



RESEARCH PAPER

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Examination the impact of organizational culture on organizational agility in Ahvaz NISOC

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**Key words:** Organizational culture, Organizational agility, Ahvaz NISOC.

**Abstract**

Since environmental changes have affected many aspects of organizations, they must dynamically adapt to environmental changes using appropriate changes so that they can survive. Changing culture is a unique solution. This change should be taught to everybody in the shortest possible time. Accordingly, one way of agility organization is properly shaping the organizational culture. The main objective of this study is to examine the effect of organizational culture on the organizational agility. The statistical population consists of experts and supervisors in Ahavaz National Iranian South Oil Company (NISOC). The research is applied in terms of objective, and descriptive in terms of the data collection method, and causal in terms of relation between variables, and is specifically based on structural equation modeling. In order to measure the research variables, a questionnaire and statistical analysis methods with SPSS.18 and LISREL.8.5 were used. Results of the questionnaire analysis indicated that the organizational culture (and its dimensions) has a significant positive impact on organizational agility.

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**Introduction**

Today organizations operate in an environment with rapid changes that require them to have adaptation strategies. In fact, how organization can succeed in a dynamic and unpredictable environment is known as the most important challenge of today's world. Although several mechanisms have been introduced such as JIT production, re-engineering, virtual organizations and networking, organizational agile is most popular. Many experts and scholars have studied organizational culture as a source of competitive advantage. Organizational culture is a unique pattern of common assumptions, values and norms which form the socialization activities, language, symbols and operations of organization. In such an environment, agility has become an important feature with many impacts on organizational performance (Azar & Pishdar, 2011). The term agility was first introduced by Nigel and Dove (1991) in Iacocca Research Institute at Li Lehigh University, in a report titled Production strategy enterprises in the 21th century: industrial expert opinions.

Later, Drucker was the first one who introduced the concept of an agile institution to the world of business in order to explain the need for increased flexibility and accountability in contemporary organizations. For all the organization, agility is considered as a major competitive tool in an uncertain and constantly changing business environment (Verly & Lawler, 2010). On the other hand, culture change is a unique strategy to achieve agility. This change must be trained to everybody in the shortest time possible (including managers, professionals and labor) (Jafarnejad & Zarei, 2005). Many experts and scholars have studied organizational culture as a source of competitive advantage (Ghorbani *et al.*,

2009). Organizational culture is a unique pattern of common assumptions, values and norms which form the socialization activities, language, symbols and operations of organization (Vossoughi, 2011). The concept of organizational culture is considered as a factor in organizational efficiency and performance, and a proper work culture is well developed between management and staff will lead to higher organizational commitment, promoted morality, and higher performance and productivity (Kashani, 2012). The aim of this study is descriptive in terms of the data collection method, and causal in terms of relation between variables, and is specifically based on structural equation modeling.

**Materials and methods**

*Theoretical Framework*

The research is applied in terms of objective, descriptive in terms of the data collection method, causal in terms of relation between variables, and is specifically based on structural equation modeling. The statistical population consists of 500 experts and managers of Ahvaz NISOC. Using the Krejcie and Morgan table and the stratified random sampling, 217 individuals were selected as the sample. The data collection method was a questionnaire. Overall, 217 questionnaires were distributed and 217 valid questionnaires were collected. The questions divided into two parts: general and technical. Technical questions were presented in the form of organizational agility questionnaire, and the organizational culture questionnaire which was based on a five-point Likert scale (very low, low, medium, high and very high). In order to determine the reliability of the questionnaires, Cronbach's alpha with SPSS.18 was used. Table 1 shows the number of statements for measuring each latent variable and Cronbach's alpha coefficient for each variable.

**Table 1.** Description of the variables, dimensions and reliability of the research measurement tool.

Variable	Variable Type	Source	Number of Statements	Reliability Coefficient
Organizational culture	Independent	Denison (2000)	53	0.981
Organizational agility	Dependent	Sharifi and Zhang (1999)	14	0.933

*Factorial validity methods*

As seen in the table above, Cronbach's alpha coefficient is estimated 0.98 for organizational culture and 0.93 for organizational agility, indicating the validity and reliability of the research tool. The content validity and the factorial validity methods were used to test the questions. Expert opinions were used to examine the content validity of the questionnaire. Finally, we ensured that the questionnaire assesses the features intended to the researchers. The factorial validity test was performed

with the help of confirmatory factor analysis using LISREL. Looking at the LISREL results in Table (3) reveals that both measurement models satisfy the listed conditions and are suitable. Collectively, these results indicate that the questionnaire reliability and validity are appropriate. Data analysis was done at two levels: descriptive and inferential statistics. In order to examine the demographic characteristics of the sample, descriptive statistics were used. Table 2 shows the demographic characteristics of the sample.

**Table 2.** Demographic characteristics of the sample.

Variable	Levels	%	Variable	Levels	%	Variable	Levels	%
Sex	Female	0.82	Respon- sibility	Supervisor	62.7	Work	20 to 30 years	4.1
	Male	0.18		Head	6.27		31 to 40 years	50.0
Education	Diploma	10.1		Manager	9.7		Above 41 years	45.6
				Technical	29.5		5 years or less	6.5
	Associate	49.8	Operational	17.1	6 to 10 years	20.3		
	Bachelor	36.4	Type of Work	Service	4.1	11 to 15 years	17.1	
	Masters	0.9	Commercial	2.8	Experience	16 to 20 years	12.0	
PhD	2.8	Financial	19.8	21 years and over	44.2			
		Legal	2.3	5 years or less	6.5			
			Office	24.4	6 to 10 years	20.3		

This section outlines the research literature on the organizational culture and organizational agility.

*Research Hypotheses*

Main hypothesis: Organizational culture has a significant positive impact on organizational agility in in Ahvaz NiSOC.

Sub-hypothesis 1: Involvement has a significant positive impact on organizational agility in in Ahvaz NiSOC.

Sub-Hypothesis 2: Consistency has a significant positive impact on organizational agility in in Ahvaz NiSOC.

Sub Hypothesis 4: Mission has a significant positive impact on organizational agility in in Ahvaz NiSOC.

This section outlines the results of confirmatory factor analysis for the measurement models and the

results of testing the research hypotheses using SPSS and LISREL.

**Results and discussions**

*Organizational Culture*

According to Crocetto & Youssef (2003), organizational culture is a component of achieving organizational agility (Jafarnejad & Shahaei, 2010). The culture change is an unmatched solution to achieve agility. This change must be trained in the shortest time possible to everybody (including managers, professionals and labor) (Jafarnejad & Zarei, 2005). Many experts and scholars have studied organizational culture as a source of competitive advantage (Ghorbani *et al.*, 2009). Organizational culture is a unique pattern of common assumptions, values and norms which form the socialization activities, language, symbols and operations of

organization (Vossoughi, 2011). Organizational culture grants identity to the organization (Zahir *et al.*, 2011; Cheung *et al.*, 2011) and helps members coordinate their behavior (Aqajani, 2013). Each organization has its own organizational culture identity which is applicable as an unwritten contract between the organization and its employees. Unlike non-agile organizations, the culture of agile organizations is dynamic, i.e. it is based on trust and confidence in leaders and respect for employees (Jafarnejad & Shahaei, 2010). The concept of organizational culture is considered as a factor in organizational efficiency and performance, and a proper work culture is well developed between management and staff will lead to higher organizational commitment, promoted morality, and higher performance and productivity (Kashani, 2012). In his model, Denison considers cultural dimensions for organizations in the four main areas: involvement, consistency, adaptability and mission.

*Each dimension is measured with three indicators (Rahim Nia & Alizadeh, 2008)*

1. Involvement: Efficient organizations empower their staff, center the organization on working groups, and develop human resource capacities at all levels. In this model, this feature is measured by three indicators: empowerment, team building, and capability development.

2. Adaptability: Research has shown that effective organizations are often stable and integrated, and the behavior of organizational activities has been well-coordinated and sustained. This feature is evaluated by three parameters: core values, agreement, coordination & integration.

3. Adaptability: Well-integrated organizations barely change. Thus internal integration and external adaptability can be considered as advantages for organizations. This feature is evaluated by three criteria: creating change, customer focus, and organizational learning.

4. Mission: Perhaps the most important feature of organizational culture is its mission. Organizations that do not know their existing situation and position often go astray. This feature is measured by three indicators: strategic direction and intent, goals and objectives, and vision (Dennison, 2000, Don Rahim Alizadeh, 2008, Ziaeebidhendi *et al.*, 2011). In this study, the above model was used to measure organizational culture.

#### *Organizational Agility*

The new business era in the 21st century has recognized change as a main feature (Hung *et al.*, 2012). Most experts consider increasing accessibility to technology, intense competition in technology development, globalization of markets, commercial competitiveness and rapid development of access to technology as reasons for changes in the business world. Hence, in such an environment, organizations cannot be directed and controlled by traditional methods. A necessity for effective response to these changes and gaining competitive advantage from opportunities arising from them is to achieve organizational agility (Shahei, 2006). The term agility was first introduced by Nigel and Dove (1991) in Iacocca Research Institute at Lehigh University, in a report titled "Production strategy enterprises in the 21th century: industrial expert opinions." Later, Drucker was the first one who introduced the concept of an agile institute to the world of business (Jafarnejad & Shahei, 2010). Brian Maskell (2001) defines agility as the ability of realization in an uncertain and constantly changing business environment (Maskell, 2001). Organizational agility is the basis of competitive advantage and performance in a company (Verly & Lawler, 2010). Zhang and Sharifi (2000) developed a methodology for achieving agility capabilities in manufacturing companies and divided them into four major categories (Almahamid *et al.*, 2010) (Fig. 1-1). These agility capabilities include:

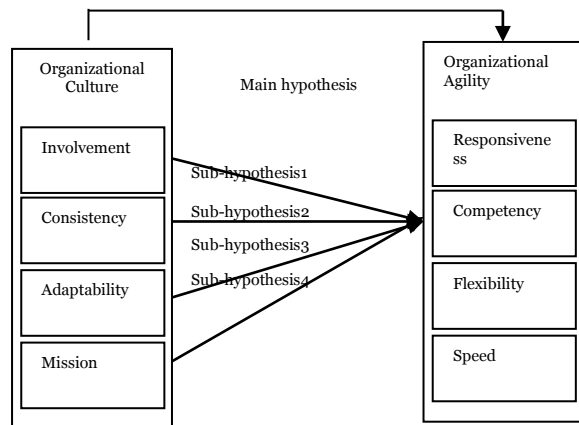
1. Responsiveness: Ability to identify changes for quick response.

2. Competency: Organizational efficiency and effectiveness in achieving goals.
3. Flexibility: Ability to run different processes and achieve different goals.
4. Speed: Ability to top an activity in the shortest possible time (Jafarnejad and Ahmadi, 2010).

This study uses the above model for measuring organizational agility.

**Conceptual Model**

According to the research literature, the following conceptual model was accepted and evaluated for exploring the impact of organizational culture on organizational agility in this study.



**Fig. 1.** Conceptual model of the research (researcher).

**Assessment of the measurement models**

In the structural equation modeling, it is needed to ensure the accuracy of measurement models. Next, the results of confirmatory factor analysis of measurement models for the research variables are presented.

As shown in Table (3), the confirmatory factor analysis results for organizational culture and organizational agility measurement models show that the main fit indicators for all latent variables are in an appropriate and acceptable range. In other words, the conceptual model of the study is largely based on observed data. Moreover, in order to better understand the research variables, we examined mean, standard deviation and correlation coefficients between the constructs of organizational culture and organizational agility (Table 4). As seen, all variables are in a good condition. Among dimensions, responsiveness has the highest score and mission has the lowest one. The correlation analysis results also show that there is a significant positive relationship between organizational culture (and its dimensions) and organizational agility.

**Table 3.** Comparison of the measurement models.

Measurement Model	Type of Confirmatory Factor Analysis	χ²	Df	χ²/df	p-value	RMSEA	GFI	AGFI
Organizational agility model	Second order	124.54	73	1.70	0.00016	0.057	0.92	0.89

**Table 4.** Mean, SD, and Pearson correlation coefficients for variables.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Involvement	2.9603	0.74131	1									
2 Consistency	3.1609	0.76082	0.862**	1								
3 Adaptability	3.0106	0.71554	0.826**	0.857**	1							
4 Mission	2.9450	0.70822	0.958**	0.842**	0.849**	1						
5 Responsiveness	3.2327	0.95500	0.640**	0.618**	0.615**	0.664**	1					
6 Competency	3.0915	0.78799	0.798**	0.774**	0.841**	0.825**	0.735**	1				
7 Flexibility	2.9631	0.73540	0.698**	0.643**	0.729**	0.828**	0.555**	0.740**	1			
8 Speed	3.0253	0.89652	0.701**	0.691**	0.686**	0.807**	0.573**	0.689**	0.706**	1		

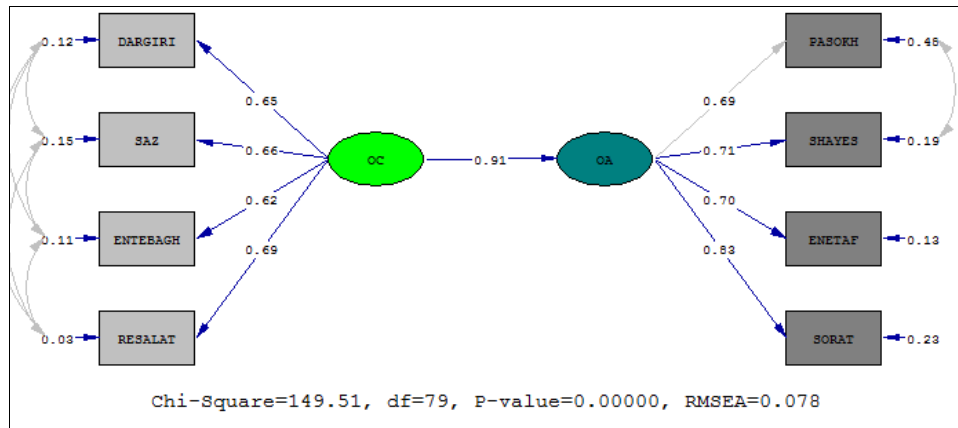
Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
9 Organizational culture	3.0192	0.69361	0.691**	0.940**	0.930**	0.691**	0.669**	0.852**	0.762**	0.759**	1	
10 Organizational agility	3.0782	0.72907	0.816**	0.786**	0.823**	0.897**	0.842**	0.909**	0.851**	0.859**	0.875**	1

\*\* Correlation is significant at the 0.01 level.

*Results of testing hypotheses*

In order to test the research hypotheses, the structural equation modeling and the path analysis technique were used. In the implementation of structural equation modeling to test the hypotheses, the software output show that the structural model is well-fitted ( $\chi^2/df = 0.89$ , RMSEA=0.078, GFI=0.92,

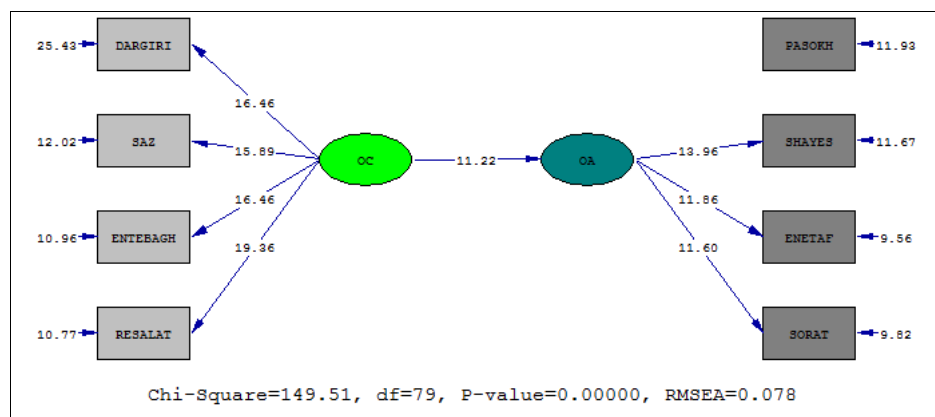
AGFI=0.89, NFI=0.95, oNNFI=0.94, CFI=0.96). In other words, the observed data is largely consistent with the research conceptual model (Fig. 2). The structural model in the standard estimation mode reflect the impact of organizational culture on agility ( $\beta=0.91$ ).



**Fig. 2.** Structural model for testing the main hypothesis in the standard estimation mode.

Fig. 3 shows the significant coefficients and parameters obtained from the structural model of organizational culture and organizational agility. As can be seen, the significant coefficient between organizational culture and organizational agility is

11.22 ( $t=11.22 > 1.96$ ). Thus the structural model suggests that organizational culture has an impact on agility. As a result, the null hypothesis is rejected and the main hypothesis is confirmed.



**Fig. 3.** Significant numbers for coefficients of the structural model for testing the main hypothesis.

*Test results of sub-hypotheses*

In the implementation of structural equation modeling for testing the research hypotheses, the software output show that the structural model is

well-fitted. In other words, the observed data is fully consistent with the research conceptual model. Table 5 shows the results of structural equations.

**Table 5.** Results of testing sub-hypotheses.

Hypothesis	Independent Variable	Dependent Variable	$\beta$	t-value	Test Result
Ha1	Involvement	Organizational Agility	0.65	16.46	Confirmed
Ha2	Consistency	Organizational Agility	0.66	15.89	Confirmed
Ha3	Adaptability	Organizational Agility	0.62	16,46	Confirmed
Ha4	Mission	Organizational Agility	0.69	19,36	Confirmed

As can be seen, Table 5 shows that sub-hypotheses are all confirmed. Among the components of organizational consistency, organizational agility has minimal impact.

**Conclusions**

Knowledge of organizational culture is an important and essential step to understand an organization and the behavior and performance of its members. Thus for any new measures in the organization, it is essential to consider its culture, because the culture leverage simply can facilitate changes and institutionalize new orientations in the organization. Many experts and scholars have studied organizational culture as a source of competitive advantage. Thus the purpose of this study is to examine Denison's organizational culture model (2000) on organizational agility in Ahavaz NISOC. Results partially confirm previous research in this area. For example, Rahim Nia and Alizadeh (2009) stated that knowledge of organizational culture is an important and essential step, so it must be considered for any new measures in the organization. On the impact of dimensions of Dennison's organizational culture model on the performance, Elmaz and Organ (2008) concluded that adaptability has the greatest impact and consistency has the least impact. Gylpsy *et al.*, (2008) concluded that involvement and mission have the highest score, and customer focus and adaptability have the lowest scores. Monavarian and Bakhtaei (2006) concluded that among Denison's organizational culture dimensions, involvement and adaptability have the best position in Industrial Management Organization. Nassiri Poor *et al.*, (2012) concluded that with increased attention to

organizational culture indicators, employee performance will improve, and with measures such as improving and strengthening cultural indicators that have the greatest effect on performance, one can witness further improved organizational culture and performance of employees. Ghorbani *et al.*, (2009) acknowledge that there is a significant positive relationship between organizational culture and effectiveness. Nassiri Poor *et al.*, (2009) suggest that there is a significant relationship between organizational culture and productivity. According to the results of Taidro *et al.*, (2012), there is a significant relationship between organizational culture and organizational performance. The results of Jakob *et al.*, (2013) suggest that organizational culture and performance are strongly correlated. Finally, to enhance the impact of organizational culture on organizational agility, the following recommendations are offered:

- ✓ Knowledge of managers on the concept of organizational culture, and its importance and role in the behavior and performance of the organization. As scientists now suggest the main task of top management is to create, develop and foster desirable cultural values.
- ✓ Managers must pay more attention to develop organizational culture values in the change, improvement, and reconstruction plans of the

organization. As the majority of management scientists suggest that the change, improvement, and reconstruction of the organization as a planned change is the same as transformation and development of organizational culture.

- ✓ Improving and changing insight and deepening healthy attitudes and improving the detection and analysis power of staff.
- ✓ Determining the position and role of organizational culture in designing the structure and drafting regulations, systems, bylaws, plans and instructions.
- ✓ Training on how to identify, introduce, and promote positive values and symbols of organizational culture and how to institutionalize them in the organization.
- ✓ Training and development of staff through workshops in order to be familiar with the dominant values of society and organization and acceptable behavior appropriate to organizational culture, and encourage them to participate, group work, and all work related skills.
- ✓ Organizational culture grants organizational identity to employees. Thus, the ability of managers to attract, nurture and support talented and creative staff will improve productivity.

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