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## **COMPARISON OF ORGANIZATIONAL CULTURES FROM A TRANSITIONAL ECONOMY AND A KNOWLEDGE ECONOMY: EMPIRICAL STUDY FROM SERBIA AND SOUTHERN CALIFORNIA**

**Abstract:** In this paper the authors discuss Organizational culture with focus on differences between characteristics of organizational culture in traditional economy and knowledge economy. In the literature, knowledge economy is considered a platform on which Industry 4.0 is based.

In the knowledge economy, knowledge is the key resource and innovation capacity of employees is the key competitive advantage. That places people at the center of research relating to the success of organizations in the knowledge economy, as the carriers of both; the key resource – knowledge, and the key capacity - innovation.

Human capital is usually divided into three categories in scientific literature: "traditional", "convertible" and "creative". Creative human capital implies the ability to set the tasks independently, the ability to switch between various activities, high professional autonomy, continuing education, and knowledge sharing. Creative human capital is the accelerator of transition from developing economy to knowledge economy.

The importance of human capital and the aforementioned key characteristics of the knowledge economy, at the center of research place the organizational culture, and its specific aspects relating to knowledge sharing and autonomy of knowledge workers.

The main research question in this paper is:

Is it possible to identify and measure perception of organizational culture and its various dimensions in Serbia and Southern California using Pareek's OCTAPACE instrument?

From the main research question the research hypothesis emerged.

In order to answer the research question and to support research hypothesis, the survey was conducted in which the organizations from Serbia were considered to be from transitional economy, and organizations from Southern California were considered to be etalon for knowledge economy.

This paper presents the results of survey conducted on a sample of 383 executives and employees from organizations in Serbia and Southern California, using Pareek's instrument for the OCTAPACE model of organizational culture.

Given that Industry 4.0 concept requires continuous innovation, education and knowledge sharing that not only depends on the peoples' skills and attitudes, but also on organizational culture, results from this research should be useful to organizations in transitional economy as they attempt to keep pace with organizations from knowledge economies.

**Keywords:** Organizational culture, Knowledge economy, Industry 4.0

## 1. INTRODUCTION

The environment of the knowledge economy is a highly competitive and volatile environment and is characterized by phenomena such as globalization, high complexity, rapid development of new technologies, economic and political instability. There is a strong interest in the scientific and professional public for the concept of innovation, organizational learning and knowledge management in the knowledge organization, and for characteristics that affect the performance of such an organization. A successful knowledge organization is designed in such a way to:

- have infrastructure of a knowledge organization with a serial entrepreneurship mentality (Senge 2006; Antonaras & Dekoulou 2015);
- treat knowledge as the most important resource and practice generative learning as a process (Sveiby 1997; Teece 2000);
- enable that organizational culture (Denison 1990; Denison & Mishra 1995; Fey & Denison 2003; Denison et al. 2004) and
- collaborative climate (Sveiby & Simons 2002) act as mediators to ensure the efficiency of knowledge flows and assist the organization in engaging in change and experimentation, as well as in utilizing the capabilities and resources embedded in different types of
- organizational value networks (Allee 2002).

The aforementioned building blocks linked to a dynamic value network constitute a construction that could answer to contemporary challenges, and enable sustainable development of organizations in the knowledge economy.

It is generally accepted that at the end of the twentieth century the developed economies of the world evolved from an industrial paradigm based on tangible assets, to a so-called knowledge economy - based on intangible assets (knowledge-based assets) (Andrews & De Serres 2012). Not only is the economic environment exposed to this transition, but the concepts of the evolution of society into a knowledge society and the evolution of cities into knowledge cities are very present in the literature (Carrillo 2015; Metaxiotis et al. 2010). Peter Drucker first mentioned the term "knowledge work" in his 1959 book "Landmarks of Tomorrow".

The greatest challenge for the 21st-century management is to (as it did in the 20th century for tangible resources) develop methods and techniques for the efficient and effective management of an organization's most important resource, intellectual capital, which is not tangible and mostly not owned by organization. Knowledge and ideas can be multiplied infinitely while material resources cannot; knowledge increases when used while material resources are consumed. Such traits of the most important resource in knowledge economy imply that significantly different economic equations (than those from industrial economy) must be introduced. Replacing "industrial" perspectives with new paradigms in the knowledge economy is necessary because of constant and radical changes and a high degree of uncertainty and risk.

Knowledge organizations need new type of managers, leaders, who will be able to manage the invisible assets of the organization. The leader is responsible for building the organizational culture and collaborative climate of the organization, which develop organization's capability to learn faster than the competition; continuously collects and shares knowledge, enhances it, and employs it to shape organization's future, i.e. the leader is responsible for learning (Senge 2006).

Managers in the knowledge economy do not manage people nor knowledge, but the space in which knowledge is created, i.e. they manage the flow of knowledge. This space is made up of both the invisible culture of the organization and the tangible environment.

The focus of this paper is to identify the OCTAPACE profile of the organizational culture of organizations in Serbia and Southern California, i.e. the subject of the research is the verification of the adequacy of the OCTAPACE model of organizational culture on the sample of economy in transition (Republic of Serbia) and on the sample of economy that is the standard for knowledge economy (Southern California).

## 2. ORGANIZATIONAL CULTURE AND OCTAPACE MODEL

Understanding organizational culture is an important activity for managers because it affects productivity at all levels (Gray & Densten 2005). Terms such as values, beliefs, ethos, climate, environment and atmosphere are used in the context of organizational culture. Pareek (Pareek 1994) defines the concept of the eight dimensions of organizational culture, called OCTAPACE (Pareek 1994; Pareek 1997). OCTAPACE symbolizes the eight (OCTA) steps (PACE) that are necessary to create a functional ethos in an organization. The eight dimensions of the OCTAPACE organizational culture model are explained below.

Openness - the spontaneous expression of feelings and thoughts and willingness to accept information and other people's opinions without being offended. Organization encourages risk taking, experimenting with new ideas and new ways of working.

Confrontation - facing the problems and challenges, not running away from them; deeper analysis of interpersonal issues. Employees face problems and work together to find a solution. They face problems directly without concealing or avoiding them for fear of hurting others' feelings.

Trust - safeguarding information received from others and not misusing it; a sense of security that others will come to their aid when needed, and that everybody will honor their obligations and promises. Department employees trust each other and can rely on the past agreements.

Authenticity - harmony between what one feels, speaks and does; acceptance of their actions and mistakes, uninhibited sharing of feelings. Authenticity is the value that is the origin of trust. Authenticity is a person's willingness to acknowledge the feelings he has, and to accept the feelings of others who relate to him or her as a person.

Proactivity - initiative, planning in advance, preventative measures, consideration of consequences before taking action. Employees are action oriented, ready to take the initiative and show a high degree of proactivity. They anticipate outcomes, and act toward anticipated needs.

Autonomy - accepting and giving freedom to plan and act in one's own field of work; respect and encouragement of individual and work autonomy. Autonomy is the willingness to use power without fear, and to help others do the same. Employees have a degree of freedom to act independently within the authority defined by their workplace or position.

Collaboration - helping others and seeking help from others; team spirit; individuals and groups working together to solve problems. Collaboration implies working together and using the strength of each member for a common purpose. Instead of solving problems alone, individuals share their problems with others and prepare strategies, make action plans, and implement them together.

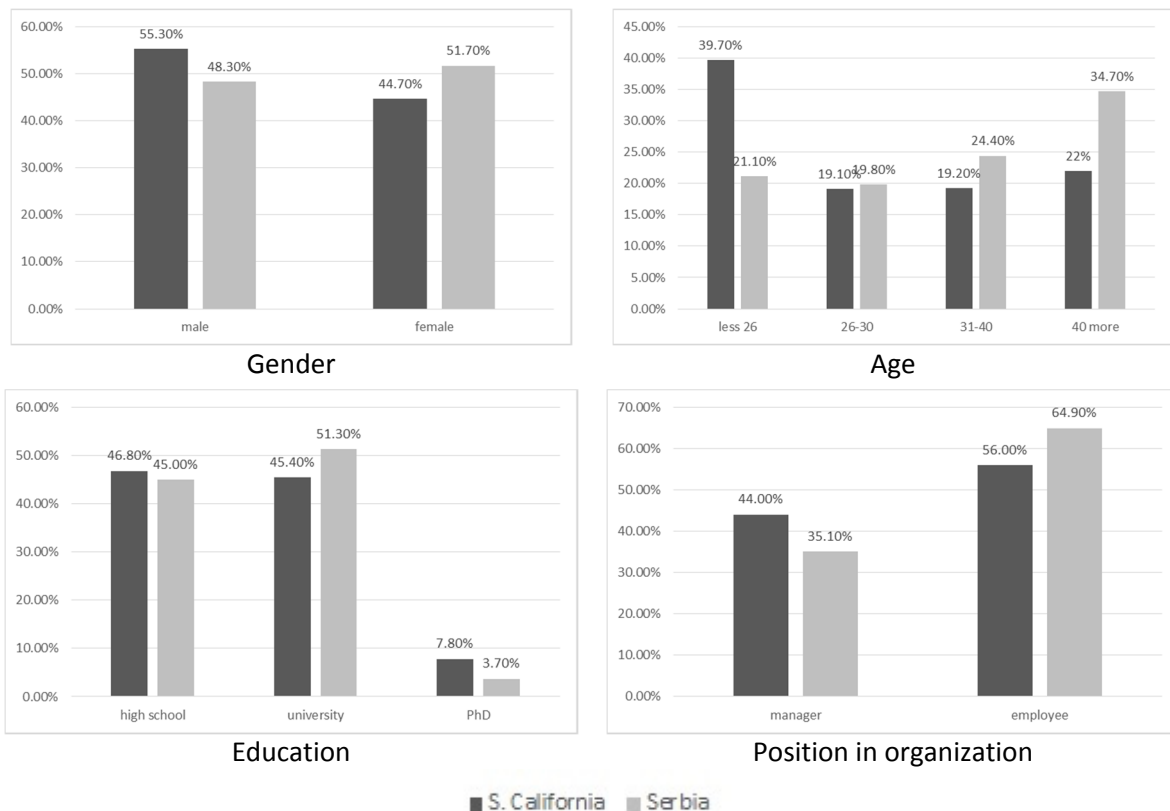
Experimenting - employing and encouraging use of inventive methods in problem solving; using feedback to improve those methods; a new way of looking at things; stimulating creativity. Experimenting as a value emphasizes the importance of innovation, and willingness to try new ways of solving problems in an organization.

### 3. RESEARCH METHOD

#### 3.1. Data Collection and Sample

In order to understand research problem related to organizational culture, as the key characteristic affecting the performance of an organization in the knowledge economy, and to reach defined goals related to that research problem, a quantitative survey was conducted during November and December of 2016, simultaneously in Serbia and Southern California. Research in Southern California was conducted in cooperation with College of Business Administration, California State University, San Marcos.

The sample for organizational culture research consisted of 383 subjects, of which 242 were part of a survey conducted in Serbia, and 141 were part of a survey conducted in southern California. A detailed sample structure, in terms of demographic characteristics, is given in Picture 1.



Picture 1. Demographic characteristics of survey respondents

Source: Authors

### 3.2. Instrument

Within organizational culture research, a structured three-part questionnaire was used to collect as relevant data as possible. The first part of our questionnaire consisted of Pareek's (Pareek 1994) questionnaire with 40 statements. Pareek's questionnaire measures components (dimensions) of the OCTAPACE model of organizational culture. The research questionnaire in Serbia was adapted to the Serbian language context. For each of the eight dimensions of organizational culture, there is a part of the instrument that relates to it.

The original questionnaire consists of 40 questions that are conceptualized in the form of statements and respondents were expected to define their relationship to the statements according to the four-point scale offered: 1-only a couple of people or no one shares this belief; 2-only few people in the organization share this belief; 3-relatively widespread belief; 4-widespread belief. Of the 40 questions, 11 were negatively worded. The second part of the questionnaire consists of the demographic characteristics of the respondents pertaining to: the gender of the respondents, the highest level of education, work experience, the position the respondent has in the organization, and the age group to which the respondent belongs. The third part of the questionnaire contains information pertaining to the organization in which the respondent is employed and relates to: affiliation of the organization to the private or public sector, and affiliation to a particular industry.

### 4. HYPOTHESES AND RESULTS

The research question of this paper is to what extent is the OCTAPACE model of organizational culture developed by Pareek (Pareek 1994) applicable in a transitional economic environment such as Serbia and in a knowledge economy environment such as Southern California. Is it possible to identify and measure perceptions of organizational culture in Serbia and Southern California and its various dimensions using Pareek's instrument for evaluating the OCTAPACE model of organizational culture? Hypothesis H1 follows from the main research question:

H1: It is possible to identify and measure perceptions of dimensions (influencing factors) of organizational culture in organizations from Serbia and Southern California using the modified Pareek's OCTAPACE instrument for assessing organizational culture.

Psychometric characteristics of the dimensions of the OCTAPACE model of organizational culture were evaluated using principal components analysis. The analyses were conducted on an individual level, which means that the analysis was conducted on a sample of 383 respondents. To assess the one-dimensionality of each of the eight OCTAPACE subscales of the organizational culture model, a principal component factor analysis was conducted on five items of each subscale. One factor was extracted for each five-item scale (using the Kaiser's criterion that the eigenvalues of the component are greater than 1, and 'Scree' plot criterion) which confirms that the subscales measuring eight OCTAPACE dimensions are one-dimensional. Items with factorial loadings less than 0.5 were excluded. The results of the reliability analyses for the subscales defined according to their original key had lower values than compared to previous studies. In order to increase the reliability of the instrument, a modification was performed by removing certain items from the instrument subscale, after which the reliability increased.

Table 1 provides an overview of psychometric characteristics of a modified Pareek instrument for measuring dimensions of the OCTAPACE model of organizational culture. The table shows the original key for each of the eight dimensions of the OCTAPACE model, as well as a modification of the key that was performed in order to increase the reliability of the instrument in our study. Due to the unacceptably low value of the Cronbach's alpha, subscale Autonomy was excluded from the OCTAPACE instrument, while other subscales were modified.

**Table 1.** Psychometric characteristics of a modified OCTAPACE instrument for organizational culture assessment

Items	Factorial loadings
<b>Subscale 1-Openness (KMO = 0,753; Cronbach's <math>\alpha</math> = 0,763; % = 58,856%; <math>\Lambda</math> = 2,354)</b>	
OK01 - Free interaction among employees, each respecting others' feelings, competence and sense of judgment.	0,775
OK09 - Genuine sharing of information, feelings and thoughts in meetings.	0,681
OK17 - Free discussion and communication between seniors and subordinates.	0,804
OK33 - Free and frank communication between various levels helps in solving problems.	0,803
OK25* - Effective managers put a lid on their feelings.	-
<b>Subscale 2: Confrontation (KMO = 0,740; Cronbach's <math>\alpha</math> = 0,747; % = 57,627%; <math>\Lambda</math> = 2,305)</b>	
OK02 - Facing and not shying away from problems.	0,842
OK10 - Going deeper rather than doing only surface analysis of interpersonal problems.	0,672
OK18 - Facing challenges inherent in the work situation.	0,793
OK34 - Identifying problems is not enough; we should find the solutions.	0,718
OK26* - Pass the buck tactfully whenever there is a problem.	-

<b>Subscale 3: Trust</b>	<b>(KMO = 0,761; Cronbach's <math>\alpha</math> = 0,733; % = 56,034%; <math>\Lambda</math> = 2,241)</b>
OK03 - Offering moral support and help to employees and colleagues in a crisis.	0,791
OK11 - Interpersonal contact and support among employees.	0,762
OK19 - Confiding in seniors without fear that they will misuse the trust.	0,721
OK27 - Trust begets trust.	0,718
OK35* - In times of crisis you have to fend for yourself (you can't rely on others).	-
<b>Subscale 4: Authenticity</b>	<b>(KMO = 0,607; Cronbach's <math>\alpha</math> = 0,516; % = 41,266%; <math>\Lambda</math> = 1,651)</b>
OK04 - Congruity between feelings and expressed behavior (minimal gap between what people say and do).	0,670
OK20 - Owning up to mistakes.	0,661
OK28* - Telling polite lie is preferable to telling the unpleasant truth.	0,691
OK36 - People generally are what they appear to be.	0,536
OK12* - Tactfulness, smartness, and even a little manipulation are needed to get things done.	-
<b>Subscale 5: Proactivity</b>	<b>(KMO = 0,662; Cronbach's <math>\alpha</math> = 0,569; % = 44,296%; <math>\Lambda</math> = 1,772)</b>
OK05 - Preventive actions on most matters.	0,733
OK13 - Seniors encouraging their subordinates to think about their development and take action in that direction.	0,569
OK21 - Considering both positive and negative aspects before taking actions..	0,754
OK29 - Prevention is better than cure.	0,584
OK37 - A stich in time saves nine (If you fix a small problem right away, it will not become a bigger problem later.)	-
<b>Subscale 6: Cooperation</b>	<b>(KMO = 0,619; Cronbach's <math>\alpha</math> = 0,569; % = 45,242%; <math>\Lambda</math> = 1,81)</b>
OK07 - Team work and team spirit.	0,783
OK15 - Accepting and appreciating help offered by others.	0,809
OK31* - Usually, emphasis on team work dilutes individual accountability.	0,500
OK39 - Employees' involvement in developing an organization's mission and goals contributes to productivity.	0,542
OK23* - Performing immediate tasks rather than being concerned about large organizational goals.	-
<b>Subscale 7: Experimentation</b>	<b>(KMO = 0,767; Cronbach's <math>\alpha</math> = 0,767; % = 59,289%; <math>\Lambda</math> = 2,372)</b>
OK08 - Trying out innovative ways of solving problems.	0,806
OK16 - Encouraging employees to take fresh look at how things are done.	0,830
OK24 - Making genuine attempts to change behavior on the basis of feedback.	0,641
OK32 - Thinking out and doing new things tones up the organization's vitality.	0,788
OK40* - In today's competitive situations, consolidation and stability are more important than experimentation.	-
<i>Cronbach's <math>\alpha</math> for the entire modified questionnaire is 0,917</i>	

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

Rotation converged in 6 iterations.

Note: \* items were recoded;  $\Lambda$  - eigenvalue of the principal component; % - percent of explained variance

Source: Authors

## 5. DISCUSSION AND CONCLUSIONS

Based on the performed analysis, the research question was answered, which leads to the conclusion that hypothesis H1 isn't rejected; it is possible to identify and measure perceptions of dimensions (influencing factors) of organizational culture in organizations from Serbia and Southern California using the modified Pareek's OCTAPACE instrument for assessing organizational culture.

With this research we tried to determine whether it was possible to modify Pareek's OCTAPACE instrument for measuring organizational culture in order to measure perceptions of dimensions (influential factors) of organizational culture in organizations from Serbia and Southern California. The results thus obtained could be further used in comparative analyses, and to identify the key differences between the organizational cultures of organizations from Serbia (transitional economy) and Southern California (standard for developed or knowledge economy). Furthermore, the key differences thus identified would serve as guidelines for the development of organizational culture (considered one of the key characteristics of an organization that affects its performance) in organizations from Serbia (and similar transitional economies), and thus contribute to the efficient and effective use of already scarce resources in transitional economies.

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