

THE ROLE OF KNOWLEDGE MANAGEMENT ON THE PERFORMANCE OF THE NEW PRODUCT DEVELOPMENT PROCESS

Javad Mehrabi, Arash Kazemi, Ruhollah Nasiri
Department of Management Qazvin Branch, Islamic Azad University, Qazvin, Iran

ABSTRACT: In today's business world, a large part of our work is based on data and less time to gain experience and knowledge available. In these circumstances organizations based on their knowledge to compete with each other. Today, most organizations need to optimize the process of developing new products to have a good sense. And for having such a successful process, have made great efforts and costs incurred are enormous. The main research question is how the key success factors in the product development process and the creation of knowledge resources affect the process of knowledge management. The purpose of this study was to examine the role of knowledge management on the performance of the new product development process. The results of the study showed that 95% level of confidence between the variables is the key success factors of knowledge management and the performance of the new product there is a significant relationship. That is the name of the key success factors ranging from workforce specialist, high quality, targeted, and be more flexible structure has better performance in innovation and new product development.

KEYWORDS: knowledge management, software industry, small and medium businesses

INTRODUCTION

In recent decades have witnessed dramatic changes in the types of institutions, structure, functioning and management styles have their own. Institute for Exploration, More important to understand, adapt to and manage change in a business environment made on the application of knowledge to improve operations and services and Better products to customers surpassed. Such organizations need to implement a new style of management to manage knowledge. In the past thirty years, much research has been done on the effectiveness of new product development processes and various models have been proposed to systematize these processes ([Clark et al., 1987](#)). On the other markers as key elements of success of new products introduced by the authors is that some of the results of the joint research. Some also differs depending on the type of business and the products it has an extensive list of these is available since the publication of influential books ([Nonaka and Takeuchi, 1995](#)) is little question that remains consistently on knowledge management. Considered an important factor in product development and knowledge activities in the heart of new product development processes is considered. So Many business owners and managers tend to make decisions about how to empower knowledge management or even coordinate the activities of their company NP

through knowledge management tools. The combination of knowledge management and new product development in the nature of their work, knowledge and technological businesses more relevant ([Clark and Wheelwright, 1993](#)). The basic objective of this study was to examine the role of knowledge management on the performance of the new product development process in SME active in the West Mazandaran software. Following the literature in Chapter 2, Chapter 3 Research Methodology, Chapter 4 analyzes the data and celebrated in Chapter 5, we conclude.

LITERATURE

Business in the new millennium with special conditions and competition among enterprises become more intense every day. And the rate of innovation is rising, so that the competition has led enterprises to reduce costs, of its human resources, which are valuable sources of data reduction and depressing than explicit the tacit knowledge of the employees' organizations to act. The output of this unit is the understanding of knowledge management, innovation and new product development, introduction to theories and models of knowledge management and the design of the questionnaire is to identify criteria and indicators.

THE EVOLUTION OF KNOWLEDGE MANAGEMENT

A grand theory in the domain of knowledge management has emerged so far, a theory that has amassed a collection of experiences related to knowledge management. In this regard, it is important to small and large and valuable reference that has been done before. It should be noted that a number of management theorists Discuss the evolution of knowledge management have claimed and distributed among them as Peter Drucker, Paul Astravsmn, and Peter Senge, of America to be named.

Drucker and Astravsmn more on the importance of improving basic knowledge as organizational resources and focusing on Senge's learning organizations Cultural dimensions of knowledge management has created. Add Human Intelligence by Dag Barrett Released in 1978, soon as a group of software applications, systems and applications capabilities in conjunction with any other show. In the mid-1980s, the importance of knowledge as a competitive asset of the organization was evident, and it was while Classical economics is concerned with methods and management methods have shortcomings, and yet for some organizations there this neglect. In 1989, the preparation of IT-based knowledge management, a consortium of organizations began their work in America As a trailblazer for the purpose of knowledge management in an organization declared as its capital. The first books on organizational learning and knowledge management were published in 1990 ([Jones, 1990](#)).

3.1. *The necessity and importance of knowledge management*

Why Managing knowledge is so important for organizations? The following factors are invested in the necessity of knowledge management ([Abdul Karim, 2004](#)).

3.2. *Competitive advantage*

Factors such as increased competition, globalization and the new knowledge economy, caused sustainable growth business more difficult. Technology advances in technology and the impact on our evolution requires adequate workforce, flexible, skilled and educated. Public offering of shares, change in the way the organizations affected structures.

3.3. *Organizational Transformation*

Who has not experienced in decades of organizational change in mind?

3.4. *Flexibility in employment*

The knowledge, the more fleeting and elusive, the staff often develop their career and job changes create for themselves.

3.5. *Knowledge management system*

Knowledge management system, system which is important in any organization should be expanded. There are many ways to describe the knowledge management systems. One aspect of the technique that was proposed by Meso and Smith in 2000. This method consists of three components: technology, functionality and knowledge. Knowledge Management System covers procedures for obtaining or data collection, organization, dissemination of information sharing among employees of an organization ([Cooper and Kleinschmidt, 1987](#)).

METHODOLOGY

How to determine which method or device which is a proposition (thesis) research is approved or rejected. The research in this study was descriptive, survey. Because the purpose of this research is to understand the complex patterns of behavior through the models and variables is assumed correlation between them. This method is especially useful in situations where the objective is to explore the relationship between variables. To examine the distribution characteristics of a target population of the survey method used. In this study, two types of variables that have been considered include: knowledge management and new product development. In this study, using a questionnaire and the information contained in small and medium software companies, data were collected for the study:

- 1- Questionnaires used in this study is 1 KM
- 2- New product development performance
- 3- Key success factors of new product development

4.1. *Reliability*

Cronbach's alpha for this study was defined as the value obtained by using SPSS software (0.898) indicates that the questioners have the appropriate reliability.

RESULTS

In order to determine the relationship between variables, and R is the correlation coefficient and the coefficient of correlation between them. These parameters are selected according to the scale of the variables measured in this study is the use of parametric Pearson:

- 1- First hypothesis: the success of the new product development process and key success factors in this process there is a significant relationship.

2- Second hypothesis: the success of the new product development process and the management of this process there is a significant relationship.

3- Third hypothesis: the key success factors of knowledge management process there is a significant relationship.

Table 1: test results correlated variables

	Performance of the new product development process	Knowledge Management	Key Success Factors
New product development	1	449	564
Significance level		003	000
The sample size	44	43	42
Knowledge Management	449	1	643
	Significance level	003	000
	The sample size	43	44
	Key <i>Successful</i> factors	564	643
	Significance level	000	000
The sample size	42	42	43

According to the results of Table 1 can say that the variable performance of the new product development process and key success factors there is, Because it represents a significance level of less than significant 0.05 confirm the hypothesis of a relationship and because the correlation coefficient between them (0.564). Therefore, a hypothesis test is significant at a confidence level of 95 % may be approved.

According to the results of Table 1 can be said that the new product development process and knowledge management performance variables are significant relationship, Because it represents a significance level of less than significant 0.05 relationship and confirmed the hypothesis that the correlation coefficient between them (0.449).

According to the results of Table 1 can be said that between the key success factors of knowledge management, there is a significant relationship. Because it represents a significance level of less than significant relationship 0.05 approved Tuesday is assumed that the correlation coefficient between them (0.643).

DISCUSSION AND CONCLUSION

In this study, we sought to identify the factors affecting the performance of the new product development process, So after identifying the key success factors of knowledge management, it is necessary The effect of these two factors into one overall model and the individual The regression test was used for this effect; So we can say that there is a significant relationship between knowledge management and new product offerings.

SUGGESTIONS

A) Providing a methodology for shape -based architecture for knowledge management in software companies

B) Providing a model of knowledge management in software companies

C) Review and analysis of rinses by use of information technology in documenting the process of developing a software product company with knowledge management approach

D) Provide a model for the retrieval and use of knowledge stored from previous product development projects in a company producing software

REFERENCES

Abdul Karim M. Management Science, technology and innovation and their role in improving the efficiency and effectiveness of processes. Information Center of Industries and Mines 2004; 3: 29-32.

Clark K, Chew WB, Fujimoto T. Product development in the world auto industry. Brookings Papers on Economic Activities 1987; pp:729-771.

Clark K, Wheelwright SC. Managing New Product and Process Development. Free Press, NY 1993; pp:457-480.

Cooper RG, Kleinschmidt EJ. New products: what separates winners from losers? Journal of Product Innovation Management 1987; 4: 169-84

Jones C. Patterns of large software systems: failure and success. Computer IEEE 1990; 28: 53-62.

Nonaka I, Takeuchi I. Knowledge of the firm, combinative capabilities and the replication of technology. Organization Science 1995; 3: 383-97.