

Fast-Moving Consumer Goods (FMCG) Distribution Companies Providing the Conceptual Model of Knowledge Management in Fast The Case Study: A Beauty and Health Company

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Abstract

Today, successful organizations, to achieve the intelligent and knowledge-based survival in a competitive environment, have got help from knowledge management to change, innovate, and accelerate the activities of the organization and ultimately improve its performance. In this regard and considering the importance of this issue, over the past few years, knowledge management as a strategic issue has been in the spotlight of Golpakhsh-e Aval Company. Accordingly, the present paper has investigated the implementation of knowledge management in a company distributing cosmetic and hygiene products. The variables have been divided into two main sections including knowledge management infrastructures and processes of knowledge management. In addition, the sub criteria have been analyzed using the t-test. After implementing knowledge management, it has been evaluated using some indices and the effect of knowledge management implementation in the organization has been compared with the pre-implementation conditions.

Keywords: Knowledge Management, Knowledge Management Concept, Knowledge Management Infrastructures, Cosmetic And Hygiene Products

1- Introduction

Knowledge is the first strategic resource for companies in the 21st century. Researchers and experts are trying to find out how to effectively collect and manage knowledge resources to use them as a competitive advantage. Therefore, before deciding to embark on the implementation of knowledge management, organizations need to assess their organizational subsystems and resources to identify the best of their knowledge management strategy. Knowledge management is not a new topic; in fact, human civilizations, from one generation to another, have tried to preserve and transfer knowledge to understand the past and predict the future. In today's complex and dynamic business environment, the thirst for knowledge is deepening day by day; the knowledge which is rapidly changing and distributing outside organizations. Information technology and the Internet have also created new challenges in creation,

maintenance and management of knowledge. To provide an accurate definition of the knowledge, different subjects should be assessed at different levels. One of the most important aspects of knowledge management is to define knowledge, information and data precisely.

1- Data: data constitute the first level of knowledge management; in other words, they are numbers, figures, charts or special characteristics obtained from observation, experience, or calculation and are meaningless by themselves. In fact, data can be considered as the raw elements needed for decision making.

2- Information: information constitutes the second level of knowledge management. Information includes data in a particular field; at this level, data are grouped, filtered and organized to be meaningful. In other words, information is a set of data, descriptions, interpretations, and other issues related to the text with respect to the objectives, events or special processes.

3- Knowledge: knowledge is defined as organized, combined, or classified information which is comprehensive and increases awareness and wisdom. The complexity of knowledge concept has led to the formation of various perspectives, but what is perceived of different definitions is that knowledge includes information processed in people's mind or groups through processes such as contemplations, the exchange of ideas, and learning.

2- The research literature

Today, organizations, believing in the vital role of knowledge in achieving a sustainable competitive advantage (Nonaka and Takeuchi, 2005), are trying to restrain systematically the value of their knowledge assets to achieve their strategic objectives through using new systems (Zack, 1999). To achieve this purpose at the macro level, knowledge management has been known as an effective approach aimed at organizational development and obtaining the competitive advantage through the systematic management of intellectual assets of the organization (Helestron and Husted, 2004). In a study conducted by Sharifinia (2009) as "investigating the relationship between organizational culture (based on the Model Globe) and knowledge management in the Ports and Maritime Organization", it was concluded that there is a positive and significant relationship between organizational culture and knowledge management in Ports and Maritime Organization.

In a general sense, knowledge map is defined as a graphic display or a list of sites for knowledge and their relationships with other people and different units within the organization. Knowledge map indicates what knowledge is used in a process and how it flows in the process. Knowledge map contains information about the knowledge of the organization that describes who has what type of knowledge, where the knowledge is and how it is transferred and disseminated (Miller, 2005). Davenport and Prusak (1998) has stated that a knowledge management map should locate important knowledge in the organization and then disseminate its image or a list of its functions. Knowledge maps usually referring to persons, documents and sites (Kim et al., 2003) illustrate the knowledge resources and flows in the organization (Liebowitz, 2005). Creating knowledge map means to locate the important positions of knowledge in the organization and disseminate the image reflecting them. In short, knowledge map shows an image of what is there in the organization as well as the way accessing them (Davenport and Prusak, 1998). Some researchers cite cases such as information systems, ICT

and its structure as key indicators of the knowledge management success in terms of technology (Yaghoobi and Maleki, 2012). On the other hand, protecting spiritual ownership due to the fear of a lack of appreciation and accreditation by managers and colleagues is also one of the reasons for the absence of knowledge sharing. Employees like to retain their ownership of knowledge so that they are accredited by their colleagues (Rowley, 2003). Table 1 shows the summary of knowledge management critical success factors in the target organization.

Table 1: the summary of knowledge management critical success factors in the target organization

Row	Main Factors	Corresponding Component
1	Organizational Leadership	Support and commitment of senior managers
		Strategic Orientation
2	Management Systems	Reward System and Spiritual
		Performance Evaluation System
		Information Technology System
		Education System
3	Organizational Excellence Culture	Organizational Learning
		Innovation
		Welcoming Changes

3- Knowledge Management Models

There are various models proposed by scholars in the field of management to identify and investigate knowledge management. Some of these models have focused on knowledge management activities such as the creation or transfer of knowledge; and others have generally studied the knowledge management cycle and taken into consideration various activities related to the knowledge. However, so far, no knowledge management model has been able to gain consensus.

3-1- Models classification

As mentioned, there are many models with different processes proposed on knowledge management. The models are classified in two ways: one way is based on the views underlying the models; and the other way is based on the processes followed to form the models. Here, two types of view-based grouping and one type of process-based grouping are introduced; and then, the process-knowledge model is discussed more.

Kakabadse et al., by reviewing the classification of knowledge, have divided knowledge management models into four groups as follows:

1- The network model: In this type of models, the focus is on communicating, acquiring, sharing and transferring through the exchange of horizontal information. Important knowledge lies in a network of people who join together by different means.

2- Cognitive models: knowledge as the asset of an organization needs accurate and controlled access, expression, storage, measurement, maintenance, and dissemination. Value creation is obtained through the subsequent application of best practices and avoiding implicit errors which have been rooted up as well as benefiting the lessons previously learned.

3- Associative/communication models: in these models, it is discussed about the characteristics of the working groups, such as self-organizing, continuous learning and informal exchanges.

4- Philosophical models: in these models, markets and internal processes based on the bilateral dialogue in a strategic context, questions about the assumptions and continuous investigation on the behavior of competitors are taken into account.

4- The research objectives

1- Implementation of knowledge management in a company distributing cosmetic and hygiene products (Golpakhsh-e Aval Company).

2- Management of knowledge as an organizational asset and facilitating the achievement and sharing of knowledge by users and experts in databases.

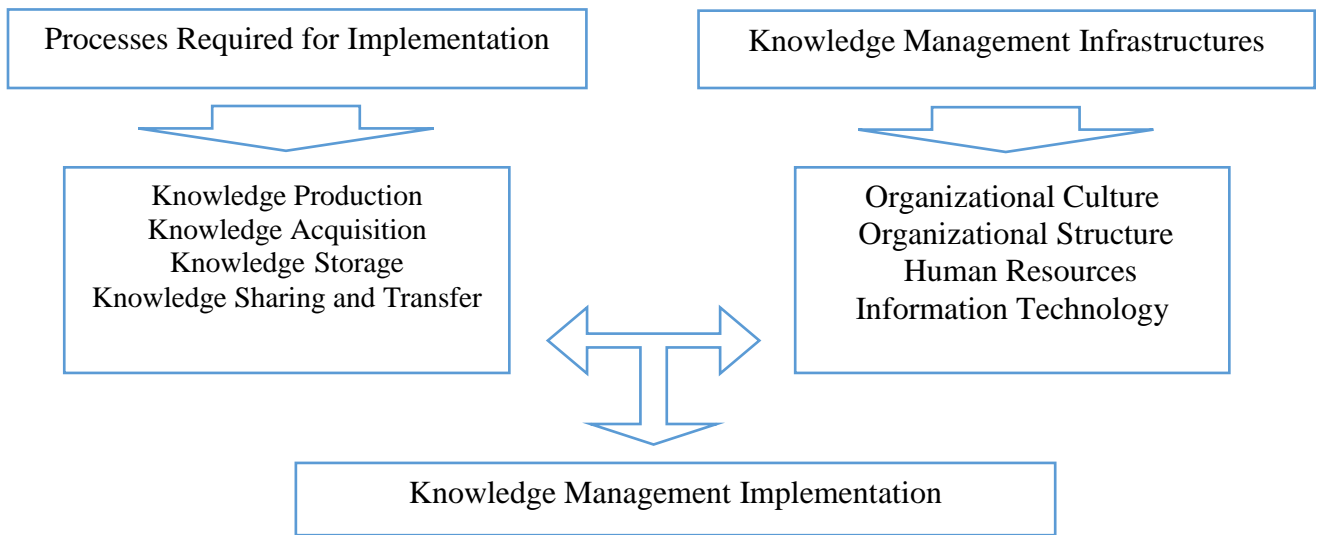
3- Creating knowledge repositories and improving the registration and distribution processes of generated knowledge.

The present paper seeks to increase the extent of knowledge management level in in a company distributing cosmetic and hygiene products (Golpakhsh-e Aval Company) and present a conceptual model to further institutionalize it.

5- The model description

Implementation in the distribution company of cosmetic and hygiene products

The conceptual model of the research is in fact a chart to show the variables extracted from the research theoretical framework. This model indicates the relationship between the theoretical design and information collection and analysis. In this research, the conceptual model has been designed in a way that it helps the researcher collect and analyze data. The following figure shows the research conceptual model:



Considering the research variables, the structure of questionnaires used in this research includes 5 areas: the first part of the questionnaire consists of 9 items relating to information technology, the second part includes 9 questions on human resources, the third and fourth parts respectively ask a question about “strategy and leadership” and “organizational structure”; finally, the 5th part of the questionnaire has 9 items on organizational culture. The following table shows the classification of variables. The responses of questions have been scored based on a scale ranging from very good to very bad.

Table 2: the variables classification

Information Technology	Knowledge Management Infrastructures
Human Resources	
Strategy and Leadership	
Organizational Structure	
Organizational Culture	
Knowledge Identification and Acquisition	Knowledge Management Processes
Knowledge Development, Sharing and Distribution	
Knowledge Storage and Maintenance	
Knowledge Application	

The questionnaires were distributed among 40 employees working in the Golpakhsh-e Aval Company which is a company distributing cosmetic and hygiene products. The variables of table 2 were assessed using the t-test analysis.

5-1- Knowledge Management Infrastructures

1- Identifying the status of information technology system in the organization

In testing the research hypotheses and examining the mean of population’s opinions using the selected samples, H_0 and H_1 , are expressed as follows:

$$\begin{cases} H_0 : \mu \text{ IT Dimension} > 3 \\ H_1 : \mu \text{ IT Dimension} \leq 3 \end{cases}$$

Considering the issue that the focus of responses is close to 3 and the difference between mean of samples and the values of the test is reported equal to 0.2 as well as $P=0.26$ and higher that $\alpha = 0.05$ (table 3), it is concluded that the null hypothesis (H_0) is confirmed at the level of 5%.

Thus, the dimension of information technology has a favorable situation; and since the value is very close to the mean value, it can be said that this area tends to be positive.

Table 3: the results of t-test to determine the status of IT dimension mean

Statistical Value = 3						
A 95% confidence interval for the difference between the mean and test values		Difference between the mean and test values	P-value (the result of statistical test)	t-statistic	Standard Deviation	Mean
Upper bound	Lower bound					
0.5818	-0.1707	0.20556	0.267	1.144	0.80389	3.2056

2- Identifying the status of organizational structure

In testing the research hypotheses and examining the mean of population’s opinions using the selected samples, H_0 and H_1 , are expressed as follows:

$$\begin{cases} H_0 : \mu \text{ Organizational Structure Dimension} \leq 3 \\ H_1 : \mu \text{ Organizational Structure Dimension} > 3 \end{cases}$$

Considering the issue that the focus of responses is far lower than 3 and the difference between mean of samples and the values of the test is reported equal to -0.16 as well as $P=0.4$ and higher that $\alpha = 0.05$ (table 4), it is concluded that the null hypothesis (H_0) is confirmed at the level of 5%.

Thus, the dimension of organizational structure has a favorable situation in the population under study.

Table 4: the results of t-test to determine the status of organizational structure dimension mean

Statistical Value = 3						
A 95% confidence interval for the difference between the mean and test values		Difference between the mean and test values	P-value (the result of statistical test)	t-statistic	Standard Deviation	Mean
Upper bound	Lower bound					
0.2135	-0.5420	-0.16429	0.374	-0.910	0.80716	2.8357

3- Identifying the status of human resources

In testing the research hypotheses and examining the mean of population’s opinions using the selected samples, H_0 and H_1 , are expressed as follows:

$$\begin{cases} H_0 : \mu \text{ Human Resources Dimension} \leq 3 \\ H_1 : \mu \text{ Human Resources Dimension} > 3 \end{cases}$$

Considering the issue that the focus of responses is far lower than 3 and the difference between mean of samples and the values of the test is reported equal to **0.4** as well as $P=0.03$ and lower that $\alpha = 0.05$ (table 5), it is concluded that the null hypothesis (H_0) is rejected at the level of 5%.

Thus, the dimension of human resources does not have a favorable situation in the population under study.

Table 5: the results of t-test to determine the status of human resources dimension mean

Statistical Value = 3						
A 95% confidence interval for the difference between the mean and test values		Difference between the mean and test values	P-value (the result of statistical test)	t-statistic	Standard Deviation	Mean
Upper bound	Lower bound					
-0.0365	-0.7858	-0.41111	0.033	-2.297	0.80050	2.5889

4- Identifying the status of organizational culture dimension

In testing the research hypotheses and examining the mean of population’s opinions using the selected samples, H_0 and H_1 , are expressed as follows:

$$\begin{cases} H_0 : \mu \text{ Organizational Culture Dimension} \leq 3 \\ H_1 : \mu \text{ Organizational Culture Dimension} > 3 \end{cases}$$

Considering the issue that the focus of responses is far lower than 3 and the difference between mean of samples and the values of the test is reported equal to **-0.06** as well as $P=0.07$ and lower than $\alpha = 0.05$ (table 6), it is concluded that the null hypothesis (H_0) is confirmed at the level of 5%.

Thus, the dimension of organizational culture has a favorable situation in the population under study.

Table 6: the results of t-test to determine the status of organizational culture dimension mean

Statistical Value = 3						
A 95% confidence interval for the difference between the mean and test values		Difference between the mean and test values	P-value (the result of statistical test)	t-statistic	Standard Deviation	Mean
Upper bound	Lower bound					
0.3682	-0.5015	-0.06667	0.752	-0.321	0.92920	2.9333

5- Identifying the status of leadership dimension

In testing the research hypotheses and examining the mean of population’s opinions using the selected samples, H_0 and H_1 , are expressed as follows:

$$\begin{cases} H_0 : \mu \text{ Leadership Dimension} > 3 \\ H_1 : \mu \text{ Leadership Dimension} \leq 3 \end{cases}$$

Considering the issue that the focus of responses is close to 3 and the difference between mean of samples and the values of the test is reported equal to 0.02 as well as $P=0.9$ and higher than $\alpha = 0.05$ (table 7), it is concluded that the null hypothesis (H_0) is confirmed at the level of 5%.

Thus, the dimension of leadership has a favorable situation; and since the value is very close to the mean value, it can be said that this area tends to be positive.

Table 7: the results of t-test to determine the status of leadership dimension mean

Statistical Value = 3						
A 95% confidence interval for the difference between the mean and test values		Difference between the mean and test values	P-value (the result of statistical test)	t-statistic	Standard Deviation	Mean
Upper Bound	Lower Bound					
0.4222	-0.3722	0.025	0.897	0.132	0.84859	3.0250

8- Conclusion of knowledge management infrastructures

Dimensions	t-statistic	P-value	Difference between the mean and test values	A 95% confidence interval for the difference between the mean and test values		Test Results	Status
				Lower Bound	Upper Bound		
Organizational Culture	-0.3	0.7	-0.07	-0.5	0.4	H_0 Confirmed	Favorable
Organizational Structure	-0.9	0.4	-0.2	-0.5	0.2	H_0 Confirmed	Favorable
Human Resources	-0.3	0.03	-0.2	-0.8	-0.04	H_0 Rejected	Unfavorable
Information Technology	1.1	0.3	0.2	-0.2	0.6	H_0 Confirmed	Favorable
Leadership	0.1	0.9	0.02	-0.4	0.4	H_0 Confirmed	Favorable
Knowledge Management Infrastructures	-0.4	0.7	-0.08	-0.4	0.3	H_0 Confirmed	Favorable

5-2- Knowledge Management Processes

The following table shows a summary of the results obtained from assessing all dimensions of the knowledge management.

9- Conclusion of knowledge management processes

Dimensions	t-statistic	P-value	Difference between the mean and test values	A 95% confidence interval for the difference between the mean and test values		Test Results	Status
				Lower Bound	Upper Bound		
Knowledge Identification and Acquisition	-0.0	0.9	0.02	-0.4	0.4	H_0 Confirmed	Favorable
Knowledge Development, Sharing and Distribution	-0.3	0.7	0.07	-0.5	0.4	H_0 Confirmed	Favorable
Knowledge Storage and Maintenance	-0.2	0.03	-0.4	-0.8	-0.04	H_0 Rejected	Unfavorable
Knowledge Application	0.3	0.7	0.07	-0.3	0.5	H_0 Confirmed	Favorable
Knowledge Management Processes	-0.4	0.7	-0.08	-0.5	0.5	H_0 Confirmed	Favorable

According to table 9, the results obtained from testing knowledge management infrastructures and processes have been favorable.

6- Conclusion

The present paper investigated the implementation of knowledge management in a distribution company of cosmetic and hygiene products. For this purpose, firstly 40 employees working in the Golpakhsh-e Aval Company were selected as samples to take part in analyzing the infrastructures and processes of knowledge management and their sub-criteria which have

been determined by the conceptual model of the research. The knowledge management infrastructures and processes dimensions were identified using t-test. After implementing knowledge management and analyzing its dimensions, the following table was distributed among the same 40 people who had been selected as samples. The data of the research was examined to specify the status of knowledge management after its implementation in the organization. Each dimension was scored from 1 to 5, ranging from very good to very bad.

Table 10: the questionnaire of knowledge management implementation indices

Indices	Pre-implementation Value	Post-implementation Value
Awareness of knowledge available in the organization		
Inter-sectoral exchange of knowledge		
Identifying the experts of the organization		
Performing group activities		
Doing things based on personal experiences		
Increasing personal knowledge by company's activities		
The impact of knowledge base on process improvement		
Company's awareness of its weaknesses		
Performance Improvement		
Familiarity with issues and projects to reduce rework in Golpakhsh-e Aval Company		

Figure 1 shows the mean of values before and after the implementation of knowledge management for the 40 people who were selected as samples.

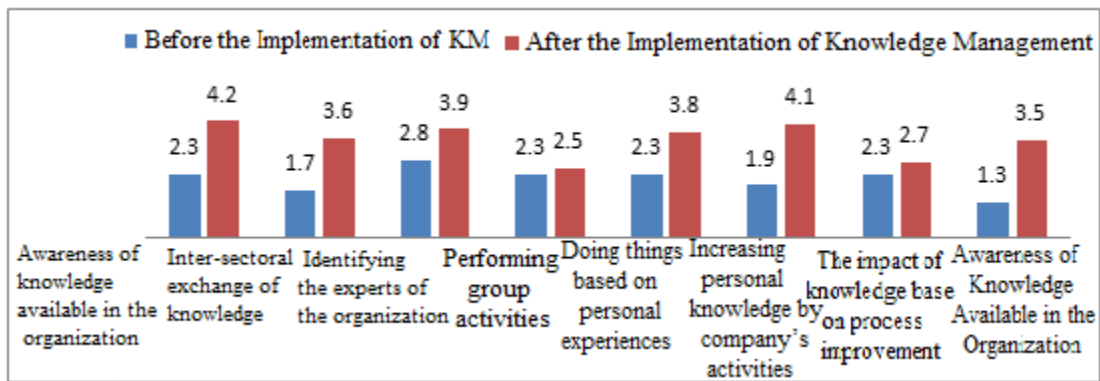


Figure: the chart of knowledge management implementation

As it observed, in some aspects, the impact of knowledge management has been significant and in some others, it has been low but effective.

References

- Amin, Amin and Saad Bargach and Jim Donegan(2003). Building Knowledge Sharing Culture. Oilfield Review, vol.13, no.1, pp.48-65.
- Broadbent, M. (1998).The phenomenon of knowledge management:
- Barney, j(1991). Types of competition and the theory of strategy: towards an integrative approach, Academy of management review. Vol11.pp 791-800.
- Barney,J.B. Firm reasources and sustained competitive advantage. Journal of Knowledge management. Vol.17, pp.99-120.
- Balogun,O, Hawisa, h. and Tanock J.(2004). Knowledge management and Manufacturing: The Product and Process Database. Journal of manufacturing technology management, vol.15, no.7, pp.245-260.
- Bhatt, G. (2002), Management strategies for individual knowledge and organizational knowledge, Journal of Knowledge Management, Vol. 6, Issue 1, pp. 31-39.
- Bierly, P., Chakrabarti, A. (1996), Generic knowledge strategies in the U.S. pharmaceutical industry, Strategic Management Journal, Vol. 17.
- Bierly, P., Daly, P. (2002), the strategic management of intellectual capital and organizational knowledge, Edited by: chan Wie choo & Bontis, N. Oxford university press.
- Chuang, S.H (2004). A resource-based perspective on knowledge management capability and competitive advantage: an empirical investigation. Expert systems with Applications, 27, pp. 459- 465.
- Choi, and H. Lee (2003). An empirical investigation of knowledge management styles and their effect on corporate performance. Information and management, 40, pp.403-417.

- De Pablos, Patricia Ordonez (2002), Strategies for management and organizational learning: typologies of knowledge strategies in the Spanish manufacturing industry from 1995 to 1999, *Journal of Knowledge Management*, Vol. 6, No. 1.
- Hansen, Morten T., Nohria, Nitin, Tierney, Thomas (1999), What's Your Strategy for Managing Knowledge?, *Harvard Business Review*, March/April 1999, Vol.77, Issue2.
- Kasten, J. (2007), Knowledge strategy and its influence on knowledge organization, *Proceeding of The North American Symposium on Knowledge Organization*, Vol. 1.
- Kim, S., Sun, E., & Hwang, H., "Building the knowledge map: an industrial case study", *Journal of Knowledge Management*, 2003, 7(2), 34-45.
- Kruger & etal (2007), Formulation of a Strategic Knowledge management maturity model, Internet.
- Liebowitz, J., "linking social network analysis with the analytic hierarchy process for knowledge mapping in organizations", *Journal of knowledge management*, 2005, 9(1), 76.
- McDermott Consulting Firm (2005), Knowledge Strategies, Internet.203
- Miller, J., "Building a Knowledge Map: An Exploratory Study for the Solids Test Group of an Environmental Testing Laboratory", A Dissertation Submitted to the Graduate Faculty of the School of Communications and Information Systems in Partial Fulfillment of the Requirement for the Degree of Doctoral of Science In Information Systems and Communications Robert Morris University, (No.3293736), 2005.
- Nonaka, I. & H. Takeuchi (1995), *the knowledge – creating company*, Oxford University Press. Oxford.
- Tectem (2001), Benchmarking project knowledge management, Benchmarking Center, University St. Gallen, Switzerland, Screening Report: 37.
- Yaghoubi, N. and Maleki, N. (2012), Critical Success Factors of Knowledge Management (A Case Study: Zahedan Electric Distribution Company), *Journal of Basic and Applied, Scientific Research*, TextRoad Publication.
- Zack, M. H. (1999), Developing Knowledge strategy, *California Management Review*, Vol. 41, No. 3, Spring 1999, pp. 125-145 .