

A study on relationship between knowledge management and organizational culture based on Denison model: A case study of PVC industry

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CHRONICLE

Article history:

Received January 20, 2013

Received in revised format

2 May 2013

Accepted 20 May 2013

Available online

May 23 2013

Keywords:

Organizational culture

Knowledge management

Denison model

ABSTRACT

Knowledge plays an essential role on creating value added business units in today's competitive environment. In this paper, we perform a study to investigate the relationship between knowledge management and organization culture in an Iranian PVC industry. The proposed study selects a sample of 65 people and distributes a questionnaire among them. The study investigates the relationship between knowledge management and four organizational cultures' components including mission, consistency, involvement and adaptability. Using Denison model and implementation of Pearson correlation ratio as well as stepwise regression techniques, we analyze four hypotheses of the survey. The results of the study confirm that there are strong relationships between knowledge management from one side and mission, consistency, involvement and adaptability.

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1. Introduction

Knowledge plays an essential role on creating value added business units in today's competitive environment (Gudykunst et al., 1988; Grant, 1991; Hansen et al., 2000). During the past few years, there have been tremendous efforts on studying on the effects of knowledge management on organizational culture. Nemati et al. (2013), for instance, developed a method to learn the effect of knowledge management (KM) practices on organizational performance. They used balanced scorecard (BSC) to materialize the study and to prevent research dispersion, the selective indicators in KM were oriented to some critical success factors impacting KM implementation. They reported that KM practices maintain some effects on the overall performance and KM practices only influenced learning and growth among dimensions of BSC, significantly. Tahernezhad et al. (2013) presented a study to investigate the relationship between organizational structure and learning characteristics in a case study of revenue agency located in province of Alborz, Iran. In this study,

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organizational structure included five components of complexity, concentration, authority, formality and flexibility. The study used structural equation modeling to survey the data using LIREL and SPSS software packages. They concluded that there were some meaningful relationships between three variables of formality, complexity and authority on one side and learning capability from the other side. However, the study did not provide any meaningful relationship between concentration and flexibility with organizational learning capability. Makhsousi et al. (2013) presented an empirical investigation to measure the effect of six cultural based factors including management support, organizational affiliation, employee participation in decision-making, staff welfare organization and establishment, adaptation of new policies and organizational and internal organizational climate on establishment of knowledge management. They reported that management support, staff welfare organization and internal organizational climate were among the most important factors while other component did not represent any significance on knowledge management implementation.

Abbas et al. (2013) studied the factors promoting knowledge sharing and knowledge creation in banking sector of Pakistan. They reported that the knowledge sharing and knowledge creation were the keys for the success of an organization. They also reported that a firm or an organization could sustain its competitive edge in market with the help of Knowledge sharing and knowledge creation. Darvish et al. (2013) studied the impacts of intellectual capital on other components and their impacts on organizational learning capability. They reported that human capital, relational capital and learning capabilities had positive effect on organizational performance. In addition, relational capital positively influenced learning capability and human capital influences positively on relational capital.

The proposed study of this paper uses a method originally developed by Denison (2000) to learn the relationship between organizational culture and KM. This study is also similar to other work accomplished by David et al. (2000) for detecting cultural barriers on achieving KM.

2. The proposed study

The proposed study of this paper investigates the relationship between knowledge management and organization culture in an Iranian PVC industry. There are four hypotheses associated with the proposed study of this paper as follows,

1. There is a relationship between KM and mission.
2. There is a relationship between KM and consistency.
3. There is a relationship between KM and involvement.
4. There is a relationship between KM and adaptability.

The proposed study of this paper designs a questionnaire based on David et al. (2000) model as well as Edwin (2006). All questions were designed in Likert scale and Cronbach alpha were calculated as 0.84 for mission, 0.85 for consistency, 0.82 for involvement and 0.76 for adaptability. In our survey, 82.9% of the participants were male and 17.1% of them were female. In terms of educational backgrounds, 13.8% of the participants did not finish high school, 86.2% of them maintained university educations. In terms of job experience, 7.1% of the participants had less than five years of job experience, 26.2% of the participants maintained between 5 to 10 years of job experiences, 20% of them had between 11 to 15 years of job experiences, 33.8% of them had 16 to 20 years of job experiences and finally, 12.3% of them had more than 20 years of job experiences.

3. The results

In order to verify the results of our survey, we first present details of the implementation of Pearson correlation tests on each hypothesis of this survey. Table 1 summarizes the results of our implementations.

Table 1

The results of Pearson correlation test

Independent variable	Dependent variable	N	P-Value	Result
Mission	KM	65	0.001	Confirmed
Consistency	KM	65	0.001	Confirmed
Involvement	KM	65	0.004	Confirmed
Adaptability	KM	65	0.001	Confirmed

As we can observe from the results of Table 1, all four hypotheses have been confirmed according to Pearson correlation test. We have also applied stepwise regression analysis between KM components and organizational culture components and Table 2 shows the results of our survey,

Table 2

The summary of stepwise regression analysis

KM components	Step	Predicted variable	R	β	F	P-value	β
Creation	1	Adaptability	0.522	0.412	25.32	0.000	0.522
	2	Adaptability Consistency	0.625	0.463	48.37	0.000	0.312 0.305
Organization	1	Consistency	0.778	0.524	14.62	0.000	0.778
	2	Consistency Mission	0.742	0.573	5.44	0.000	0.468 0.236
Development	1	Consistency Mission	0.612	0.332	6.43	0.000	0.612
	2	Adaptability	0.568	0.479	2.41	0.000	0.283 0.247
Application	1	Adaptability	0.614	0.431	16.47	0.000	0.614
	2	Mission	0.692	0.468	32.35	0.000	0.386 0.322

According to the results of Table 2, all KM components including knowledge creation, organization, development and application have meaningful relationship with some of organizational components such as adaptability, consistency or mission.

4. Discussion and conclusion

In this paper, we have presented an empirical investigation to study the relationship between knowledge management and organizational culture in one of Iranian PVC producers. The proposed study has designed a questionnaire, distributed it among employees who worked for this PVC unit and using Pearson correlation ratio we have realized that there were positive and meaningful relationships between knowledge management and organizational culture. The study also performed a stepwise regression analysis and has detected that knowledge creation has been positively influenced by adaptability and consistency, knowledge management organization has also been positively influenced by consistency and mission, development of knowledge has been positively affected by organizational consistency, mission and adaptability. Finally, adaptability as well as organizational mission has also affected knowledge application.

Acknowledgment

The authors would like to thank the managers of PVC unit who cordially cooperated in accomplishment of this work.

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