



# The Effect of Knowledge Sharing On Organizational Innovation, Considering a Mediating Role of Organizational Learning

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## ABSTRACT

This study aims to investigate the relationships between knowledge sharing, organizational learning and innovation. The study population is carriers of knowledge workers in the private banks in Fars province and 190 people were selected through targeted non-random sampling and through questionnaires distribution the subject was investigated. After collecting the data, firstly using the Kolmogorov-Smirnov test, it was to investigate the distribution of research variables data and then, using Pearson correlation techniques and structural equation modeling, the hypothesis was tested. The results are indicative of the existence of a significant relationship between knowledge sharing variables, organizational learning and organizational innovation. On the other hand, it was found that organizational learning can also play the role of mediator

## 1- Introduction:

During the past thirty years, researchers have paid much attention to innovation (Gatignon et al. 2002). In a turbulent economic environment, innovation is an important strategic driving force for gaining new opportunities and protection of knowledge assets, as well as a competitive advantage

(Hurmelinna et al., 2008, Latice Ali and Shayzan Hassan, 2013, Dengue et al., 2012). The reason which explains that innovation factor is crucial to the success of organizations is that, innovative companies have more flexibility with the phenomenon of change, and can also be held accountable for faster against changes, opportunities and gain a competitive advantage compared to other companies ( Darooch, 2005, Lawrence et al., 2005, Dung, 2010).

- 2- It is essential to be aware of the types of innovation and its features, because any kind of innovation requires a complex response of the individual and the organization (Harmlyna et al. 2008). According to Damnpvr (1991), innovation is divided into two basic and gradual categories. Researchers have realized that radical innovation within the organization, there is a huge difference with incremental innovation, and innovation is fundamental to long-term success of the company (Damnpvr 1991). In general, the texts of the most important types of innovation are: technological innovation in the face of administrative innovation. Incremental innovation to radical innovation, and product innovation, the innovation process. Also, according to the literature, a clear distinction exists between technological innovation and administrative innovation, while technological innovation involves new technology products and services, innovation, administrative policies, procedures and organizational form (Damnpvr and Ivan in 1984, Dong et al. 2012).
- 3- Importance of innovation has led researchers to identify variables that will accelerate innovation (Becheikh et al. 2006). Some researchers believe that knowledge management activities are one of the most important drivers of innovation (Darooch et al. 2002, Liao and Chang, 2011, Liao et al., 2012). Knowledge-based view of the organization, which carries the resource-based view, considers knowledge as a strategic resource (Grant, 1996; Gould et al. 2001, Layts Ali& Shayzan Hassan, 2013).
- 4- Nowadays, companies have become competitive in the knowledge. Knowledge-based theory now suggests that, strategically, is an important source of knowledge, and the main determinant of sustainable competitive advantage (Grant, 1996; Drucker, 2000). Knowledge management refers to the process of capturing the collective expertise, and the use of intelligence in the organization and uses them to foster innovation through organizational learning and it includes acquisition, conversion, utilization and protection of knowledge. Knowledge sharing is one of the important processes of knowledge management Nonaka & Tkeuchi (1995) noted that knowledge could become the fourth stage which include extroversion, socialization, internalization and combination (Nonaka and Takeuchi 1995).
- 5- Organizational learning is also one of the important drivers of innovation (Sanz et al., 2011; Daruch, 2005). According to Liao, organizational learning and knowledge management activities should contribute to achieve the best performance (Liao et al., 2012). Although some researchers have examined the processes of knowledge management with a competitive advantage, some researchers had studied knowledge management processes with organizational learning, and others had studied it with organizational innovation separately (Daruch; 2005; Don Pratt et al, 1998), while

organizational learning is completed with knowledge management processes and the relationship between each processes, knowledge management, organizational learning and innovation should be considered separately (Gove; 2005; Lea et al., 2011). Organizational learning involves three main processes which are (1) a commitment to learning,(3) open view (2) shared vision (Sinkula et al. 1997, Julia and others, 2010).

#### **6- Sharing knowledge**

7- Knowledge sharing, as one of the stages of knowledge management refers to activities that, in connection with the current knowledge, a department or a person or the other person and includes communication, conversion, interpretation and treatment knowledge. Knowledge sharing as a complex process but creates value and is the rationale for many of the organizational knowledge management strategies (pebble, 2005). On the one hand, sharing knowledge, transforming knowledge to students individually or in groups in the process of internalization and socialization, and on the other hand, knowledge sharing could be individual or group translations to the organizational knowledge through the process of externalization and composition. It is worth noting that sharing tacit knowledge leads to socialization and sharing explicit knowledge in an organization causes combination (Wang, 2012). The purpose of knowledge sharing is or creates new knowledge or exploit existing knowledge (Howell & Anansiq, 2013)

#### **8- Organizational Learning**

9- Garvin argues that the organization is a learning organization which has skills and the ability to create, acquire and transfer knowledge and modify their behavior so that it reflects new knowledge and insights. Finally, in another definition, a learning organization is a type of thinking that encourages systematic approach and communication and enhance personal and technical skills; and it encourages learning among its members and (facilitates the acquisition of knowledge and information and enabling them to react quickly and effectively makes to changes (Baoliang Hu, 2013). The learning organization is an organization that learning culture is institutionalized inside it. The learning organization knows how to use knowledge and gives to its employees, opportunities and creation tools and employing knowledge. The learning organization creates knowledge and in all processes it applies work and experience and modifies its behavior to be consistent with the changes and thus, the creation and application of new knowledge for growth and continuous learning in an endless cycle (Musse et al., 2001)

#### **10- Innovation**

11- Generally it can be said that innovation is an activity in which, its purpose is to create, move, change and respond to new ideas. Researchers have provided similar definitions of these phenomena in the way that, it can be said that from their perspective, innovation is not only consciously development of new ideas but also to introduce and apply these ideas (Johnson, 2004).

12- According to Damanpour (1991), innovation is divided into two basic and gradual categories. Researchers have realized that radical innovation within the organization has huge difference with

incremental innovation, and innovation is an essential foundation for long-term success of the company (Damanpour 1991). In general, in related texts, the most important types of innovation are: technological innovation against administrative innovation, incremental innovation against radical innovation, and product innovation against process innovation. Also, according to the literature, there is a clear distinction between technological innovation and administrative innovation while technological innovation involves new technology products and services; administrative innovation focuses on policies, procedures and organizational form (Damanpour Ivan 1984, Dong et al., 2012).

**13- Research Methodology**

14- The method of the research is descriptive and correlational study which was conducted as a field study. The study population is all employees in 35 private banks in the province including Pasargad Bank, Parsian Bank, Sina Bank, Ansar Bank, Ghavamin Bank, Bank of Iran Zamin, the Eqtesad Novin Bank, Bank Shahr and Sarmayeh Bank. The study population is head officials which are about 230 individuals. The questionnaires were distributed and 173 valid questionnaires were returned to the researcher.

15- In the questionnaire, 3 variables were measured which include: knowledge sharing, organizational learning and organizational innovation. Each of these variables are used in the measurement of previous studies. To measure organizational learning the standard questionnaire Sincla and others (1999) were used and the three dimensions of organizational learning were evaluated in the form of eleven questions. To measure knowledge sharing, thirteen questions are used that these questions have been removed from the standard questionnaire of Mencla (1994). Also for measuring organizational innovation, the standard questionnaire of Dong et al. (2012) with twenty-two questions. The questionnaire based on the Likert scale, i.e. each of the categories included seven options; from strongly agree to strongly disagree. Next, the questionnaire was translated, because most respondents are not familiar with English. Based on reverse engineering, which was proposed by Daglas and Graike (2005) questionnaire was translated into Persian, and then to estimate the consistency of the questionnaires, the Persian versions was translated back into English.

16- After collecting the data, firstly, using the Kolmogorov-Smirnov test, the distribution of variables was analyzed and by using Pearson correlation techniques and structural equation modeling, the hypotheses were discussed.

**17- Variables normality test**

18- According to the probability variables amount, in the Kolmogorov-Smirnov test which is larger than 0.5, H0 is accepted based on the normal distribution of variables, and 95 percent confidence level with 0.05 error, the research variables are normally distributed.

19- Kolmogorov-Smirnov test

Components	Test statistics	Sig	Test result

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-۲۱

31-	Culture Adhocracy	1.128	0.127	Normal	-٢٢
	Folklore	0.962	0.0313	Normal	-٢٣
	Culture Market	0.951	0.327	Normal	-٢٤
	Hierarchical culture	0.830	0.497	Normal	-٢٥
	Organizational Culture	0.837	0.485	Normal	-٢٦
	Organizational Learning	0.787	0.565	Normal	-٢٧
	Organizational Innovation	0.489	0.970	Normal	-٢٨
	Sharing knowledge	0.843	0.475	Normal	-٢٩

32- Hypothesis 1: there is a significant relationship among the sharing of knowledge with organizational learning,.

Hypothesis	Exploring the relation between		r	R <sup>2</sup>	Sig	Test result
	The first variable	The second variable				
1	Sharing knowledge	Organizational Learning	0.728	0.53	0.000	H1 verified
<b>r : The correlation coefficient    R<sup>2</sup> : The coefficient of determination    Sig : Significance level</b>						

34- As a result of this test shows, the significance level was 0.000 which is smaller than 0.05. Therefore, it can be argued that, at confidence level of 95%, the sharing of knowledge and organizational learning has a significant relationship. On the other hand, since the value of the correlation coefficient between these two variables is equal to 0.728, it can be said that there is a linear relationship between knowledge sharing and organizational learning,

35- Hypothesis 2: there is a significant relationship among the sharing of knowledge with organizational learning.

36-

Hypothesis	Exploring the relation between		r	R <sup>2</sup>	Sig	Test result
	The first variable	The second variable				

2	Knowledge sharing	Organizational Innovation	0.549	0.301	0.000	H2 verified
<b>Significance : Sig    The coefficient of determination : R<sup>2</sup>    The correlation coefficient : r</b>						
<b>level</b>						

37- As a result of this test shows, the significance level was 0.000 which is smaller than 0.05. Therefore, it can be argued that at confidence level of 95%, there is significant relationship between knowledge sharing and organizational innovation. On the other hand, since the value of the correlation coefficient between these two variables is equal to 0.549, it can be said that there is a linear relationship between knowledge sharing and organizational innovation.

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39- Hypothesis 3: there is a significant relationship among the organizational learning with organizational innovation.

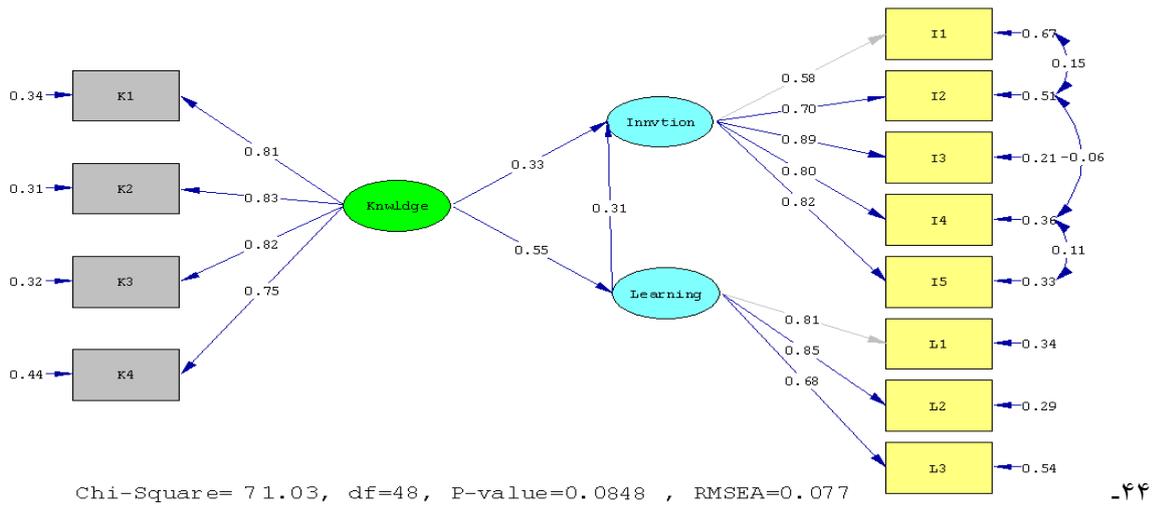
Hypothesis	Exploring the relation between		r	R <sup>2</sup>	Sig	Test result
	The first variable	The second variable				
3	Organizational learning	Organizational innovation	0.619	0.383	0.000	H3 verified
<b>Significance : Sig    The coefficient of determination : R<sup>2</sup>    The correlation coefficient : r</b>						
<b>level</b>						

40- As a result of this test shows, the significance level was 0.000 which is smaller than 0.05. Therefore, it can be argued that at confidence level of 95%, there is significant relationship between learning and organizational innovation. On the other hand, since the value of the correlation coefficient between these two variables is equal to 0.619, it can be said that there is a linear relationship between learning and organizational innovation.

41-

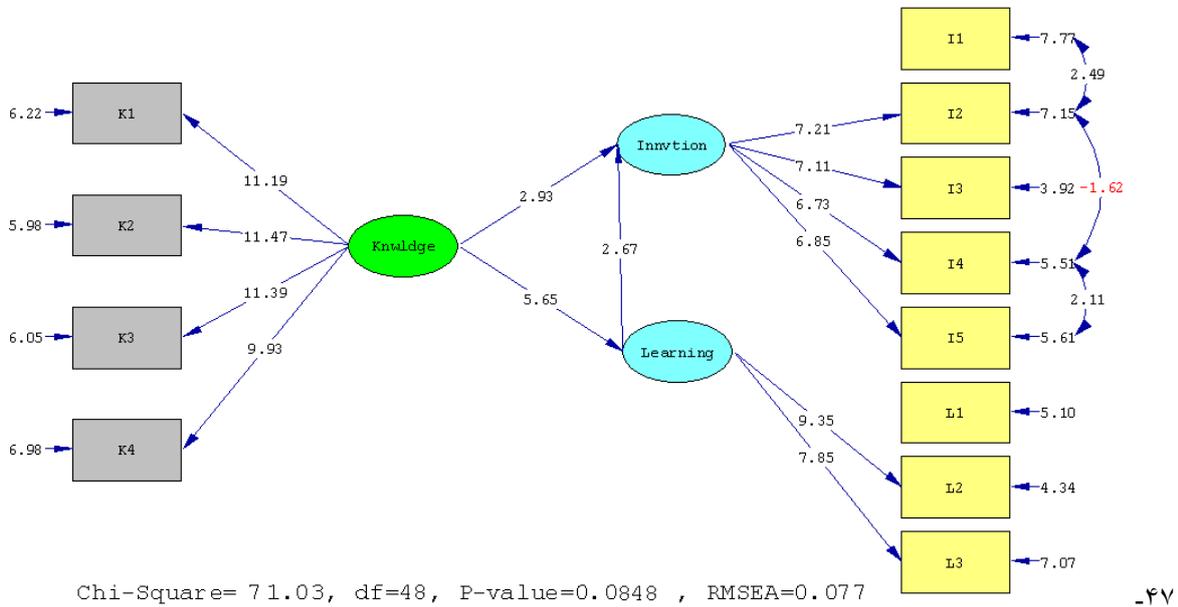
42- Hypothesis 4: organizational learning has an intermediary role between knowledge sharing and organizational innovation.

43- Figures 1 (structural model in the standard estimate mode) and 2 (structural model in significant factor) demonstrate the significant impact and effect of relationships between research variables. As is known, these relations have been significant:



45- Figures 1: structural model and 2: in standard estimation mode

46- The figure of 2<sup>nd</sup> structural model in coefficient state shows significant:



48- Figures 2: Structural Model of 2 in a significant coefficient

50- The extent of indirect effect determination is done through the mediator, through statistic called VAF:

$$52- VAF = \frac{a \times b}{(a \times b) + c}$$

53- a: The path coefficient between the independent variable and the mediator = 0.55

54- b: The path coefficient between the mediator and the dependent variable = 0.31

55- c: The path coefficient between independent and dependent variables = 0.33

56- VAF = 0,341

$$58- z = \frac{a \times b}{(b^2 \times s_a^2) + (a^2 \times s_b^2) + (s_a^2 \times s_b^2)} = 26.14$$

59- a: path coefficient between the independent variable and the mediator = 0.55

60- b: The path coefficient between the mediator and the dependent variable = 0.31

61- S<sub>a</sub>: standard error, of course, between the independent variable and the mediator = 0.14

62- S<sub>b</sub>: standard error of the path between the mediator and the dependent variable = 0.12

63- Given that Sobel test value is higher than 1.96, we can say that at confidence interval of 95, the impact of organizational learning mediator in the relationship between knowledge sharing and innovation is significant.

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## 65- Results

66- Organizations, so that they can effectively meet the demands of today's changing environment, need the flexibility, adaptability, entrepreneurship and innovation. Creativity and innovation are so that, if it aside from the scenes of human life, in fact, the final bullet had hit the motion, dynamics, survival and the survival of human life and organization. So, in today's corporate world, managers, innovators, innovative organizations and innovative staff, are the innovation triangle sides and without any innovation to its destiny. Because of skilled manpower and is competent as a source of competitive advantage, enabling organizations with the flexibility, assignment of responsibilities and tasks to employees, a sense of independence, competence, effectiveness and meaningful granted to employees. In such circumstances, human resources with high energy, in general will be tried, in carrying out their thoughts and ideas, and always will be seeking to learn new knowledge and its application. In this case, the institutionalization of creativity, and production thinking and new thinking, organization becomes a creative agency, innovative and prosperous, and the result is a synergy in innovation, ultimately, innovation, lead were to raise the quantity and quality of service, reduce costs, avoid waste, reduce bureaucracy, and consequently, increase efficiency and productivity, job satisfaction and motivation of employees. And organization can be aligned with changes done to the system, and aims to achieve greater efficiency

67- According to the hypothesis of the relationship between knowledge sharing and organizational learning, it was concluded that direct and positive relationship exists between these two variables and the results are consistent with the findings of (Ramirez et al., Yang et al., 2912). When bank employees tried on share their knowledge and discuss it with other colleagues to review, it would be an emerging culture in the banks and the staff encourages the learning experiences and new knowledge. Staff will move ahead towards organizational learning and the learning organization.

68- Also, in examining the relationship between organizational learning and innovation it found that there is positive relationship between organizational learning and innovation,. Jiang Chen et al. 2009 support the results. Also, studies of (Sanz et al., 2011 and Haller and Holt, 1998, Sincla and Barker, 1999, Hu Boaling 2013, Morales et al., 2013) are backing for positive impact on technological

innovation and organizational learning. In those organization which are becoming a learning organization, employees will always seek to do things in new creative manner, because their willingness to learn new things, makes innovation in their thinking.

69- Since the findings are indicative of the existence of a direct relationship between knowledge sharing and organizational innovation, the research of (Wang and Wang, 2012) support them. Also in the reviews of the relationship mediator of organizational learning, the sharing of knowledge and innovation, it became clear that knowledge sharing, both directly and indirectly affects innovation and through influencing organizational innovation, plays its own role.

70- References

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