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# Effect of the University organizational culture perception on students' commitment: the role of organizational identification

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**Abstract.** The study is aimed to identify the way organizational culture contributes to the students' commitment to the University. In addition, the linkage of organizational identification and commitment is examined. Applying the quantitative methodology to collect the bachelor students' data the questionnaire was constructed. The questionnaire includes measures for identification by Kreiner and Ashforth, Organizational Culture Instrument (OCAI) based on competitive Values Framework (CVF) by Quinn and Cameron and Porter Organizational Commitment Questionnaire (OCQ). After that, the data analysis was provided with conducting of Cronbach-alpha and T-Test, providing descriptive statistics, applying Spearman correlation analysis and performing structure equitation modeling (SEM). By this token, we were able to build the university commitment model. Our findings show that students are getting more committal to the university, if there is an environment with strong Clan culture, emphasizing human relations and cooperation, with which students tend to identify themselves. Additionally, we defined that Market culture type with ideas of competition and Hierarchy type based on the formal procedures predict a decrease in students' commitment. Moreover, Adhocracy culture as innovation-based is not clearly understood by students. Hence, the discussion and implications are suggested to explain our results.

## Introduction

In the era of transformation, modern universities are considerably changing in the role they play as social institutes and the market players. Today, it is essential to construct the new structure, management policy and strategy to be successful [1]. A university of the 21<sup>st</sup> century is not just a science-based organization, but rather competitive innovator and partner for the business. According to Clark, universities' transformation depends on their initial status, reputation or ambitious that push to search for changing and development strategies, which usually put in the unique context of their history and prior goals. However, the so-called 'entrepreneurial universities' are in greater demand due to their successful innovation activities in combination with academic approaches, contributing to the high diversity and flexibility. These organizations are viewed as the business-oriented ones, that suggest corresponding processes to be applicable for new universities [2]. Consequently, the process of creation of an effective strategy should be formulated according to the needs of actors and stakeholders, who defines the university's activities outcome [3].



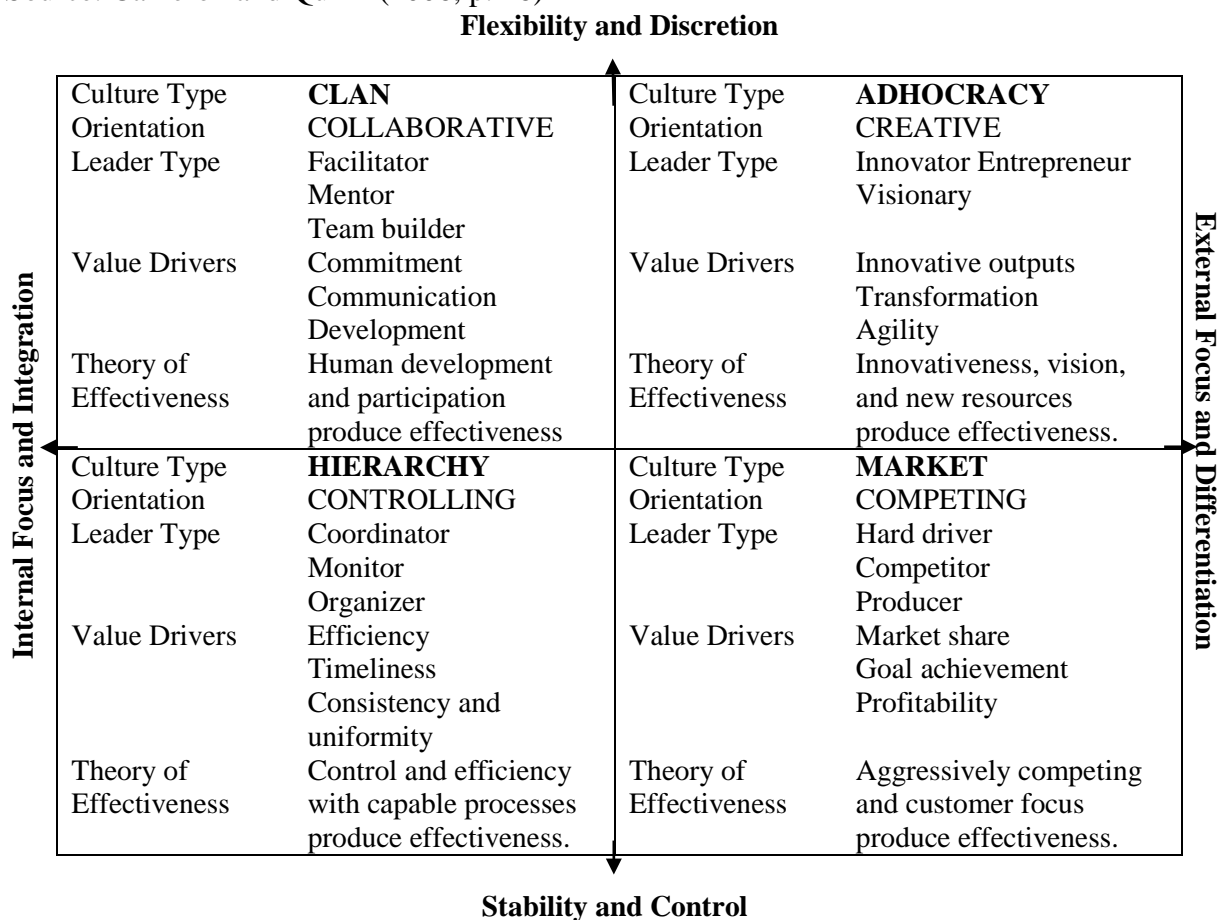
In this study, the university is observed via the students’ perception of organizational culture, it hypothetically affects the relations’ students build up with their alma-mater. The research questions to be answered in the current paper are the following:

- (1) How the perception of organizational culture affects organizational commitment among students?
- (2) What is the role of organizational identification in the students’ commitment to the University?

*The peculiarities of organizational culture in universities*

The key concept of this study is organizational culture. It should be emphasized that this term was originally applied in the context of business and became rather popular at the end of the 20<sup>th</sup> century [4]. The commonly used definition had been formulated by Schein [5] and suggested that organizational culture could be understood as “a set of basic tacit assumptions about how the world is and ought to be that a group of people share and that determines their perceptions, thoughts, feelings and, to some degree, their overt behavior”. Later, the sphere of organizational culture usage was broadened by the university environment, as educational organizations were analyzed via organizational perspectives. Thuswise, Tierney [6] as a pioneer, applied the term of ‘organizational culture’ in context of higher education, observing various sources to create the framework for future researches. It was emphasized that college organizational culture consisting of mission, strategy, leadership and environmental aspects could be observed in the university and become a basis for managerial decisions and strategic planning.

**Figure 1.** The Competing Values of Leadership, Effectiveness, and Organizational Theory  
Source: Cameron and Quinn (2006, p. 46)



Nowadays, there are several approaches to define the university's organizational culture. They were summarized by Lacatus [7] in three models. The first approach arose from the Competitive Values Framework (CVF) developed by Queen and Cameron, as the managerial perspectives [8]. As can be seen in Figure 1, this model has the following four basic types of culture:

- Market culture (with emphasis on competitive advantage),
- Clan culture (focusing on the values of human relations and common activities),
- Hierarchy culture (the main feature is role and status subordinate communication, regulated and formalized activities)
- Adhocracy culture (ideas of innovation and creativity).

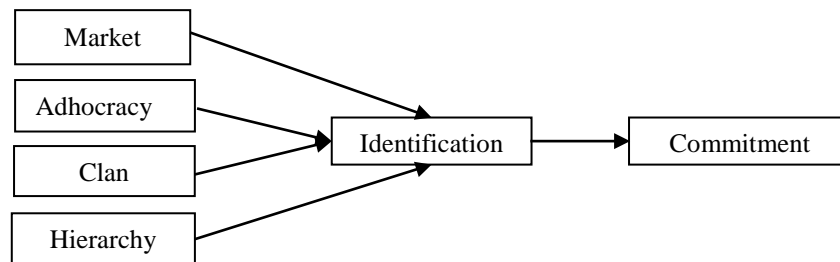
The second approach is the McNay model of university types that include the combination of the following factors; Enterprise, Corporate, Collegiate and Bureaucratic. Finally, the third classification of universities derives from their prior functions: The Humboldtian model (research and education as a united process), The Napoleonic model (the two main kinds of activities are teaching and research, separated from one another), and The Anglo-American model (aimed to fulfill the market needs).

#### *The concept of organizational commitment and identification*

Organizational culture may greatly contribute to the organizational processes being the part of the complicated systems of social and group phenomena that create an internal environment where employees and students are actors with their own interests and attitudes. Evidently, there is a great variety of relations that actors may demonstrate toward the organization. Based on the social identity theory, individuals define themselves according to the group they belong to, this is the '*cognition of oneness*' or *identification* [9]. Actually, the process or state of identification may be rather unconscious, while defined and formulated attitudes of the individual construct the *commitment*.

Then, it is essential to provide evidence of the differences between identification and commitment in the context of the university as the organization. According to Podnar, Golob, and Janjini [10], the identification and commitment are considered to be unequal. In that study, the concept of organizational identification is double-nature and the empirical research resulted in the fact that the identification with the organization includes both group and corporate identity, hence, identification is not that simple and easily operationalized. The next research aimed to construct the multidimensional analytical model of university identity. That study suggests that identity consists of four aspects, namely, organizational identity, symbolic identity, image and reputation [11]. The model demonstrates that the university identity is broader than organizational identification and cannot be used equally. Emphasizing the relations between organizational identity and organizational culture, the paper "Theorizing university identity development: multiple perspectives and common goals" [12] may be referred. Here, researchers state that organizational identity is defined as "as the central and ongoing representations of a university that suggest shared beliefs, values, and organizational culture, which over time create metaphors for its unique qualities".

In modern reality, universities are implementing the new culture that through practices and incorporated beliefs may provide the development of a big range of elements like university identity and reputation [2]. In addition, a positive image and reputation among students as clients and stakeholders can provide a competitive advantage. The consequences of that kind are illustrated via the paper of Pinna and others [13], providing the research on the university identification that influences the students' desire to recommend the university and somehow "promote" it. The conclusion was formulated as the relations appeared between the university and students brought additional benefits for the organization, there it resulted in volunteer promotion to attract new students in the future. Therefore, it is possible to assume that the perception of organizational culture through the identification with the university as a mediating variable can affect organizational commitment, as shown in Figure 2.

**Figure 2.** The theoretical model for commitment to the university.

Overall, organizational culture and students' attitudes toward university reflected by identification and commitment may be beneficial in terms of transformation and development under the digital era challenges.

## Research method

### 1. Research design

The research was conducted among bachelor students in one of the prestigious universities located in St. Petersburg. The research design included a survey questionnaire of four parts measuring identification and commitment to the University as well as current and preferred organizational culture.

The first part was dedicated to the organizational identification based on the Kreiner and Ashforth expanded model [14]. This questionnaire includes 24 statements about the University measuring four dimensions namely, identification with the organization, disidentification, ambivalent and neutral identification degree. The 7-point Likert scale was used (1 – strongly disagree to 7 – strongly agree).

The second and third parts measure organizational culture by using the OCAI (Organizational Culture Assessment Instrument) methodology developed by Quinn & Cameron [8]. This questionnaire provides details about six characteristics of the organization, namely, Dominant Characteristics, Organizational Leadership, Management of Employees, Organization Glue, Strategic emphases, Criteria for success. Each characteristic has four statements that correspond to the four culture types. A test-taker was asked to divide 100 points over statements to evaluate the current and preferred organizational culture of the university.

The fourth part gauges the level of organizational commitment. This questionnaire includes 15 statements from the Organizational Commitment Questionnaire (OCQ) designed by Porter [15]. The 7-point Likert scale was used, where “1” – “strongly disagree” to “7” – “strongly agree”. The service “Google forms” was applied to conduct this survey.

### 2. Sample

The data were gathered via an anonymous online survey conducted in 2019. Altogether, 150 students received instructions on how to fill in Google forms with questionnaires and demographic characteristics. In all, 118 participants sent fully completed forms back for further analysis. Overall, the response rate was 78.67% that was acceptable for online surveys [16]. The survey was distributed via the social network platform titled VKontact. We used the proportionate stratification technique [17] to sample students from the five faculties of the University as presented in Table 1. Males made up 42.3% of the sample composition, and females made up 57.6%, with a mean age of 19.93 (SD=0.730) for both genders.

**Table 1.** Sample distribution across University faculties.

Title of the University faculties	<b>Percentage of students studying in a particular academic year</b>			
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	% in the sample	% in the sample	% in the sample	% in the sample
School of Arts and Humanities	0,0%	4,2%	5,1%	0,0%
School of Social Sciences and Area Studies	9,3%	7,6%	12,7%	0,0%
School of Physics, Mathematics, and Computer Science	0,0%	0,0%	5,1%	0,0%
School of Economics and Management	4,2%	22,9%	3,4%	1,8%
School of Law	0,8%	8,5%	14,4%	0,0%
<b>Total</b>	14.3%	43.2%	40.7%	1.8%

### 3. Data analysis method

In this study, the following variables were defined and measured: perception of organizational culture, commitment and identification along with demographic characteristics. The statistical analyses were performed via R-Studio. Firstly, the descriptive statistics were performed due to the Kolmogorov-Smirnov distribution test of the examined variables. The reliability Cronbach-alpha criteria were applied for scales used to be appropriate. The T-test was defined to detect the differences in the different culture type perception and levels of identification demonstrated. The connection among the variables was verified by using the Spearman correlation index. Finally, Structural Equation Modeling, namely, path analysis, was performed to provide the model of the university commitment via existing organizational culture and the identification's role in it. Four types of organizational culture served as independent variables, Organizational identification as a mediating variable and organizational commitment as a dependent variable. In order to specify model fit, we applied three types of fit indices, notably, absolute fit dimensions ( $\chi^2$ , RMSEA, GFI), incremental fit dimensions (NFI, NNFI (TLI), CFI) (Hooper et al. 2008). Likewise, the probability level (p-value) and degree of freedom (df) were observed [18]. Concerning root mean square error of approximation (RMSEA), the threshold has been acceptable at the statistic within 0.05 and 0.08. Values greater than 0.95 have been suitable for goodness of fit index (GFI), normed-fit index (NFI), non-normed fit index in EQS (NNFI) or Tucker-Lewis index (TLI), and comparative fit index (CFI).

## Results

### 1. Organizational culture in the University

After applying the data analysis steps the following findings were detected. As shown in Table 2, students demonstrate particular issues toward the existing organizational culture in the University. In this case, the dominant type is the Market culture, while the Adhocracy culture is seemed to be not clearly understood by the students, as the distribution of mean value is rather vague. Additionally, reliability analysis showed that the scale, measuring the Adhocracy culture, poorly correlate to the overall scale of the OCAI instrument in our case.

It was found out that the distribution for the culture types is not equal after examining the data obtained. Providing the graphical comparison, it resulted in the fact that the distribution of Adhocracy culture resembled bimodal (with two peaks) type distribution in comparison with other types. As the next step, the reliability test was performed. Examining OCAI scales, the Cronbach alpha coefficient

was ( $\rho = 0.78$ ), but the item statistics showed that the correlation for Adhocracy measures are much lower  $r(0.16)$  in comparison to Market  $r(0.65)$  or Clan culture items  $r(0.63)$ .

**Table 2.** The Mean and Standard deviation for the culture types corresponding with CVF.

Variable	Mean	SD	Median	Skewness
1. Adhocracy culture	27.71	7.93	28.33	1.37
2. Clan culture	24.99	11.36	24.17	1.22
3. Hierarchy culture	19.69	8.96	19.58	1.03
4. Market culture	29.28	10.36	27.50	2.06
5. Adhocracy culture (preferred)	26.58	9.09	26.67	2.32
6. Clan culture (preferred)	36.24	14.12	33.33	1.14
7. Hierarchy culture (preferred)	17.50	9.04	18.33	1.45
7. Market culture (preferred)	21.51	9.31	21.67	2.49

As for comparing current and preferred culture values, the T-Test was conducted to define the differences between culture types. Thus, the current culture is seemed to be rather balanced. The paired T-test showed significant differences for Clan, Market and Hierarchy types that resulted in the differences of cultural profiles. For current Clan culture value ( $M = 24.99$ ,  $SD = 11.36$ ) and preferred Clan culture value ( $M = 36.24$ ,  $SD = 14.12$ ) with  $t(117) = -8.2894$ ,  $p < .05$ , that reported the Clan type is desired to be more performed in the University. For current Market value ( $M = 29.28$ ,  $SD = 10.36$ ) and preferred one ( $M = 21.51$ ,  $SD = 9.31$ ) while the t-test  $t(117) = 7.899$ ,  $p < .05$  gave that students desire it to be less expressed, the same result was for the Hierarchy type  $t(117) = 2.4321$ ,  $p < .05$ . Actually, there were no significant differences regarding Adhocracy culture.

The next step was to define the relation between the variables by using the Spearman correlation, as presented in Table 3:

**Table 3.** Means, standard deviations, and correlations.

Variable	M	SD	1	2	3	4	5	6	7	8
1. Ambivalent identification	<b>0.21</b>	<b>0.41</b>								
2. Desidentification	<b>0.20</b>	<b>0.43</b>	<b>.89**</b>							
3. Neutral identification	<b>0.11</b>	<b>0.45</b>	<b>.68*</b>	.62						
4. Identification	<b>0.05</b>	<b>0.45</b>	-.61	-.61	<b>-.91**</b>					
5. Commitment	<b>0.12</b>	<b>0.39</b>	-.38	-.36	-.63	<b>.69**</b>				
6. Adhocracy culture	<b>0.04</b>	<b>0.39</b>	-.17	-.25	.25	-.18	-.18			
7. Clan culture	<b>-0.04</b>	<b>0.50</b>	-.61	<b>-.68*</b>	-.53	<b>.61**</b>	<b>.63*</b>	.03		
8. Hierarchy culture	<b>0.06</b>	<b>0.42</b>	.41	.52	.17	-.32	-.30	-.66	-.52	
9. Market culture	<b>0.04</b>	<b>0.44</b>	.36	.44	.25	-.36	<b>-.49*</b>	-.08	<b>-.87**</b>	.27

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. \* indicates  $p < .05$ . \*\* indicates  $p < .01$ . Values for preferred culture types were not included as would not be used in the following analysis.

The correlation analysis showed that there were strong positive relations between commitment and identification ( $r=0.69$ ), Clan culture and identification ( $r=0.61$ ), which provide the basis for the hypothesis on the role of identification in action with organizational culture. While the negative relations were defined for the Clan culture and disidentification ( $r=-0.68$ ), Market culture and Clan

culture ( $r=-0.87$ ) probably, the values characterizing these types are controversial, as well as Market culture and commitment ( $r=-0.49$ ).

### 2. Role of identification

Concerning the levels of identification and commitment, it was found that either the identification or neutral identification dominated among students while measures for both disidentification and ambivalent identification showed insignificant result  $p > .05$  according to One-Way ANOVA.

**Table 4.** The mean and Standard deviation for the identification levels and commitment.

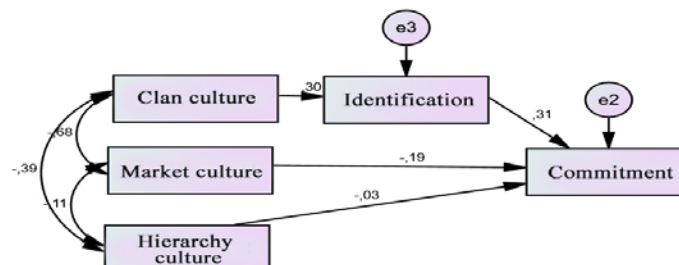
Variable	Mean	SD	Median	Skewness
1. Ambivalent identification	2.87	1.24	2.83	0.46
2. Disidentification	2.86	1.13	2.67	0.45
3. Neutral identification	3.57	1.53	3.33	0.33
4. Identification	3.75	1.36	3.83	-0.08
5. Commitment	4.00	0.54	3.93	0.80

The empirical study of the Chelyabinsk State University showed that the identification can arise from the certain type of culture, its high-level associates with clan or adhocracy culture, which is considered to be desirable for the university environment, while the true state is characterized by the bureaucracy type with a rather low level of self-identification [19]. As can be seen in the correlations table, we may expect that the more Clan culture expressed, the fewer students reject organizational values and aspects and the stronger the identification is getting. Moreover, university identity is formed by various factors, and one of them is organizational identification [10]. Such assumptions provide the basis for the model we got as the result of the research conducted.

### 3. Path analysis

Ultimately, in order to understand the links among organizational culture, organizational commitment and identification a few path models have been tested that explain the further relationship among these variables. However, the only model with organizational identification as a mediating variable demonstrated significant results with good values of fit indices (Figure 2). In addition, adhocracy culture was excluded from this analysis due to the absence of the normal distribution as stated below. The fit indices are moderately good ( $df=2$ ,  $p=0.295$ ,  $\chi^2=2.44$ ,  $RMSEA=0.043$ ,  $GFI=0.981$ ,  $NFI=0.930$ ,  $NNFI$  (TLI)= $0.945$ ,  $CFI=0.984$ ). Two types of organizational culture, namely market and hierarchy, demonstrate significant negative influence on Organizational commitment (hierarchy= $-0.03$ , market= $-0.19$ ), while clan culture affects positively organizational commitment via identification.

**Figure 3.** Structural equation modelling of commitment to the university.



RMSEA=,043; p=,295; CFI=,984; TLI=,945; NFI=,93



## Discussion

The purpose of the paper was to examine the relations of organizational culture and commitment and what role that might play in the university environment. To answer the question on identification role and analyze the hypothesis on the mediating role of the identification as characteristics of relations 'student-university' in the commitment formation the structural equation modeling was applied. The theoretical model (Figure 1) assumed that organizational culture of the University, consisted of four aspects, somehow related to the identification level, that was defined as rather a strong predictor for the commitment.

However, descriptive statistics and reliability analysis showed that the aspect of Adhocracy culture, emphasizing the innovations and creative decisions, was not understood clearly by students. It seems that innovation and innovative activities are still alien to the Russian context nowadays, though there is a tendency to search for creative decisions and projects in the sphere of business and education as they are a driver for economic growth and social development [20]. Additionally, Clan culture occurred to be more desirable than other culture types. This preference appears in various contexts, even enterprises' organizational culture in Russia is characterized by collectivism and familism [21]. On the other hand, the transformation of the economy contributes to the educational institute and the social environment are getting more and more oriented to the cooperation and building up the interpersonal communication. Consequently, agile approach as the up-to-date methodology example is getting popular not only in the commercial companies and in the educational processes, putting the person and teamwork in the core position [22]. All these ideas suggest that the communication and value of human relations are appreciated in society.

Nevertheless, the final model brought us other findings. It has been defined that identification is predicted only by the Clan culture, and the effect works in the case of significantly expressed Clan culture while Market and Hierarchy cultures decrease the commitment level of students directly. The possible interpretation of the result is that both Hierarchy and Market aspects are easily detected by the specific environment with either strict formalization or rather aggressive competition, hence, being observed, these aspects create an unpleasant image and then separate students and university. However, Clan culture cannot be easily observed, this is the environment, where person may be integrated via common ideas, beliefs and actions, hence, it is whether attractive to a particular individual or not. In the case that the environment suits the person, the identification appears and then contribute the conscious commitment.

## Limitations

This study has several limitations. First, this research was confined to a single University located in a mega-city. Therefore, the findings cannot be generalized to other higher educational institutions placed in smaller towns. However, taking into account the pressures created by the contemporary economic reality for the university, it is possible to apply these results in other countries.

Second, this was a cross-sectional study conducting at one-point in time. As a result, this limits to discover a picture of organizational culture, commitment and identification evolving over time. Thus, a longitudinal design of further research is important for the development of this field.

## Conclusion

To summarize the main ideas and findings, we have shown that strong Clan culture may contribute to identification demonstrated, while other culture types are not associated with identification. Despite that not all cultural aspects are related to the identification itself, we have captured the condition of positive relations and attitudes formation in our particular case. In our study identification performed as a mediator that predicted the commitment with the University, though it works when the Clan culture is strong in the organization, which allows people to be engaged. Finally, we performed the model of the described phenomenon.

We assume that the case examined maybe not just an isolated incident, but even the consistent pattern in terms of Russian cultural aspects and peculiarities of social order issues. Hence, the study may be applied to other universities in the future, to get more evidence.

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