

ORGANIZATIONAL CULTURE: A COMPARATIVE ANALYSIS FROM THE TURKISH CONSTRUCTION INDUSTRY

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ABSTRACT

With the worldwide globalization trends, studies of organizations and their organizational cultures have gained more importance. However, there remains a limited empirical understanding of organizational culture in the context of construction.

This study examines the cultural profile of organizations operating in Turkish Construction Industry. The data reported are from 107 contracting and 27 architectural firms. In the study, Cameron and Quinn's OCAI (Organizational Culture Assessment Instrument) was used to compare organizational cultures of the sampled firms. The findings show that the construction industry has been dominated by companies as clan and hierarchy type organizations. In addition, the analysis reported here indicates organizational culture differences in terms of firm type, size, and age.

Keywords: organizational culture, construction sector, Turkey

1. INTRODUCTION

Understanding of organizational culture is fundamental to understanding what goes on in organizations, how to run them and how to improve them (Schein, 1992). Organization culture is defined as the shared assumptions, beliefs and 'normal behaviors (norms) present in an organization. Most organizational scholars and observers recognize that organizational culture has a powerful effect on the performance and long-term effectiveness of organizations. Cameron and Quinn (1999) propose that what differentiates successful firms from others is their organizational culture.

With the worldwide globalization trends, special attention has been given to the study of organizations and their cultures. Empirical studies of organizational culture have been carried out across various countries and industries. Within the construction context, culture studies also have attracted interest. For instance, Maloney and Federle (1991, 1993) introduce the competing values framework for analyzing the cultural elements in American engineering and construction organizations. Zhang and Liu (2006), examine organizational culture profiles of construction enterprises in China. Ankrah and Langford (2005) highlight the cultural variability between organizations in the project coalition.

This paper aims to describe cultural profile of organizations by referring to results of a questionnaire study. The study was designed to analyze the current dominant culture types of organizations in the Turkish construction sector.

2. LITERATURE REVIEW

Despite different definitions of organizational culture, there is a general consensus among organizational researchers that it refers to the shared meanings or assumptions, beliefs and understandings held by a group. More comprehensively, Schein (1992) defined organizational culture as, *“a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration that has worked well enough to be considered valid and therefore to be taught to new members as the correct way to perceive, think and feel in relation to those problems.”* Similarly, Deshpandé and Webster (1989, p.4) proposed that organizational culture is *“the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them with norms for behaviors in the organization.”* As identified by these definitions, the concept of organizational culture is concerned with the values, beliefs, assumptions, and norms that inform organizational processes and behaviors.

Many writers have proposed a variety of dimensions and attributes of organizational culture. Among them, Hofstede has been very influential in studies of organizational culture. Drawing on a large sample of 116,000 employees of IBM in 72 countries, Hofstede identified four dimensions of culture. These four dimensions used to differentiate between cultures are: power distance, uncertainty avoidance, masculinity/femininity and individualism/collectivism. Beyond these, Hofstede (1997) also identified the process/results oriented, employee/job oriented, parochial/professional, open/closed system, loose/tight control and normative/pragmatic dimensions of culture. These dimensions have seen adaptation and application in studies of organizational culture (Sødergaard, 1996)

Other comprehensive studies into organizational culture have been carried out, notably by Trompenaars and Hampton-Turner (1993) who conducted extensive research into the attitudes of 15,000 managers over a 10 year period in 28 different countries. They proposed five cultural dimensions: Universalism/ particularism; Collectivism/ individualism; Neutral/affective relationships; Diffuse/specific relationships; Achievement/ascription

When dealing with a multitude of dimensions, typologies are employed as an alternative to provide a simplified means of assessing cultures. In this regard, typologies have been developed to use in studies of organizational culture. Notable contributors to the use of typologies include Handy (1993, 1995) who identified the club, role, task and person typologies and Quinn (1988) who identified the market, hierarchy, adhocracy and clan typologies of culture.

Since the culture is regarded as a crucial factor in the long-term effectiveness of organizations, it becomes important to be able to measure organizational culture. In response to this issue, a range of tools designed to measure organizational culture have been developed and applied in industrial, educational, and health care settings over the last two decades. All of them examine employee perceptions and opinions about their working environment (the so-called "climate" of an organization) but only a few, such

as the Competing Values Framework and the Organizational Culture Inventory, try to examine the values and beliefs that inform those views (Scott, 2003).

In this study, the Competing Values Framework (CVF) was selected to assess organizational culture. The CVF is based on two major dimensions. The first dimension emphasizes the organizational focus (internal versus external), whereas the second one distinguishes between the stability and control and the flexibility and discretion. These two dimensions create four quadrants, each representing a major type of organizational culture (see Figure 1). The cultural values represented in the four quadrants have existed in the literature (see Cameron and Quinn, 1999 for detailed information).

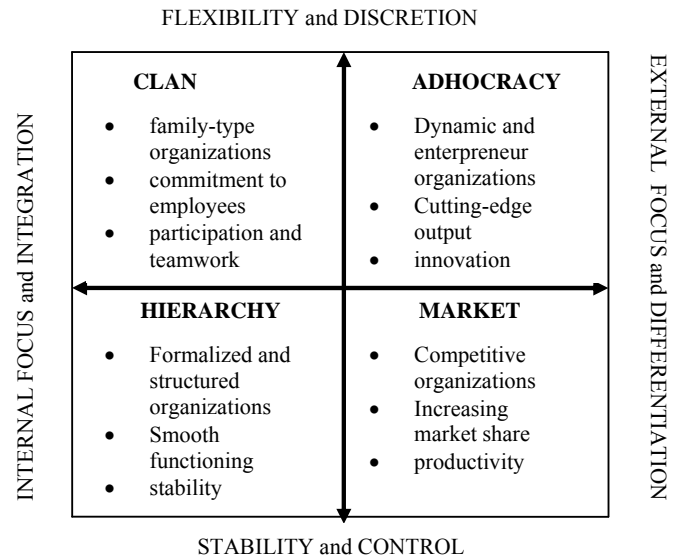


Figure 1. The Competing Values Framework (Cameron and Quinn, 1999)

3. RESEARCH METHODOLOGY

In this study, Quinn’s OCAI (Organizational Culture Assessment Instrument) was used to diagnose organizational culture of contracting and architectural firms operating in the Turkish Construction Sector. A number of 351 firms were contacted, and only 134 of them participated in the study giving a response rate of 38.18.

Sample

Table 1 shows the characteristics of the sample in the study. For the purpose of this study, companies having fewer than 50 employees were classified as small, those with 51-150 as medium and those with more than 150 as large. 46 per cent of the respondent companies could, therefore, be classified as small, 25 per cent as large and 28 per cent as medium. The contracting firms in the survey were generally medium and large-sized whereas the architectural practices were small in size.

Table 1. Characteristics of Sample

Characteristics of Sample	Frequency	Percentage
Number of Firms		
Contracting	107	79.9
Architectural	27	20.1
Total	134	100.0
Number of respondents		
Contracting	723	87.5
Architectural	103	12.5
Total	826	100.0
Gender		
Female	207	25.1
Male	619	74.9
Total	826	100.0
Age of respondents (years)		
30 & under	220	26.6
31-40	292	35.4
41-50	199	24.1
51& above	109	13.2
Missing	6	0.7
Total	826	100.0

Construction of the questionnaire

The questionnaire comprised two parts. Part I contained questions regarding personal characteristics of all respondents. Part II was adopted from the “Organizational Culture Assessment Instrument (OCAI)” developed by Cameron and Quinn (1999). The OCAI is based on a theoretical model titled the “Competing Values Framework”. The “Competing Values framework is based on six organizational culture dimensions (dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and criteria of success) and four dominant culture types (clan, adhocracy, market, and hierarchy). The OCAI was chosen because it has been tested and proved to be most valid and reliable in measuring organizational culture.

Responses were scored on a 5-point Likert scale. In this scoring system, for each of the five response categories (completely true, mostly true, partly true, slightly true, never true) a score of 1-5 was assigned, with the highest score of 5 being assigned to ‘completely true’.

Reliability coefficients (Cronbach alpha) were calculated for each of the different culture types being assessed by the instrument. Coefficients were .89 for the clan and adhocracy cultures, and .86 for the market and hierarchy cultures.

4. RESULTS AND DISCUSSION

A cultural profile score for each organization was obtained by averaging the respondent’s rating for each cultural type across the six dimensions. This provided an indication of the cultural orientation of sampled firms based on the four cultural types. The average scores for all the participating companies are shown in Table 2. As is seen from the table, the dominant culture of the sample is Clan culture. Respondents identified Hierarchy type as the next most dominant in their organizations. These predominant two cultures were followed by Adhocracy and Market, respectively.

Table 2. Mean Scores on the Organizational Culture Dimensions for the sample

Dimension	Clan	Adhocracy	Market	Hierarchy
Dominant characteristics	3.61	3.19	3.58	3.04
Organizational Leadership	3.39	3.38	2.86	3.84
Management of Employees	3.84	3.13	3.17	3.66
Organization Glue	3.83	3.69	3.09	3.25
Strategic Emphases	3.53	3.75	3.64	3.90
Criteria of Success	3.66	3.52	3.36	4.04
Average of the six dimensions				
Cultural profile of the sample	3.64	3.44	3.28	3.62

Scale: 1=strongly disagree, 2= disagree, 3=neutral, 4=agree, 5= strongly agree.

Figure 2 shows a graphical presentation of the mean scores in each of the four culture types for the sample using the competing values framework axis and quadrants. As is seen from the figure, the sampled firms tend to have values consistent with employee focus or clan culture and internal process or hierarchy culture. The values consistent with external orientation and results focus are emphasized to a lesser extent.

This finding contributes to our understanding of the alignment between national and organizational cultures. According to Hofstede’s (1980, 2001) model of national culture, Turkey has been described as being high on the collectivism and power distance value dimensions. This suggests that organizational cultures in Turkish firms are characterized by both unequal (or hierarchical) and harmonious, family-like (clan) relationships. The finding is also consistent with the earlier observations of the Turkish society. Trompenaars and Hampden (1998) found Turkey to have the steepest hierarchy in its organizations. Turkish organizations are also described to be of the family-type (Trompenaars & Hampton-Turner, 1998). Another explanation of this finding is that the nature of state-business relations in Turkey appears to be a key factor which shapes organizational culture of the firms in the construction industry.

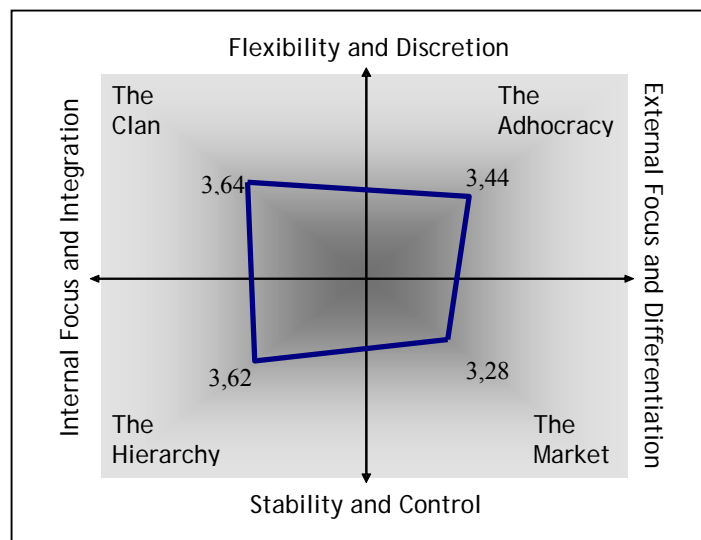


Figure 2. The Overall Cultural Profile of the Construction Industry

Independent sample t-tests were conducted on the overall scores for each of the four culture types to compare architectural and contracting firms. Items were randomly

pulled from the larger group in order to have equal sample sizes. The results, which are presented in Table 3, revealed a significant difference for the market culture type between contracting and architectural firms. This type is more dominant in the contracting firms than in the architectural practices ($t=3.849$, $p<0.0001$). This may be attributed to the characteristics of the contracting firms operating in more uncertain and unpredictable markets and environments, where market cultures are essential for survival.

Table 3. Cultural profile scores for firm type, size, and age

	n	<i>Culture Types</i>			
		Clan	Adhocracy	Market	Hierarchy
<i>Firm type</i>					
Architectural	27	3.75	3.39	2.93	3.47
Contracting	32	3.62	3.46	3.37	3.66
<i>t-value</i>		-1.193	0.590	3.849***	1.671
<i>Firm Size</i>					
Small	62	3.72	3.48	3.25	3.65
Medium	38	3.80	3.55	3.41	3.82
Large	34	3.33	3.25	3.19	3.35
F-value		9.201***	3.507*	1.592	7.553**
<i>Firm Age</i>					
≤15	45	3.62	3.45	3.37	3.60
16 - 25	46	3.87	3.69	3.42	3.86
>25	39	3.47	3.21	3.06	3.44
F-value		6.919**	9.233***	3.172	5.505*

* $p<0.01$ ** $p<0.001$ *** $p<0.0001$

Analysis of variance (ANOVA) test was performed to examine organizational culture differences by firm size and age of the firm. A post hoc Scheffé test was used to identify significant differences among subgroups. Three of the ANOVA results for firm size were significant. Scheffé test, at a significance of $p<0.05$ level, revealed that the mean scores for large firms for clan and hierarchy cultures were significantly lower than those of small and medium-sized firms. This finding failed to support Cameron and Quinn (1999), who related the internal process model to large organizational size, and were inconsistent with many scholars who reported that larger organizations are characterized by numerous hierarchical levels, standardized procedures, increased specialization, limited flexibility and bureaucratic control (Child, 1974; Keats & Hitt, 1988; Lawler, 1997; Mintzberg, 1979). Analysis of Variance was also significant for adhocracy or open systems model. The difference was between medium and large sized firms.

Significant group differences were also found in terms of organizational age. Scheffé tests, at a significance of $p<0.05$ level, indicated that organizations in operation between 16 and 25 years scored significantly higher on clan, adhocracy, and hierarchy cultures than older ones. This finding was inconsistent with organizational life cycle theories in which it is proposed that more hierarchical and bureaucratic structures evolve as organizations grow and age (Greiner, 1998; Kriesi, 1996).

The preceding findings may imply that organizational cultures are shaped not only by contextual factors, but also by cultural profile of organizational members. Thus, further research is needed to determine the generalizability of this study's findings.

A k-means cluster analysis was used for combining sampled firms into clusters (groups) that describe cultural configurations of firms with similar cultural characteristics. In order to determine the appropriate number of groups, a hierarchy cluster analysis was first conducted, using Ward's method and squared Euclidean distance as a distance measurement. Results from the hierarchy cluster analysis showed that there are three underlying patterns of cultural types among sampled firms. This number was then used as seed points for the non-hierarchical k-means analysis. Table 4 presents the characteristics of each of the groups obtained, using the culture types. Firms of the first cluster obtained low scores on market, and moderate scores in the others. 45 organizations are characterized with cluster I. Cluster II comprised organizations with low scores for the four culture types. 25 organizations belong to this group. Cluster III contained the largest sample, with 64 organizations. In this group, there was a high emphasis on hierarchy and clan cultures and to a lesser extent adhocracy and market cultures.

Table 4. Description of the three cultural clusters

Cultural types	Cultural clusters			F-value
	Cluster I (n=45)	Cluster II (n=25)	Cluster III (n=64)	
Clan	3.62	2.83	3.98	108.508***
Adhocracy	3.21	2.76	3.87	167.741***
Market	2.92	2.79	3.73	102.916***
Hierarchy	3.47	2.82	4.04	182.701***

n= number of samples, ***p<0.0001

A close look at the data shows that there are similarities between the clusters. It is interesting to note that the firms in the three clusters had higher scores for clan and hierarchy culture types when compared to market and adhocracy types. This finding is inconsistent with the assumptions of Dasmalchian et.al (2000) that environmental unpredictability has a positive effect on market culture and a negative one on the clan culture. Dasmalchian et.al suggest that organizations operating in more unpredictable and uncertain markets are more likely to develop a value system that emphasizes results orientation and market focus, and de-emphasizes the culture of hierarchy and bureaucracy.

5. CONCLUSION

This paper presents the findings of a questionnaire survey conducted among organizations in the construction sector with the view of establishing their current cultural profiles. However, the conclusion of the study is limited to the sample studied. All companies are Turkey-based companies and therefore reflect the bias of the national culture.

The results reported in this paper indicated that most of the sampled organizations in the Turkish construction industry tended to have a mix of clan and hierarchical cultures, which did not match the demands of their competitive environments. What

the data tell us is that companies within the two sub-sectors emphasized stability and teamwork instead of maintaining productivity and innovation. Yet, they may find it difficult to survive in a fiercely competitive industry such as construction due to a mismatch between their culture and environment.

The study of organizational culture in the construction industry is still in a fledgling stage. We believe that studies of this sort will serve not only to enhance our understanding of organizational culture in the construction industry, but will ultimately point toward several issues that need to be investigated in future research.

6. REFERENCES

- Ankrah, N.A. and Langford, D.A. (2005). "Architects and contractors: a comparative study of organizational cultures", *Construction Management and Economics*, 23, pp.595-607
- Cameron, K.S. and Quinn, R.E. (1999). *Diagnosing and Changing Organizational Culture: based on the Competing Values Framework*, Addison-Wesley, New York.
- Child, J. (1974). "Predicting and Understanding Organizational Structure." *Administrative Science Quarterly*, 19 pp.168-185.
- Dasmalchian, A., Lee, S. and Ng, I. (2000). "The interplay between organizational and national cultures: a comparison of organizational practices in Canada and South Korea using the Competing Values Framework," *Journal of Human Resource Management*, 11(2), pp.388-412
- Deshpande, R. and Webster, F.E. (1989). "Organizational Culture and Marketing: Defining the Research Agenda," *Journal of Marketing* 53 (January): 3-15.
- Greiner, L. E. (1998). "Evolution and Revolution as Organizations Grow." *Harvard Business Review*, May-June.
- Handy, C.B. (1993). *Understanding Organizations*, Oxford University Press, New York.
- Handy, C.B. (1995). *Gods of Management: the changing work of organizations*, Oxford University Press, New York.
- Hofstede, G., (1980). *Culture's Consequences: International Differences in Work-Related Values*. Sage Publications, London.
- Hofstede, G. et.al. (1990). "Measuring Organizational Culture: A Quantitative and Qualitative Study Across Cultures." *Administrative Science Quarterly*, 35, (2), pp. 286-316.
- Hofstede, G. (1997). *Cultures and Organizations : software of the mind*, McGraw-Hill, New York.
- Hofstede, G. (2001). *Culture's consequences. Comparing values, behaviors, institutions, and organizations across nations*, Sage Publications, London.
- Keats, B. and Hitt, M. (1988). "A Causal Model of Linkages among Environmental Dimensions, Macro Organizational Characteristics and Performance." *Academy of Management Journal*, 31(3), pp.570-598.
- Kriesi, H. (1996). "The Organizational Structure of New Social Movements in A Political Context", in Doug McAdam, John D. McCarthy, and Mayer N. Zald (eds) *Comparative Perspectives On Social Movements*. Cambridge/New York: Cambridge University Press.

- Lawler III, E. (1997). "Rethinking Organization Size." *Organizational Dynamics*, 26(2), pp: 24-35.
- Maloney, W.F. and Federle, M.O. (1991). "Organizational culture and management." *Journal of Management in Engineering*, 7(1), pp.43-58
- Maloney, W.F. and Federle, M.O. (1993). "Practical models for organizational assesement." *Journal of Management in Engineering*, 9(1), pp.64-81
- Mintzberg, H. (1979). *The Structuring of Organizations*. Englewood Cliffs, NJ: Prentice Hall.
- Shein, E. (1992). *Organizational Culture and Leadership*, (2nd Ed), Jossey-Bass Publishers, San Francisco.
- Scott ,T., Mannion, R., Davies, H. and Marshall, M. (2003). "The quantitative measurement of organizational culture in health care: a review of the available instruments – Methods." *Journal of Health Services Research*, June.
- Sødergaard, M. (1996). "Hofstede's Consequences: A study of reviews, citations and replications." *Organization Studies*, vol.15, pp.447-456
- Trompenaars, F. and Hampden-Turner, C. (1993). *The seven cultures of capitalism: value, systems for creating wealth in the United States, Britain, Japan, Germany, France, Sweden, and the Netherlands*. London: Piatkus.
- Trompenaars, F. and Hampden-Turner, C. (1998). *Riding the Waves of Culture: Understanding Cultural Diversity in Business*, McGraw-Hill, New York.
- Zhang, S.B. and Liu, A.M.M. (2006). "Organizational culture profiles of construction enterprises in China", *Construction Management and Economics*, 24, pp:817-828