SciencePG
Science Publishing Group

Knowledge Sharing: Exploring the Links to Organizational Culture

Farshad Andam

Ministry of Cooperatives, Labor & Social Welfare, Tehran, Iran

Email address:

farshad.andam@yahoo.com

Abstract: Countless studies have examined the relationship between organizational culture and knowledge management, and yet there is little research done on the relationship between organization culture and knowledge sharing in public organizations. The purpose of this paper is to explore the relationship between organizational culture and knowledge sharing among Ministry of cooperatives, labor & social welfare employees'. Data was collected via a questionnaire designed to measure the relationship between organizational culture and all kinds of knowledge's sharing. The data collected from 193 Ministry of cooperatives, labor & social welfare headquarter experts was explored by regression analysis. Among organizational culture, clan culture leaded the employees to share embedded knowledge on request and to specific persons rather than unrequested to specific persons. Also, it can be deduced that market culture stimulated the employees to share embedded knowledge on request to everybody rather than on request and to specific persons. Furthermore, market culture urged the employees to share embedded knowledge unrequested to specific persons rather than on request and to specific persons. Moreover, 2.72% of variation in embedded knowledge sharing was explained by clan culture meanwhile, 3.92% of variation in embedded knowledge sharing was explained by market culture. The study was limited to the mentioned ministry, hence the further survey should be carried out in other Iranian and overseas organizations in order to conduct a comparative study.

Keywords: Knowledge Management, Knowledge Sharing, Organizational Culture

1. Introduction

Knowledge sharing proposed to be a conveyance behavior, through which people acquire knowledge from others [1]. Knowledge sharing was explained as "the communication of knowledge from a source in such a way that it is learned and applied by the recipient". One way to promote knowledge sharing is to include facilitators or knowledge brokers within organizations whose job are to build bridges to overcome the culture gap between researchers and decision-makers [2]. As knowledge sharing is more likely to be successful when there are ongoing interactions between stakeholders, having dedicated staff whose responsibilities are entirely focused on facilitating such interactions and in turn, knowledge-sharing opportunities can greatly increase knowledge-sharing effectiveness [3]. Meanwhile, studies indicate that organizational culture can have a significant influence on the long-term success of organizations [4]. The concepts of organizational culture and knowledge management as foundations to understanding how organizations behave and gain competitive advantage both have strong theoretical and empirical support [5]. To be truly effective, knowledge management requires an understanding of the culture in which it is embedded [6], [7] and this is imperative because organizational culture shapes members' knowledge sharing behaviours and influences how they learn [8]. In this paper, the relationship between organizational culture and each type of knowledge's sharing among Ministry of cooperatives, labor & social welfare employees' was explored.

Theoretical framework & hypotheses

1.1. Knowledge Sharing

Knowledge was indicated as a flow concept, could be used for communication between knowledge possessors and receivers [9]. Knowledge sharing was defined as 'the willingness of individuals in an organization to share with

others the knowledge they have acquired or created' [10]. Also, knowledge sharing is argued to lead to better business performance through improved decision making and coordination [11]. Adapting and extending a categorization of knowledge types suggested by Collins, all types of knowledge were defined as following [12]:

1.1.1. Embrained Knowledge

Embrained knowledge is knowledge that is dependent on conceptual skills and cognitive abilities. Fiol and Lyles reflect the predominant view of the distinctive status of abstract knowledge when they contrast 'routine' behavioural adjustments with what they term 'higher level' abilities to develop complex rules and to understand complex causations [13]. Perhaps the best known theorist of organization learning who has featured embrained knowledge is Argyris, whose theory of 'double-loop' learning encourages an explicit recognition and reworking of taken-for-granted objectives [14]. A recent account in this tradition is Senge who synthesizes personal insights, models, systems thinking and shared visions in a general account of organization learning [15].

1.1.2. Embodied Knowledge

Embodied knowledge is action oriented and is likely to be only partly explicit. A contemporary account of embodied knowledge is included in Zuboff: such knowledge, she says, depends on peoples' physical presence, on sentient and sensory information, physical cues and face-to-face discussions, is acquired by doing, and is rooted in specific contexts [16]. Other accounts include Scribner's description of 'practical thinking', i.e. problem-solving techniques which depend on an intimate knowledge of a situation rather than abstract rules [17], Hirschhorn's analysis of mechanization and his conclusion that operators' tacit understandings of machine systems are more important than their general knowledge [18], and Suchman's studies of how people spontaneously construct interpretations of technologies as they interact with them [19].

1.1.3. Encultured Knowledge

Encultured knowledge refers to the process of achieving shared understandings. Cultural meaning systems are intimately related to the processes of socialization and acculturation; such understandings are likely to depend heavily on language, and hence to be socially constructed and open to negotiation. As Swidler indicated, in periods of social transformation explicitly formulated ideologies become the main vehicle for promoting new recipes for action [20]. Following Pettigrew and Ouchi's discussions of organizational culture there has, of course, been considerable interest in the relevance to organizations of such processes [21], [22]. Within the literature on organizational learning, Srivastva and Barrett demonstrated how the imagery in the language of a group can change over time: as people grasp for new insights, they experiment with new metaphors into their talk which others may take up and develop [23]; and Czamiawska-Joerges illustrated how consultants explicitly

endeavour to manage this process [24].

1.1.4. Embedded Knowledge

Embedded knowledge is knowledge which resides in systemic routines. The notion of 'embeddedness' was introduced by Granovetter, who proposed a theory of economic action that, he intended, would neither be heavily dependent on the notion of culture (i.e. be 'oversocialized') nor heavily dependent on theories of the market (i.e. be 'under-socialized'): his idea was that economic behaviour is intimately related to social and institutional arrangements [25]. Following Badaracco, the notion of embedded knowledge explores the significance of relationships and material resources. Embedded knowledge is analyzable in systems terms, in the relationships between, for example, technologies, roles, formal procedures, and emergent routines [26].

1.1.5. Encoded Knowledge

Encoded knowledge is information conveyed by signs and symbols. To the traditional forms of encoded knowledge, such as books, manuals and codes of practice, has been added information encoded and transmitted electronically. Zuboff's analysis of the 'informating' power of information technologies explores the significance of this point for organizations: information encoded by decontextualized, abstract symbols is inevitably highly selective in the representations it can convey [16]. Poster's thesis on how the new information technologies may be 'culturally alien' and Cooper's analysis of the significance of technologies of representation for the theory of organization are amongst the writings which have complemented such lines of analysis [27], [28].

1.2. Organizational Culture

An organization's culture consists of practices, symbols, values and assumptions that the members of the organization share with regard to appropriate behaviour. The artefacts can include physical layout, the dress code, the manner in which people address each other and the overall feel of the place, to more permanent aspects such as archival records, products, statements and annual reports. Values are organizational norms, ideologies, charters and philosophies. Basic underlying assumptions are based on an organization's historical events that determine perceptions, thought processes, feelings and behaviour. The basic underlying assumptions are the least apparent, but are much more influential on behaviour than espoused artefacts and values [29]. Various studies provide evidence to suggest that cultural values influence knowledge sharing behaviours by shaping patterns and qualities of interactions needed to leverage knowledge among individuals [5], [6], [30]. Culture establishes an organizational context for social interaction and creates norms regarding what is 'right' and 'wrong' [6], [31]. Therefore, it can influence how people communicate and share knowledge. Furthermore, evidence suggests that organizational structure has an impact on approaches to KM

[32]. For example, De Long and Fahey argued that different cultural attributes influence knowledge sharing across the organization (horizontal) and throughout the various levels of an organization (vertical). Finally, cultures that reward individuals for sharing behaviours and encourage the use of existing knowledge create different knowledge sharing patterns than cultures that do not promote such activities [6]. The key to assessing organizational culture, therefore, is to identify aspects of the organization that reflect key values and assumptions in the organization and then to give individuals an opportunity to respond using their underlying archetypal framework. Organizational Culture Assessment Instrument (OCAI) allows this to occur. Six content dimensions serve as the basis for the OCAI:

1   The dominant characteristics of the organization, or what the overall organization is like.

2   The leadership style and approach that permeate the organization.
3   The management of employees or the style that characterizes how employees are treated and what the working environment is like.
4   The organizational glue or bonding mechanisms that hold the organization together.
5   The strategic emphases that define what areas of emphasis drive the organization's strategy.
6   The criteria of success that determine how victory is defined and what gets rewarded and celebrated.

In combination, these content dimensions reflect fundamental cultural values and implicit assumptions about the way the organization functions [33].

All types of organizational culture were defined in the following and the theoretical model was depicted in Figure 1.
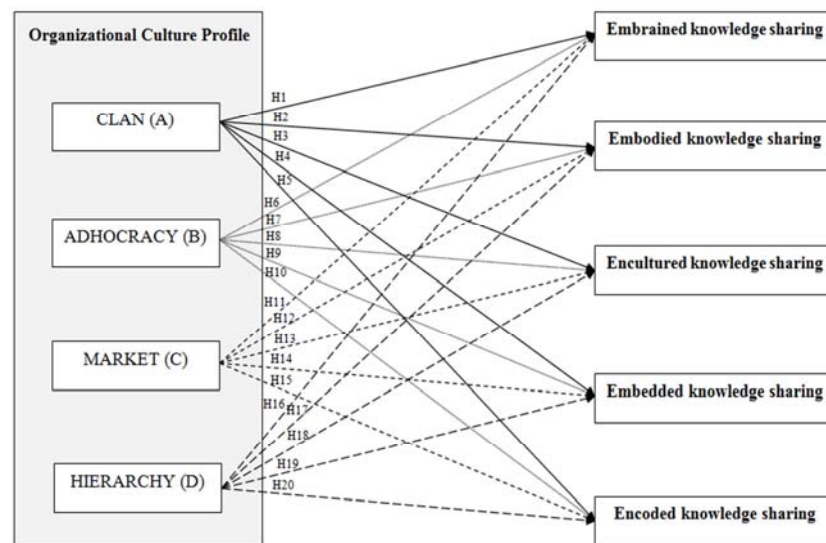

Figure 1. Theoretical model.

1.2.1. The Clan Culture

The first ideal form of organization is represented by the upper left quadrant in Figure 2. It is called a clan because of its similarity to a family-type organization. After studying Japanese firms in the late 1960s and early 1970s, a number of researchers observed fundamental differences between the market and hierarchy forms of design in America and clan forms of design in Japan [34], [35], [36]. Shared values and goals, cohesion, participativeness, individuality, and a sense of "we-ness" permeated clan-type firms. They seemed more like extended families than economic entities. Instead of the rules and procedures of hierarchies or the competitive profit centers of markets, typical characteristics of clan-type firms were teamwork, employee involvement programs, and corporate commitment to employees. These characteristics were evidenced by semiautonomous work teams that received rewards on the basis of team (not individual) accomplishment and that hired and fired their own members, quality circles that encouraged workers to voice suggestions regarding how to improve their own work and the performance of the company, and an empowering

environment for employees [33].

Some basic assumptions in a clan culture are that the environment can best be managed through teamwork and employee development, customers are best thought of as partners, the organization is in the business of developing a humane work environment, and the major task of management is to empower employees and facilitate their participation, commitment, and loyalty. The clan culture, as assessed in the OCAI, is typified by a friendly place to work where people share a lot of themselves. It is like an extended family. Leaders are thought of as mentors and perhaps even as parent figures. The organization is held together by loyalty and tradition. Commitment is high. The organization emphasizes the long-term benefit of individual development, with high cohesion and morale being important. Success is defined in terms of internal climate and concern for people. The organization places a premium on teamwork, participation, and consensus [33]. Therefore, relationships between the culture and all kinds of knowledge's sharing were hypothesized as following:

H1. Clan culture significantly affect embrained knowledge

sharing.

H2. Clan culture significantly affect embodied knowledge sharing.

H3. Clan culture significantly affect encultured knowledge sharing.

H4. Clan culture significantly affect embedded knowledge sharing.

H5. Clan culture significantly affect encoded knowledge sharing.

1.2.2. The Adhocracy Culture

As the developed world shifted from the industrial age to the information age, a second ideal type of organizing emerged. It is an organizational form that is most responsive to the hyper-turbulent, ever-accelerating conditions that increasingly typify the organizational world of the twenty-first century. With rapidly decreasing half-life of product and service advantages, a set of assumptions were developed that differed from those of the other three forms of organization. These assumptions were that innovative and pioneering initiatives are what leads to success, that organizations are mainly in the business of developing new products and services and preparing for the future, and that the major task of management is to foster entrepreneurship, creativity, and activity "on the cutting edge." It was assumed that adaptation and innovativeness lead to new resources and profitability, so emphasis was placed on creating a vision of the future, organized anarchy, and disciplined imagination [33].

The root of the word adhocracy is ad hoc—implying something temporary, specialized, and dynamic. Most people have served on an ad hoc task force or committee, which disbands as soon as its task is completed. Adhocracies are similarly temporary. They have been characterized as "tents rather than palaces" in that they can reconfigure themselves rapidly when new circumstances arise. A major goal of an adhocracy is to foster adaptability, flexibility, and creativity where uncertainty, ambiguity, and information overload are typical [33].

The adhocracy organization may frequently be found in industries such as aerospace, software development, think-tank consulting, and filmmaking. An important challenge for these organizations is to produce innovative products and services and to adapt quickly to new opportunities. Unlike markets or hierarchies, adhocracies do not have centralized power or authority relationships. Instead, power flows from individual to individual or from task team to task team, depending on what problem is being addressed at the time. Emphasis on individuality, risk taking, and anticipating the future is high as almost everyone in an adhocracy becomes involved with production, clients, research and development, and other matters. In sum, the adhocracy culture, as assessed in the OCAI, is characterized by a dynamic, entrepreneurial, and creative workplace. People stick their necks out and take risks. Effective leadership is visionary, innovative, and risk-oriented. The glue that holds the organization together is commitment to experimentation and innovation. The emphasis is on being at the leading edge of new knowledge,

products, and services. Readiness for change and meeting new challenges are important. The organization's long-term emphasis is on rapid growth and acquiring new resources. Success means producing unique and original products and services [33]. Hence, relationships between the culture and all kinds of knowledge's sharing were hypothesized as following:

H6. Adhocracy culture significantly affect embrained knowledge sharing.

H7. Adhocracy culture significantly affect embodied knowledge sharing.

H8. Adhocracy culture significantly affect encultured knowledge sharing.

H9. Adhocracy culture significantly affect embedded knowledge sharing.

H10. Adhocracy culture significantly affect encoded knowledge sharing.

1.2.3. The Market Culture

Another form of organizing became popular during the late 1960s as organizations faced new competitive challenges. This form relied on a fundamentally different set of assumptions than the hierarchy and was based largely on the work of Williamson, Ouchi, and their colleagues [34], [37]. These organizational scholars identified an alternative set of activities that they argued served as the foundation of organizational effectiveness. The most important of these was transaction costs. The new design was referred to as a market form of organization. The term market is not synonymous with the marketing function or with consumers in the marketplace. Rather, it refers to a type of organization that functions as a market itself. It is oriented toward the external environment instead of internal affairs. It is focused on transactions with (mainly) external constituencies such as suppliers, customers, contractors, licensees, unions, and regulators. And unlike a hierarchy, where internal control is maintained by rules, specialized jobs, and centralized decisions, the market operates primarily through economic market mechanisms, mainly monetary exchange. That is, the major focus of markets is to conduct transactions (exchanges, sales, contracts) with other constituencies to create competitive advantage. Profitability, bottom-line results, strength in market niches, stretch targets, and secure customer bases are primary objectives of the organization. Not surprisingly, the core values that dominate market-type organizations are competitiveness and productivity. Competitiveness and productivity in market organizations are achieved through a strong emphasis on external positioning and control [33].

The basic assumptions in a market culture are that the external environment is not benign but hostile, consumers are choosy and interested in value, the organization is in the business of increasing its competitive position, and the major task of management is to drive the organization toward productivity, results, and profits. It is assumed that a clear purpose and an aggressive strategy lead to productivity and profitability. In the words of Patton, market organizations

"are not interested in holding on to [their] positions. Let the [enemy] do that. [They] are advancing all the time, defeating the opposition, marching constantly toward the goal" [38]. A market culture, as assessed in the OCAI, is a results-oriented workplace. Leaders are hard-driving producers and competitors. They are tough and demanding. The glue that holds the organization together is an emphasis on winning. The long-term concern is on competitive actions and achieving stretch goals and targets. Success is defined in terms of market share and penetration [33]. Therefore, relationships between the culture and all kinds of knowledge's sharing were hypothesized as following:

H11. Market culture significantly affect embrained knowledge sharing.

H12. Market culture significantly affect embodied knowledge sharing.

H13. Market culture significantly affect encultured knowledge sharing.

H14. Market culture significantly affect embedded knowledge sharing.

H15. Market culture significantly affect encoded knowledge sharing.

1.2.4. The Hierarchy Culture

The earliest approach to organizing in the modern era was based on the work of a German sociologist, Max Weber, who studied government organizations in Europe during the early 1900s. The major challenge faced by organizations at the turn of the twentieth century was to efficiently produce goods and services for an increasingly complex society. To accomplish this, Weber proposed seven characteristics that have become known as the classical attributes of bureaucracy: rules, specialization, meritocracy, hierarchy, separate ownership, impersonality, accountability. These characteristics were highly effective in accomplishing their purpose. They were adopted widely in organizations whose major challenge was

to generate efficient, reliable, smooth-flowing, predictable output [39]. In fact, until the 1960s, almost every book on management and organizational studies made the assumption that Weber's hierarchy or bureaucracy was the ideal form of organization because it led to stable, efficient, highly consistent products and services. Because the environment was relatively stable, tasks and functions could be integrated and coordinated, uniformity in products and services was maintained, and workers and jobs were under control. Clear lines of decision-making authority, standardized rules and procedures, and control and accountability mechanisms were valued as the keys to success [33].

The organizational culture compatible with this form (and as assessed in the OCAI) is characterized by a formalized and structured place to work. Procedures govern what people do. Effective leaders are good coordinators and organizers. Maintaining a smooth-running organization is important. The long-term concerns of the organization are stability, predictability, and efficiency. Formal rules and policies hold the organization together [33]. Hence, relationships between the culture and all kinds of knowledge's sharing were hypothesized as following:

H16. Hierarchy culture significantly affect embrained knowledge sharing.

H17. Hierarchy culture significantly affect embodied knowledge sharing.

H18. Hierarchy culture significantly affect encultured knowledge sharing.

H19. Hierarchy culture significantly affect embedded knowledge sharing.

H20. Hierarchy culture significantly affect encoded knowledge sharing.

Figure 2 listed the leadership roles, the effectiveness criteria, and the core management theories most closely associated with each of the four quadrants [33].
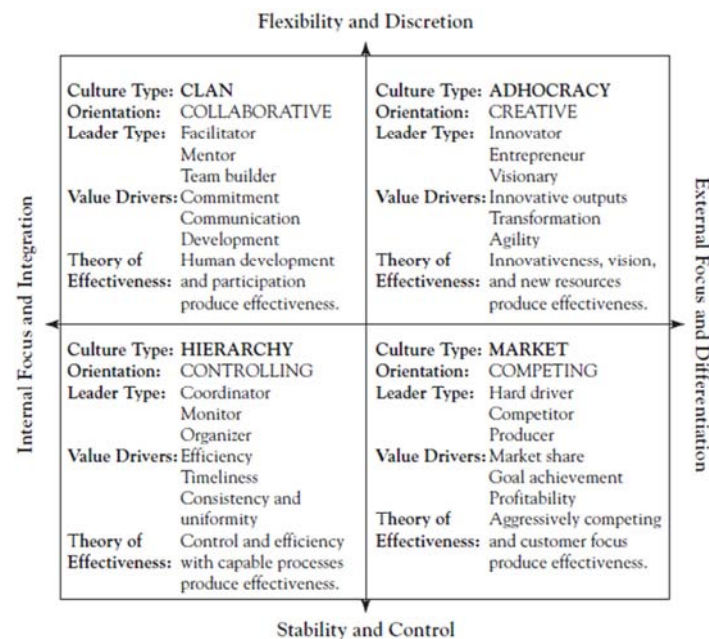

Figure 2. The Competing Values of Leadership, Effectiveness, and Organizational Theory.

2. Methods

2.1. Questionnaire

A set of questions was developed using extensive literature review. First section of the questionnaire addressed respondents' demographic information including gender, age, post and education. Demographic characteristics of the respondents were shown in Table 1. Then, each type of knowledge sharing were assessed based on Blackler knowledge sharing scale and measured by obtaining the respondents' extent of agreement through five-point Likert scale assessment ranging from 1=never, 2=on requestand to specific persons, 3=on request to everybody, 4=unrequested to specific persons and 5=unrequested to everybody [40].

Next, The multi-trait analysis was produced to assess organizational culture. The instrument was the Organizational Culture Assessment Instrument which assessed the cultural dimensions using a Likert-type scale where each alternative scenario was rated from 1 to 5. The OCAI captures the underlying structure of these psychological archetypes in its core dimensions. That is, assessing organizational culture using the competing values framework taps into the fundamental organizing framework used by people when they obtain, interpret, and draw conclusions about information [33]. A total of 208 questionnaires were distributed and 195 returned, with 193 useable, giving a response rate of 93 percent.

Table 1. Demographic characteristics of respondents.

Gender	f	%
Male	110	57
Female	83	43
Age		
31-40	60	31.1
41-50	71	36.8
51-60	62	32.1
Education		
Bachelor's degree	89	46.1
Master's degree	83	43
Doctoral degree	21	10.9
Post		
Expert	78	40.4
Senior expert	54	28
Head Officer	61	31.6

2.2. Cronbach'sAlpha

In this study, several items were measured for each construct. To analyze all of the constructs in a single regression model, the Cronbach's alpha statistic was used to test its internal consistency, or reliability of the group items. The minimum accepted alpha level utilized was 0.7 [41]. The alpha coefficients for all types of knowledge's sharing was 0.816. The alpha coefficients for clan, adhocracy, market and hierarchy culture were 0.793, 0.895, 0.880 and 0.758 respectively. The values of the scales were all observed to be fairly high andtherefore, reliability was approved.

To analyze the primary data collected through the

questionnaire, the Statistical Package for Social Science (SPSS) version 22 was deployed. After data was described statistically, regression analysis was applied to test hypotheses and compare strength of association between variables. Then one-way ANOVA and the post hoc analysis was used to explore additional associations in the research.

3. Results

Each type of knowledge sharing statistics was shown in Table 2.

Table 2. Knowledge sharing statistics.

	Never (%)	on requestand to specific persons (%)	on request to everybody (%)	unrequested to specific persons (%)	unrequested to everybody (%)	Mean (S.D.)
Embrained knowledge	-	71 (36.8)	67 (34.7)	55 (28.5)	-	2.92 (0.806)
Embodied knowledge	-	82 (42.5)	111 (57.5)	-	-	2.58 (0.496)
Encultured knowledge	-	92 (47.7)	101 (52.3)	-	-	2.52 (0.501)
Embedded knowledge	-	77 (39.9)	64 (33.2)	52 (26.9)	-	2.87 (0.809)
Encoded knowledge	-	68 (35.2)	61 (31.6)	64 (33.2)	-	2.98 (0.829)

3.1. Regression Analysis

Relationship between embrained knowledge and all kinds of organizational culture were examined and regression analyses displayed in Table 3.

Table 3. Embrained knowledge regression analyses.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	3.944	0.937		4.210	0.000*
Clan culture	0.191	0.282	0.049	0.676	0.500*
Adhocracy culture	- 0.306	0.292	- 0.076	- 1.049	0.295*
Market culture	- 0.333	0.188	- 0.129	- 1.774	0.078*
Hierarchy culture	- 0.065	0.181	- 0.026	- 0.358	0.721*

*p < 0.050

According to Table 3 there were no significant relationships between embrained knowledge and all kinds of organizational culture.

Relationship between embodied knowledge and all kinds of organizational culture were examined and regression analyses displayed in Table 4.

Table 4. Embodied knowledge regression analyses.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	2.656	0.582		4.565	0.000*
Clan culture	0.120	0.0175	0.050	0.684	0.495*
Adhocracy culture	- 0.059	0.0181	- 0.024	- 0.325	0.746*
Market culture	- 0.089	0.117	- 0.056	- 0.765	0.445*
Hierarchy culture	- 0.002	0.113	- 0.001	- 0.014	0.989*

*p < 0.050

According to Table 4 there were no significant relationships between embodied knowledge and all kinds of organizational culture.

Relationship between encultured knowledge and all kinds of organizational culture were examined and regression analyses displayed in Table 5.

Table 5. Encultured knowledge regression analyses.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	3.077	0.583		5.273	0.000*
Clan culture	- 0.286	0.176	- 0.119	- 1.624	0.106*
Adhocracy culture	- 0.170	0.182	- 0.068	- 0.935	0.351*
Market culture	- 0.096	0.117	- 0.060	- 0.817	0.415*
Hierarchy culture	0.081	0.113	0.052	0.715	0.475*

*p < 0.050

According to Table 5 there were no significant relationships between encultured knowledge and all kinds of organizational culture.

Relationship between embedded knowledge and all kinds of organizational were examined and regression analyses displayed in Table 6.

Table 6. Embedded knowledge regression analyses.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	1.592	0.917		1.736	0.084*
Clan culture	- 0.577	0.276	- 0.148	- 2.087	0.038*
Adhocracy culture	0.381	0.286	0.094	1.331	0.185*
Market culture	0.466	0.184	0.180	2.533	0.012*
Hierarchy culture	0.191	0.177	0.076	1.078	0.283*

*p < 0.050

According to Table 6 there was significant relationship between embedded knowledge and clan culture (sig=0.038<p=0.050). Also, there was significant relationship between embedded knowledge and market culture

(sig=0.012<p=0.050).

Relationship between encoded knowledge and all kinds of organizational were examined and regression analyses displayed in Table 7.

Table 7. *Encoded knowledge regression analyses.*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	2.355	0.962		2.448	0.015*
Clan culture	0.303	0.290	0.076	1.045	0.297*
Adhocracy culture	- 0.213	0.300	- 0.051	- 0.711	0.478*
Market culture	- 0.258	0.193	- 0.097	- 1.337	0.183*
Hierarchy culture	0.263	0.186	0.102	1.412	0.160*

*p < 0.050

According to Table 7 there were no significant relationships between encoded knowledge and all kinds of organizational culture.

3.2. ANOVA Test

The one-way ANOVA and the post hoc analysis was applied to compare the means between the groups and determines whether any of those means are significantly different from each other. So, the ANOVA was used to explore the hypothesis investigated whether mean of the all types of knowledge's sharing (presented in Table A1) has significant difference according to the all kinds of organizational culture. The ANOVA test results were shown in Table 8.

Table 8. *The ANOVA test.*

	Sum of Squares	df	Mean Square	F	Sig
Embrained knowledge					
Between Groups	3.265	4	0.816		
Within Groups	121.409	188	0.646	1.264	0.286*
Total	124.674	192			
Embodied knowledge					
Between Groups	0.320	4	0.080		
Within Groups	46.840	188	0.249	0.321	0.863*
Total	47.161	192			
Encultured knowledge					
Between Groups	1.047	4	0.262		
Within Groups	47.098	188	0.251	1.045	0.385*
Total	48.145	192			
Embedded knowledge					
Between Groups	9.289	4	2.322		
Within Groups	116.473	188	0.620	3.748	0.006*
Total	125.762	192			
Encoded knowledge					
Between Groups	3.803	4	0.951		
Within Groups	128.114	188	0.681	1.395	0.237*
Total	131.917	192			

*p < 0.050

4. Discussions

According to the test results, there was a meaningful difference between the ones who share embedded knowledge on request and to specific person and the others who share the knowledge unrequested to specific persons in clan culture score. Moreover, there was a meaningful difference between the ones who share embedded knowledge on request and to specific person and the others who share the knowledge on

request to everybody in market culture score. In addition, there was a meaningful difference between the ones who share embedded knowledge on request and to specific person and the others who share the knowledge unrequested to specific persons in market culture score.

Due to the fact that the market culture emphasizes on productivity, goal clarity, efficiency and goal achievement [42] it was supposed that employees share embedded knowledge on request to everybody or unrequested to specific persons rather than on request and to specific persons. These staff are part of market type organizations and are united together through goal orientation and competition [42], [43]. On the other hand, since the clan culture emphasizes on information sharing, teamwork, collaboration and interpersonal relationships [42] employees were expected to share embedded knowledge unrequested to specific persons rather than on request and to specific persons although the result showed opposite. It also cautions against

the assumption that collaboration and teamwork enhances knowledge sharing because this paper revealed that collaboration and teamwork does not play a significant role in improving knowledge sharing in the organization.

5. Conclusions & Recommendations

In this paper, the effect of organizational culture on the all kinds of knowledge's sharing were examined. Findings revealed that there were not significant influence between all kinds of knowledge sharing and organizational culture dimensions expect clan culture and market culture which positively related to embedded knowledge sharing. Table 9 demonstrated a summary of hypothesis tests. It also showed the percent of the variation in the knowledge sharing. 2.72% of variation in embedded knowledge sharing was explained by clan culture meanwhile, 3.92% of variation in embedded knowledge sharing was explained by market culture.

Table 9. *Summary of the hypothesis tests.*

Hypothesis		Supported	% of the variation in KS
H1	Clan culture significantly influencesembrained Knowledge Sharing	No	-
H2	Clan culture significantly influences embodied Knowledge Sharing	No	-
H3	Clan culture significantly influences encultured Knowledge Sharing	No	-
H4	Clan culture significantly influences embedded Knowledge Sharing	Yes	2.72
H5	Clan culture significantly influences encoded Knowledge Sharing	No	-
H6	Adhocracy culture significantly influences embrained Knowledge Sharing	No	-
H7	Adhocracy culture significantly influences embodied Knowledge Sharing	No	-
H8	Adhocracy culture significantly influences encultured Knowledge Sharing	No	-
H9	Adhocracy culture significantly influences embedded Knowledge Sharing	No	-
H10	Adhocracy culture significantly influences encoded Knowledge Sharing	No	-
H11	Market culture significantly influences embrained Knowledge Sharing	No	-
H12	Market culture significantly influences embodied Knowledge Sharing	No	-
H13	Market culture significantly influences encultured Knowledge Sharing	No	-
H14	Market culture significantly influences embedded Knowledge Sharing	Yes	3.92
H15	Market culture significantly influences encoded Knowledge Sharing	No	-
H16	Hierarchy culture significantly influences embrained Knowledge Sharing	No	-
H17	Hierarchy culture significantly influences embodied Knowledge Sharing	No	-
H18	Hierarchy culture significantly influences encultured Knowledge Sharing	No	-
H19	Hierarchy culture significantly influences embedded Knowledge Sharing	No	-
H20	Hierarchy culture significantly influences encoded Knowledge Sharing	No	-

ANOVA test results mentioned that clan culture caused the employees to share embedded knowledge on request and to specific persons rather than unrequested to specific persons. Also, it was deduced that market culture caused the employees to share embedded knowledge on request to everybody rather than on request and to specific persons. Furthermore, it was inferred that market culture caused the employees to share embedded knowledge unrequested to specific persons rather than on request and to specific persons. The findings of this study may be limited to the public sector in Iran. Thus, these findings might not be generalized to other cultures and countries. The reason

behind the findings related to share knowledge may be that in public serviceorganization studied in this paper senior management did not significantly influence teams to share knowledge freely amongst team members through seminars, workshops, and information and communication technology.

Future researchers can take steps to test the research framework on different public sectors and industries. Moreover, future research should include other tiers of employees as well, as the present study only took staff holding non-administrative position in the ministry. Including other ministries personnel as well as administrative staff members may change the results of the study.

Appendix

Table A1. Types of organizational culture statistics.

		Strongly Disagree(%)	Disagree(%)	Neither agree nor disagree(%)	Agree(%)	Strongly Agree(%)
Dominant Characteristics	A	101 (52.3)	92 (47.7)	-	-	-
	B	107 (55.4)	86 (44.6)	-	-	-
	C	65 (33.7)	73 (37.8)	55 (28.5)	-	-
	D	-	-	55 (28.5)	67 (34.7)	71 (36.8)
Organizational Leadership	A	108 (56)	85 (44)	-	-	-
	B	102 (52.8)	91 (47.2)	-	-	-
	C	66 (34.2)	79 (40.9)	48 (24.9)	-	-
	D	-	-	110 (57)	43 (22.3)	40 (20.7)
Management of Employees	A	99 (51.3)	94 (48.7)	-	-	-
	B	89 (46.1)	104 (53.9)	-	-	-
	C	65 (33.7)	71 (36.8)	57 (29.5)	-	-
	D	-	-	73 (37.8)	59 (30.6)	61 (31.6)
Organization Glue	A	106 (54.9)	87 (45.1)	-	-	-
	B	97 (50.3)	96 (49.7)	-	-	-
	C	65 (33.7)	66 (34.2)	62 (32.1)	-	-
	D	-	-	70 (36.3)	74 (38.3)	49 (25.4)
Strategic Emphases	A	94 (48.7)	99 (51.3)	-	-	-
	B	103 (53.4)	90 (46.6)	-	-	-
	C	70 (36.3)	67 (34.7)	56 (29)	-	-
	D	-	-	131 (67.9)	32 (16.6)	30 (15.5)
Criteria of Success	A	93 (48.2)	100 (51.8)	-	-	-
	B	114 (59.1)	79 (40.9)	-	-	-
	C	110 (57)	83 (43)	-	-	-
	D	-	55 (28.5)	63 (32.6)	75 (38.9)	-

References

[1] Ryu, S., Ho, S. H. and Han, I. (2003), "Knowledge sharing behavior of physicians in hospitals", *Expert Systems with Applications Journal*, Vol.25 No.1, pp.113-122.

[2] Ma, W. W. and Chan, A. (2014), "Knowledge sharing and social media: altruism, perceived online attachment motivation, and perceived online relationship commitment", *Computers in Human Behavior*, Vol.39, pp.51-58.

[3] Tsui, L., Chapman, S. A., Schnirer, L. and Stewart, S. (2006), "A Handbook on Knowledge Sharing: Strategies and Recommendations for Researchers, Policymakers, and Service Providers", Community-University Partnership for the Study of Children, Youth, and Families, Alberta, Canada.

[4] Ajmal, M. M. and Helo, P.(2010) Organisational culture and knowledgemanagement: an empirical study in Finnish project-based companies.International Journal of Innovation and Learning 7 (3), 331–344.

[5] Alavi, M., Kayworth, T. and Leidner, D.(2006) An empirical examination of theinfluence of organizational culture on knowledge management practices, Journal of Management Information Systems 22 (3), 191–224.

[6] De Long, D. W. and Fahey, L. (2000) Diagnosing cultural barriers to knowledge management. The Academy of Management Executive 14 (4), 113–127.

[7] Fong, P. and Kwok, C. (2009) Organizational culture and knowledge management success at project and organizational levels in contracting firms. Journal of Construction Engineering and Management 135 (12), 1348–1356.

[8] Wiewiora, A., Trigunarsyah, B., Murphy, G. and Coffey, V. (2013). Organizational culture and willingness to share knowledge: A competing values perspective in Australian context, International Journal of Project Management.

[9] Holthouse, D. (1998), "Knowledge research issues", *California Management Review*, Vol.43 No.3, pp.277-280.

[10] Gibbert, M. and Krause, H. (2002), "Practice Exchange in a Best Practice Marketplace", in Davenport, T. H. and Probst, G. J. B. (Eds), Knowledge Management Case Book: Siemens BestPractices', Publicis Corporate Publishing, Erlangen.

[11] Zarraga, C. and Bonache, J. (2003), "Assessing the team environment for knowledge sharing: an empirical analysis", *International Journal of Human Resource Management,* Vol.14 No.7, pp.1227-1245.

[12] Collins, H. (1993), "The structure of knowledge", *Social Research,* Vol.60, pp.95-116.

[13] Fiol, C. M., Lyles, M. A. (1985). Organizational Learning. The Academy of Management Review, Vol.10 No. 4, pp.803-813.

[14] Argyris, C. and Schon, D. (1978) Organizational learning: A theory of action approach. Reading, MA: Addison Wesley.

[15] Senge, P.M. (1990). The Fifth Discipline: The Art and Practice of the Learning Organization. Doubleday, New York, NY.

[16] Zuboff, S. (1988). In the Age of the Smart Machine: The Future of Work and Power. Basic Books, New York, NY.

[17] Scribner, S. (1986). Thinking in action: some characteristics of practical thought. in Sternberg, R. and Wagner, R. (Eds.), Practical Intelligence: Nature and Origins of Competence, Cambridge University Press, Cambridge.

[18] Hirschhorn, L. (1984) Beyond mechanization: Work and technology in a post-industrial age. Cambridge, MA: MIT Press.

[19] Suchman, L. (1987). Plans and situated actions, Cambridge UniversityPress.

[20] Swidler, A. (1986). Culture in action: symbols andstrategies. American SociologicalReview 51: 273-286.

[21] Pettigrew, A. (1979) On studying organizational cultures, Administrative Science Quarterly 24: 570-581.

[22] Ouchi, W. G. (1980) 'Markets, bureaucracies and clans'. Administrative Science Quarterly 25: 129-141.

[23] Srivastva, S. and Barratt, F. (1988). The transforming nature of metaphors in group development: a study in group theory, Human Relations 41: 31-64.

[24] Czarniawska-Joerges, B. (1990) Merchants of meaning: management consultants in the Swedish public sector' in Organizational symbolism. B. Turner (ed.), 139-150. Berlin: Walter de Gruyter.

[25] Granovetter, M. (1985) Economic action and social structure: the problem of embeddedness'. American Journal of Sociology 91: 481-510.

[26] Badaracco, J. (1991) The knowledge link: How firms compete through strategy alliances. Boston, MA: Harvard University Press.

[27] Poster, M. (1990) The mode of information: Poststructuralism and social context., Cambridge: Polity Press.

[28] Cooper, R. (1992) Formal organization as representation: remote control, displacement and abbreviation' in Rethinking organization: New directions in organization theory and analysis. M. Reed, and M. Hughes (eds.), 254-272. London: Sage.

[29] Schein, E. H. (1990), "Organizational culture", *American Psychologist*, Vol.45 No.2, pp.109–119.

[30] Gray, J.H. and Densten, I.L. (2005) Towards an integrative model of organizational culture and knowledge management. International Journal of Organisational Behaviour 9 (2), 594–603.

[31] Ajmal, M. M. and Koskinen, K. U. (2008) Knowledge Transfer in Project-Based Organizations: An Organizational Culture Perspective. Project Management Journal 39 (1), 7–15.

[32] Friesl, M., Sackmann, S. A. and Kremser, S. (2011) Knowledge sharing in new organizational entities: the impact of hierarchy, organizational context, micropolitics and suspicion. Cross Cultural Management: An International Journal 18 (1), 71–86.

[33] Cameron, K. S. and Quinn, R. E. (2005), "*Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*", Jossey-Bass Inc, San Francisco, USA.

[34] Ouchi, W. G. (1981) Theory Z: How American Business Can Meet the Japanese Challenge. Boston: Addison-Wesley.

[35] Pascale, R. and Athos, A. (1981) The Art of Japanese Management. New York: Simon & Schuster.

[36] Lincoln, J. R. (2003) Culture, Control, and Commitment: A Study of Work Organization and Work Attitudes in the United States and Japan. New York: Percheron Press.

[37] Williamson, O. (1975), "Markets and Hierarchies, Analysis and Antitrust Implications: A Study in the Economics of Internal Organization", New York, Free Press.

[38] Patton, G. S. (1944) "The Famous Patton Speech, June 5, 1944, Somewhere in England." Recorded by Charles M. Province, George S. Patton Historical Society [http://www.pattonhq.com].

[39] Weber, M. (1947). The Theory of Social and Economic Reform, New York, Free Press.

[40] Blackler, F. (1995). Knowledge, knowledge work and organizations – An overview and interpretation. Organization Studies, Vol.16 No.6, pp.1021–1046.

[41] Nunnally, J. C. and Bernstein, I. H. (1994), "Psychometric Theory", McGraw-Hill, New York, NY.

[42] Cameron, K.S. (n.d.), ''An introduction to competing value framework'', available at:www.haworth.com/enus/Knowledge/WorkplaceLibrary/Documents/An%20Introduction%20to%20the%20Competing%20Values%20Framework.pdf.

[43] Cameron, K. S. and Quinn, R. E. (1999), Diagonising and Changing Organizational Culture, Addison-Wesley, Reading, MA.