because corporate culture is increasingly important for Iranian firms, studying the influence of this kind of culture on HPWS is valuable. In this regard, the role of four types of culture in HPWS adoption was studied by considering SVE. According to the results, it can be concluded that the HPWS's design is influenced by OC so that it can boost the HPWS development. Second, types of OC have different impacts on HPWS. According to our findings, group, developmental and rational culture positively affect HPWS, whereas no evidence found to support the impact of hierarchical culture on HPWS. Third, types of OC have also different impacts on OL through HPWS. In this regard, group, developmental and rational culture have positive indirect effects on OL through HPWS. Thus, the mediating role of HPWS is also proven in types of OC and OL relationships. However, owing to the insignificant impact of hierarchical culture on OL through HPWS, this relationship is not completely accomplished.

However, there are some intricacies that should be taken into account. For example, to enhance OL, its HPWS and OC practices should be scrutinized as OC can play the role of both OL enabler and OL barrier based on the values included. Also, according to our findings, a hierarchy culture is a barrier for OL (and it is better to change it), whereas the other three cultures can empower it. Goal realization, continual change orientation, creativity and flexibility can be mentioned as the main values for OL culture. So, it is better to firms to adopt a group, developmental or rational culture to empower OL. Furthermore, the results demonstrate that focusing on either flexibility or external orientation is not so useful and both should be considered by firms. In total, our study can help to develop an OC fostering both HPWS and OL.

Finally, we recommend that the findings of this study should be interpreted by taking the following considerations. First, although several firms have been used to collect data, given that the data only belongs to one industry, it may not be enough to generalize the results to all organizations. Second, the survey questions were designed based on our personal perceptions because OC, OL and HPWS are abstract concepts. Also, to obtain better results, one can use objective data because the organization's competitiveness is dependent on every variable. Also, to mitigate the time lag associated with learning output and enhance logical validity, a longitudinal data collection can be useful. In total, the mentioned considerations can be great topics for future studies. For example, a longitudinal study may be a good option to scrutinize the causality of the relationships among OL, OC and HPWS.

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