

# Determination of the effective factors in the knowledge management strategy (Case study: Tabriz city pharmacy industry)

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## Abstract

The conditions of competitive environment of the organizations are considered to be various and very complicated while the competitive space is changing rapidly, at the same time the rate of change for most organizations is faster than their speed and ability of responding. In this direction only the organizations that keep their competitive advantage can survive. Keeping the competitive advantage and permanence of the organizations is possible by assistance of the knowledge management. Innovation is the main key of success of a pharmacy company, because these companies, from the initial drug discovery till its final processes to supply products in the market, need innovation and new resources for their stability and durability in the market. The knowledge management strategy in the pharmacy not only insists on the importance of obtaining some new knowledge, but also considers its distribution in the society. This research tried to evaluate the impact of four dimensions such as: organizational structure, culture, creation and knowledge transfer, and human resources on the knowledge management strategy. Our statistic society in this research is the staff of three pharmacy plants Zahravi, Dana and Shahid Ghazi seromsazi. This research from purpose point of view is a functional research and from the data collecting point of view is a descriptive one. The Friedman test was used for ranking the impact of four factors on the knowledge management strategy. Referring to the research results, the knowledge management strategy should emphasize on the human being sources factor.

**Keywords:** Knowledge management strategy, organization structure, culture, establishing and transferring the knowledge and human being sources.

## Introduction

The best way to achieve competence in the global market is through planning and upgrading core competencies. The knowledge of economy will not only change the experience of workers, but organizations and countries must also rethink their economic strategies. "How well an individual, an organization, an industry, does in acquiring and applying knowledge will become the key competitive factor. There will be no poor countries. There will only be ignorant countries" (Anonymous, 1995). An organization knowledge management has the potential to be of great value, but only when linked to its overall strategy and strategic decisions. Knowledge management (KM) is the latest and very important strategy in increasing organizational competitiveness (Bell & Jackson, 2001). The ability of a company in production, saving and distributing the knowledge at the top of the competition in the quality, speed, innovation and price fields is very important and sensitive. A company only by system development and implementation of mechanism for collecting, promoting mental achievements can transform the knowledge into an active power (Nonaka, & Takeuchi, 1995). Reviewing of 5 successful companies in using the management strategies indicated that one of the key factors for successful design of knowledge management is to consider culture as a very important component

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for KM (Itami, 1987). For this reason the organizations that observe the knowledge management gradually and are synchronous with organization culture, are more successful than organizations that tried to make vast and intensive modification. Knowledge accumulation is of the specifications of new organizations, as the increasing of the information volume in these organizations and necessity of using it in organization decisions during the recent decades cause to appearance of such new events as knowledge management (Marr, 2002). This summons the necessity of planning, organizing, directing the knowledge and also the management of process of achieving the exact knowledge by emphasizing on its performance and efficiency (the same resource). In the modern century of knowledge the organizations realize that their life without having the a management strategy and valuing the organization knowledge will not be steady (Seemann, 1999). The base of the drug expansion is knowledge and knowledge needs innovations to implement the drug finding process that may be considered as the main property of the organization (Kandampully, 2002). All are discussing about the knowledge management, but how it can be used and how can we execute it successfully? This question is the question of most of the organizations that follow up the understanding and establishment of the knowledge management (KM) for their business. In the past years several organizations considered the knowledge management. Day – to – Day, strategic management is changing to the main factor of organization achieving the competitive advantage through innovation. The purpose of this survey is to evaluate the importance of knowledge management, assistance and improvement of innovation processes in the R&D of the organization.

## Methodology

### *Knowledge concept*

How can knowledge drive a competitive edge for the business? Knowledge helps the organization to utilize resources more efficiently – leveraging those resources smarter and more productively in support of the business goals. Knowledge is also important to identify new ways to provide services, create value, improve performance and help the organization to achieve the goals and objectives (Anan, & Singh, 2011). A knowledge worker is an organizational asset who possesses the relevant knowledge in the

form of experience, expertise and problem solving abilities in a domain of knowledge with the ability to understand problems and develop solutions to those problems (Laha, 2011). Knowledge has not a clear concept. There are more definitions of knowledge and different methods of how to do management. Davenport and colleagues defined the knowledge a combination of information and human being that cause to information transform to operation (Davenport, & Prusak, 1998). Knowledge has been defined as the ability of operation of properties and conforming the capability in one status that guarantee achieving the goals (Sanchez *et al.*, 1996). In fact knowledge is a source in the organization that by using it not only its value is deducted but its value is added (Glaser, 1998).

### *Knowledge management strategy and Knowledge management*

Knowledge management is a process that helps the organization to manage intangible assets by combining knowledge with the experience of individuals or knowledge workers (Ioniță I., & L. Ioniță, 2011). Knowledge management is the process that helps organizations to realize, choose and organize and publish the main information and skills that are considered somehow as the organization memory and are usually as unorganized. This enables the organization in solving the learning issues, strategic planning and dynamic decisions more effective and efficient. Knowledge management emphasizes on the realization of the knowledge and providing it, as it can share officially and as a result it can be used again (Karnamehagi, 2004). If KM could not add an added value to the organization, in this case it becomes only an extra cost, useless even adverse. Therefore, the strategic way of the organization should determine the activity way of the KM. Knowledge management is not a science base on the IT, but IT is one of the tools that knowledge management use it, therefore the starting point of executing the knowledge management in an organization is not purchasing the software and equipment, the starting point is executing the methods and solutions that distinguish the exact knowledge of organization from miscellaneous information. The next step is promotion of the culture of information using and its progress in the organization. Only when the enough motivation to participate in such a process was created, it can use the IT to remove the current barriers on the free circulation of the ideas, thoughts and staff information (Noipour, 2004).

### *Benefits of Knowledge Management Strategy*

Howells (2002) notes the challenge of the pharmaceutical industry is to keep abreast of the sheer volume of information and knowledge within the pharmaceutical domain, while competing with rivals on the quality and efficacy of its drug products. From a strategic perspective the role of the R&D function within large pharmaceutical companies is changing, research by Kneller (2003) indicates the basis of drug development is migrating from the in-house R&D model, to one of external acquisition of innovation and drug technology through Universities and Biotechnology firms. While this transition is occurring, research within the drug industry suggests companies are slow to accept such change and embrace Knowledge Management strategies as a means to adapt (Davenport, & Peitsch, 2005). The pharmaceutical industry is a knowledge intensive arena that demands up to date applicable knowledge and to all intents and purposes, Knowledge Management research should be able to provide worthwhile benefits to an organization and enhance the drug development processes (Alavi, & Leidner, 2001).

The payoff potential from successful knowledge management strategy is increased efficiency, effectiveness and innovation. These benefits include:

- Innovation through free flow of ideas
- Reduction of timeframes required for the reaction to changes or rapid adaptation
- Multiple use of existing knowledge influences elimination of redundant and unnecessary processes thus reducing costs
- Increase revenue faster and adequate placement of products and services in the market
- Reduction of employee turnover by recognizing value of employee's knowledge
- Creating a database of collective, organizational knowledge of the company
- Control knowledge in all areas of action and use in practical applications, problem solving, response to changes in the environment, the needs of users
- Increasing quality of services and reducing the time needed to diagnose problems using the deep knowledge of employees, business partners and customers (Kovacevic, & Djurickovic, 2011).

Potential efficiency of success strategy of the knowledge management increases effectiveness, efficiency and innovation. Knowledge management strategy determines the movement into direction of reaching organization goals, but its main goal is

to make the management potential in the organization. The activities and standardization are considered to be the main parts of the solutions in the implementation of the knowledge management (TECTEM, 2001). Simply a knowledge management strategy, production process, codification and explicit and implicit knowledge transferring in the organization is obtaining correct information of the proper people at proper time. The business leaders, organization consultant and managers would like to use of the four principle of the strategic knowledge management to led the organization to manage. Generally these management strategies are known as culture, guide, technology and measurement (Davenport *et al.*, 1998). From theory point of view, a strategic organization of knowledge management should provide a plan or way that by it an organization can guide its staff through methods and tools of knowledge management effectively (Jashapara, 2004).

Factors affecting strategy knowledge management are as follows:

- General Business Strategy
- Organizational Culture
- Organization structure
- Establishing and transferring the knowledge
- Human sources

### *Organization structure analysis and effective cultural factors*

One of the effective factors in success of the knowledge management that should be considered in making strategic, is organization structure as mechanical structures or hierarchical that have functional organization specification, supporting the knowledge management strategies. Mechanical structure is an organization that has complexity, formality and high centralization and organic organization is an organization that has complexity, formality and low centralization. By using the questionnaire number 1 we try to determine the structure type. In this making strategic step some of the public culture of the organization parameters that will help to the knowledge management process are evaluated. This evaluation is for the purpose of the realization of the barriers or stimulus existed in the organization in the way of success of the knowledge management and also realization of the strengths of the organizational culture that can cover the cultural weak points. In the questionnaire number 2 we evaluate the cultural factors and realization of the cultural factors that can be effective in producing knowledge processes as stimulus and booster.

### *Establishing and transferring the knowledge analysis*

The knowledge producing processes factors analysis, reviewing of the results of the previous researches indicates that one of the main differences among making strategic for information management and making strategic for knowledge management that is due to the nature differences between data and information with knowledge and also the direct impact of the knowledge production processes on the assumption strategy on making strategy of knowledge management, firstly is done for the knowledge area for the organization. One of the main reasons in choosing the knowledge management strategy, is the current knowledge of the organization on each of its types. Being interaction between implicit knowledge and clear of the organization is one of the purposes of the strategic planning for knowledge management. Next purpose of this step is evaluation of the current situation of the knowledge production and publication there is used of the Nonaka and Takeuchi models. Each of the four processes of combination, community making, inside making, and clear making by standard questionnaire by Choy Vali in 2005 are designed for measuring these processes, are used. By using of questionnaire number 3 we evaluate this factor.

### *Human sources analysis*

Human sources strategy analysis step firstly there reviewed the current strategies in the organization that the current status of the organization in supportive human being resources management are what kind of the strategies of the knowledge management. Then by comparison with chosen strategies for knowledge management of organization to strength or modify of this strategy. Reviewing the effective factors of huge human being strategies on knowledge management is done by questionnaire number 4. Human being strategies can also support of the humanist strategies and support of oriented systems too, although mostly there are used in direction of the humanist strategies.

### *Data analysis methods*

Our statistic society in this research are the managers and staff having high education (higher than license degree) of three factories Zahra-vi, Dana and Shahid Ghazi seromsazi. Data collection tools are including the library and internet sources. There were used of the interviews and questionnaires for testing the assumptions and the tools of the data analysis is (SPSS) software. Stan-

dard questionnaire is used as we distributed these questionnaires among the staff by random that they answered only 180 questionnaires from 230 questionnaires. In order to analyze the collected data firstly descriptive statistics we review the variants of demographic of research including sex, age and service background. Then considering the assumptions we used of Fradman test to determine the priority and Kolmogorov–Smirnov test in order to publish the sample. The used software is (SPSS) software. Assumption 4. Realization of the strategy of human being sources management is effective on knowledge management strategy In this research stability of the questionnaire' questions are measured by Cronbakh test that because all of the coefficients were higher than 6% consequently the questions had the needed stability and ability of evaluation of these factors. There was used of the Kolmogorov–Smirnov test to determine the normality of the tests that there was realized that the variant grades reviewing have normal publication that means that can use of the parameter tests in order to test the variants (Table 1).

The main hypothesis

The main factors that affect the knowledge management strategy

Subsidiary of Hypothesis

1. Organizational structure has an impact on Knowledge Management Strategy
2. Organization Culture has an impact on Knowledge Management Strategy
3. Establishing and transferring the knowledge has an impact on Knowledge Management Strategy
4. Human sources has an impact on Knowledge Management Strategy

### *Evaluations of the effective factors on the knowledge management strategic making*

For prioritization according to the information of table 2 and done Freidman test, it is seen that the most effective factors in the knowledge management strategy are obtained respectively realization of the human being resources strategy with rating of 3.22, organization structure with rating of 2.71, effective cultural factors with rating of 2.17 and the producing and transferring of knowledge process with rating of 2.47. As the value of the test are obtained equivalent with 112.876 with significant level 0.00 that because the significant level is less than 5%, the result is the knowledge management strategy has main role in the knowledge management strategy.

**Table 1. Kolmogorov-Smirnov test for normality evaluations of the effective factors knowledge management strategy.**

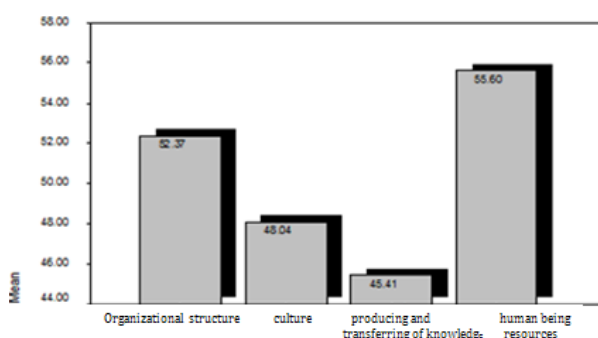
Kolmogorov-Smirnov test		Statistics of variables
Sig	Z-Statistic	
0/776	0/66	Organization structure
0/143	1/148	Organizational Culture
0/077	1/127	Establish and transferring the knowledge
0/756	1/673	Human sources

**Table 2. Evaluations of the effective factors on the knowledge management strategic making.**

	N	Mean	Freidman Test	DF	Sig
1. Human sources strategy	180	3/22	112.876	3	0/000
2. Organization structure		2/71			
3. Organization culture		2/17			
4. Establishing and transferring the knowledge		1/90			

**Table 3. The role of four factors on the knowledge management strategic making.**

	N	Mean	T-Test	Std. Deviation	DF	Sig
Organizational structure	180	52/36	2/355	13/47	179	0.020
Organizational culture	180	48/0422	2/137	12/29201	179	0/034
Establish and transferring the knowledge	180	45/4094	4/341	14/18751	179	0/000
Human sources strategy	180	55/5952	4/713	1592652	179	0/000



### The most important factors that influenced the knowledge management strategy.

Organizational Culture has an impact on Knowledge Management Strategy → Confirm the hypothesis  
 Organization structure has an impact on Knowl-

edge Management Strategy → Confirm the hypothesis

Establishing and transferring the knowledge has an impact on Knowledge Management Strategy → Confirm the hypothesis

Human sources has an impact on Knowledge Management Strategy → Confirm the hypothesis

## Results

In this research, four factors of organizational structure, culture, creation and knowledge transfer, and human resources have been analyzed in three factories of the East Azerbaijan. According to the results, four factors' impact on the knowledge management strategy in the pharmacy industry is significant and the impact of factor of human resources has been more serious among the others. Making the knowledge management strategy in the



pharmacy organizations is accompanied with such impacts as knowledge sharing and accelerating new technology achievement, preventing of over lapping and wasting of the resources, reusing of the knowledge, helping to publish the knowledge in the organization and the speed of knowledge circulation in the organization, making competitive advantage in the organization, synergistic in the produced knowledge in the current or future researching projects and deducting the distance among the actual research requirements and research projects and easy achievement of researchers and other users to the information and knowledge with assistance of the electronic system. The results of the research indicate that these organizations can do by using of the data and current information in direction of producing the relevant knowledge with products and customers and use this knowledge in direction of increasing the competitive advantage in the market. Reviewing the strategy of human being resources of these companies, the codified job explanation, defined tasks, repeated processes and existing the jobs with operator definition in these companies shows the importance of the knowledge coding and frequent usage of these processes. Plans and programs that the management of strategy of organizational knowledge is implemented through as well as relevant technologies, are new subjects and refer to not quite explored area for managers. Meanwhile what is really important is to find strategy and plan and proper tools to solve this problem in the organization. Implementation of the plans and projects of the knowledge management in these organizations without previous studying and having a unique strategy for management of organizational knowledge apart from that cause to high cost of buying new tools and providing the software and hardware, also includes the cost of using of manpower in these projects and or heavy payments to the contactors. Strategic planning for knowledge management is the first step to execute the knowledge management and managers using knowledge management with this approach, will considerably reduce the risk of failure of this project in their organization.

Suggestions for supportive strategies of human beings resources management of knowledge management are as follows:

- 1-Plans to increase the interactions between the staff and making working teams
- 2-Employment of experienced staff beside the low experienced staff with high social capacity
- 3-Facilitation of making relationship with suppliers and customers

4-Designing the motivational system for finding new opportunities in the market by emphasizing on domestic strength

5-Support of the integration of suggestion systems, sharing the knowledge and reward organizational systems and evaluation of function with approach of amount of knowledge providing in the bases of the organizational knowledge.

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