

The Relationship between Knowledge Management and Innovative Behavior

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ABSTRACT

In today's complex business environment, Companies are faced with the fact that they must be innovative. Innovation is increasingly vital in creating and sustaining competitive advantage of organizations, also contributing to the growth and acquisition wealth. In other words, innovation is a strong competitive strategy to achieve a manufacturing position and global serving and it is competitive effective factor in global markets and we can say that knowledge management is one of the key drivers of innovation and among this, cultural characteristics of an organization can play an important role in the relationship between knowledge management and innovative behavior. The aim of the present study was to investigate the relationship between knowledge management and innovative behavior of Guilan manufacturing firms. This study is an application study and use descriptive method. A field method is used to data collection and data collection tool is questionnaire. The population of this study is all 212 Guilan manufacturing firms located in city of Rasht and simple random methods is used to sampling. Finally, the sample consists of 81 companies using the finite population sampling formula completed the study questionnaires and returned them. Finally, using correlation and regression techniques, research hypotheses were tested that the relationship between KM and innovative behavior was confirmed.

KEYWORDS: Knowledge management, innovative behavior.

1. INTRODUCTION

Lack of innovation is one of the important causes of low levels of economic growth in developing countries. And as long as these countries have not improved the innovation and training to use science and knowledge and to increase the level of professional skills, labor efficiency levels remain low (Rabii, 2009). Today, the pressures of global competition and rapid technological growth has increased companies need to adjust, improve, and continuous innovation. Companies with more innovations are more successful in responding to environmental changes and development of capabilities in order to achieve better performance. In fact, those companies seek to innovative behavior are more successful in dealing with environmental changes and constantly develop their performance to achieve better results (Chen et al., 2010). Innovation is presented as an idea, product or process that is new for the companies and refers to the tendency of companies to develop new elements or new combinations of existing elements of products, technologies or management practices (Chen et al., 2010). Innovation is recognized as one of the most important sources of competitive advantage for organizations. The results of this study indicate that those companies that paid particular attention to innovation could increase market share and their profits significantly (Farsijani and Samii Niestani 2010). According to Scott and Bruce (1994), individual innovative behavior in the workplace as a complex behavior is including three different behaviors: production, support the idea and acting on the ideas. Individual innovation starts by the production of novel and useful ideas in various domains (Amabil, Conti, Coon, Lazenby and Herron, 1996; Woodman et al, 1993). Individual Innovative behavior is more complex concept than creative behavior. While creativity refers to generate new and useful ideas, innovation refers to successful development and implementation of innovative ideas (Afshari, 2009). According to Chen (2004), one of innovation resources is from knowledge management. Knowledge is widely recognized as a strategic asset that enables companies to strengthen top competition and uncover innovative opportunities (chen, 2004). Innovation process is including acquisition, dissemination and application of new knowledge. Therefore, knowledge management is influenced on the innovative performance. Effective knowledge management provides individuals and groups to create, preserve and disseminate knowledge. Creation and dissemination of knowledge is very dynamic in the innovation process. However, activities related to the maintenance of knowledge have static state. Creation of

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knowledge is opportunities for companies to recombination of existing knowledge to create new knowledge. Dissemination of knowledge in this study refers to collective beliefs or behaviors associated with the spread of learning among individuals or units in an organization (Chen *et al.*, 2010). Studies on innovation revealed that organizational culture can act as a stimulus or an obstacle to innovation. These studies reveal that a culture that has focuses on collaboration and risk tolerance and challenge the members of the organization to create new ideas leads to innovation. A number of authors know this kind of culture as a mental stimulus to describe organization that dealt with to provide new suggestions and ideas through innovation and teamwork (Yusof *et al.*, 2011). Considering the entire above subject, this research has tried to examine the relationship between knowledge management and innovative behavior with the moderation role of organizational culture characteristics in the manufacturing firms of Rasht:

The basic research question is as follows:

Is there significance relationship between knowledge management and innovation according to the corporate culture in the production companies in Rasht city?

Research objectives

To assess the level of innovative behavior in Guilan manufacturing companies.

To assess the level of knowledge management in Guilan manufacturing companies.

To assess the relationship between knowledge management and its dimensions and innovative behavior in Guilan manufacturing companies.

2. RESEARCH MODEL

Many studies had been done to investigate the relation between knowledge management as the independent variable and innovative behavior as the dependent variable (Chen *et al.*, 2010). There are also a variety of paper that are discussed the relationship between organizational culture and knowledge management (Allameh & *et al.*, 2011) as well as organizational culture and innovation (Yusof, 2011). That is referring to in the background. Thus, considering the theoretical basis existing in the theoretical framework is present according to Figure 1-1. While to examine the relationship between knowledge management and innovative behavior, organizational culture features roles is also pay attention in this regard.

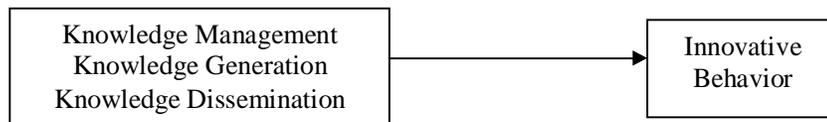


Figure 1-1) Research model (Chen *et al.*, 2010)

2.1 Research hypotheses

According to the research model, research hypotheses are as follows:

H1: There is significant relationship between knowledge management and innovative behavior.

H2: There is significant relationship between knowledge generation and innovative behavior

H3: There is significant relationship between knowledge share and innovative behavior .

3. LITERATURE

1- Research on "The relationship between organizational culture and knowledge management in the Education system of Semnan. The findings suggest that organizational culture was influenced on knowledge management and among different cultures, tribal culture and democratic organizational culture provide favorable conditions for knowledge management in an organization. In order to improve knowledge management in organizations, authorities need to establish a democratic organizational culture and tribal culture (Bidokhti Amin *et al.*, 2011).

2- Research on "the role of learning in organizational innovation. In this research, while describing the importance of innovation in today's organizations, the concept of organizational learning and organizational knowledge has been discussed as factors influencing innovation and their impact on organizational performance. Findings show that organizational learning by creating new ideas cause to innovation and improved performance (Shokri and Khairegou, 2009).

3- Research entitled "relationship between organizational culture and knowledge management." In this study, five components of team building, learning, negotiation, top management support and communication as components of organizational culture and conversion ideas, knowledge storage, knowledge transfer and creation of knowledge as a component of knowledge management are considered. Studies have indicated that in the electricity distribution companies of executive vice president of North East Tehran, the situation of team building, negotiation, communication, top management support and learning in a way that it does not provide the required domain to establish knowledge management (Daneshfard and Shahabi Nia, 2009).

4- A study entitled "Knowledge Management and Innovation: The role of organizational climate and structure. The aim of this study was to investigate the effects of organizational climate and structure on knowledge management and innovation of the company. Findings show that knowledge management conclusively linked to firm's innovation. Furthermore, the effect of knowledge management on innovation is adjusted by the supportive atmosphere, decentralized structure, less formalized and integration. Once the organizational structure is less formalized, more decentralized and integrated, knowledge management is the most progressive (Chen.Chung, 2010).

5- Research entitled "relationship between organizational culture and knowledge management." In this study, the relationship between four types of organizational culture from Quinn and Comeron conceptual framework and six dimensions of knowledge management has been studied. Findings show that there is significant relationship between various organizational culture and six dimensions of knowledge management (Allameh & et al, 2011).

6- Research entitled "relationship between organizational culture and innovation". The results of this study indicate that four of the eight dimensions of Hofstede organizational culture are important in organizational innovation by adjusting power. In particular, performance trends, humanism and courage culture has significant relationships to organizational innovation. However, the future trend has ambiguous relationship to organizational innovation (Yusof Abu-Jarad, 2011).

7- A study entitled "Knowledge management and learning capacity." This research aim to suggest an overall vision to create organizational innovation based on knowledge management and organizational learning capacity. This study shows the important role of organizational learning capacity in the knowledge management cycle. In fact, organizational learning is used as filling the gap between organizational learning and innovation (Gunsel and et al, 2011).

8- Research entitled "Factors influenced on accepting technological innovation among the employees of Australian public organization." The findings reveal a direct influence of organizational factors (training, management support and organizations advantages) along with individual factors (perception of usefulness of innovation, individual innovation, past experiences, self-imagination, pleasure derived from innovation) and social factors (social network and colleagues) on innovative behavior and attitudes to innovation and finally the adoption of innovation among employees (Talukder, 2012).

9- A study titled "The Role of Knowledge Management in creation innovation". The findings reveal positive and significant impact between the type of knowledge, knowledge activities, knowledge transfer to create innovation (Akram et al, 2011).

These studies indicate that there is close relationship between knowledge management and innovative behavior on the one hand as well as organizational culture and innovative behavior on the other hand. Also, research shows that there is also a positive relationship between knowledge management and organizational culture. In sum, it can be the strong basis for the theoretical framework of this research.

4. RESEARCH METHOD

This study is among the field research in control and monitoring degree, because the researcher will examine the variables in the normal state. In terms of application scope, this research is in application research and finally, in terms of data collection methods, it is a field of research. The population of this study is Guilan manufacturing firms located in city of Rasht and simple random methods is used to sampling. Because the number of manufacturing companies was limited and 212 companies, finite population sampling formula is used:

$$n = \frac{Z^2 \cdot \frac{a}{2} \cdot S_x^2 \cdot N}{e^2 N - e^2 + \left(Z^2 \cdot \frac{a}{2} \cdot S_x^2 \right)}$$

$$n = \frac{(1/96)^2 \times (0/288)^2 \times 212}{(0/05)^2 \times 212 - (0/05)^2 + (1/96)^2 (0/288)^2} = 80$$

Thus, the minimum sample size of 80 companies is required.

n= sample size

N= Number of branches

$$\frac{Z_{\alpha}^2}{2}$$

= the dependent variable size according to the standard normal distribution with an uncertainty level of 5% ($\alpha=0/05$)

S2= the variance of population based on the dependent variable (innovative behavior)

Note that the minimum number of 80 companies is required and due to the number of questionnaires is not returned, 120 questionnaires were distributed across 120 manufacturing companies. In the end, 84 corporate executives completed the questionnaires and returned them (return rate about 70%) that 3 of them in the final analysis due to lack of complete responses were excluded and 81 questionnaires was used in the final analysis. Field method is used for data collection. Data collection tool was questionnaire.

5. ANALYSIS

H1: There is significant relationship between knowledge management and innovative behavior with regard to organizational culture.

To test this hypothesis, at first the relationship between knowledge management and innovative behavior would be examine.

Table 1 knowledge management and innovative behavior

Variables	Number	Correlation coefficient	Significance	Result
knowledge management and innovative behavior	81	58/9 %	0/000	Confirmed

According to the above table, it can be seen that Sig =0/000<0/05. So, given that the level of significance is less than 0/05, the relationship between knowledge management and innovative behavior is accepted. According to this table, we can say that correlation intensity between the two variables of knowledge management and innovative behavior is + 58/9 percent that represents a direct relationship between the two variables.

In the next step, to examine the impact of corporate culture characteristics on the relationship between two variables of knowledge management and innovative behavior, multiple regression method is used.

Table 2) summarizes the results of regression models between the dimensions of knowledge management and innovative behavior with regard to organizational culture

	Intensity	Determination Coefficient
First model- Without moderator variable	58/9%	34/7 %
Second model (entering moderator variable in the model)	68	46/2 %

It can be seen that in the first model, the impact of knowledge management on innovative behavior is about 58/9 percent. With the arrival of the cultural characteristics of the model, this rate increases to 68 percent.

H2: There is significant relationship between knowledge creation and innovative behavior.

Table 3) knowledge creation and innovative behavior

Variables	Number	Correlation coefficient	Significance	Result
Knowledge creation and innovative behavior	81	53/3 %	0/000	Confirmed

According to the above table, it can be seen that Sig =0/000<0/05. So, given that the level of significance is less than 0/05, the relationship between knowledge creation and innovative behavior is accepted. According to this table, we can say that correlation intensity between the two variables of knowledge creation and innovative behavior is + 53/3 percent that represents a direct relationship between the two variables.

In the next step, to examine the impact of corporate culture characteristics on the relationship between two variables of knowledge creation and innovative behavior, multiple regression method is used.

H3: There is significant relationship between knowledge share and innovative behavior .

To test this hypothesis, at first the relationship between knowledge share and innovative behavior would be examine.

Table 4) knowledge share and innovative behavior

Variables	Number	Correlation coefficient	Significance	Result
Knowledge share and innovative behavior	81	58/9 %	0/000	Confirmed

According to the above table, it can be seen that Sig =0/000<0/05. So, given that the level of significance is less than 0/05, the relationship between knowledge share and innovative behavior is accepted. According to this table, we can say that correlation intensity between the two variables of knowledge share and innovative behavior is + 52 percent that represents a direct relationship between the two variables.

6. DISCUSSION AND CONCLUSION

1) The first hypothesis has shown that there is significant and positive relationship between knowledge management and innovative behavior so that correlation between the two variables of knowledge management and innovative behavior is + 58/9 percent. Thus, knowledge management explains about 34% of the dependent variable that is innovative behavior.

2) The second hypothesis has shown that there is significant and positive relationship between knowledge creation and innovative behavior so that correlation between the two variables of knowledge creation and innovative behavior is + 53/3 percent. Thus, knowledge creation explains about 28% of the dependent variable that is innovative behavior..

3) The third hypothesis has shown that there is significant and positive relationship between knowledge share and innovative behavior so that correlation between the two variables of knowledge share and innovative behavior is + 52 percent. Thus, knowledge share explains about 27% of the dependent variable that is innovative behavior.

According to the results from the hypothesis, the following cases are proposed:

According to the first hypothesis which shows a positive correlation between knowledge management and innovative behavior and analysis results also showed that knowledge sharing has a greater impact on the innovative behavior, it is suggested that the companies should be more emphasis on knowledge sharing between employees. Since it is expected that managers and supervisors in the companies has a high theoretical knowledge and also production employees have a high practical knowledge, knowledge sharing between them can increase the effectiveness of the organization. Building knowledge group between supervisors and employees can be very helpful.

According to the second hypothesis which shows a positive correlation between knowledge creation and innovative behavior and due to study the questions in separately, it is suggested that assignment of new projects to the members should based on their skills. Also, the problems or failure of the organization must discuss publicly.

According to the third hypothesis which shows a positive correlation between knowledge share and innovative behavior and due to study the questions in separately, it is suggested that organization need to encourage the transfer of knowledge informally. Also discussion between the members shall be taken place via electronic networks about shared interests.

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