

The Effect of Organizational Learning on Firm Innovation Capability: An Investigation in the Banking Sector

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Abstract

Purpose: The purpose of this research is to measure the organizational learning level in public banks operating in Denizli and to determine what kind of relationship there is between the organizational learning levels of these banks with their innovation mentality and the innovation activities and also whether or not the organizational learning capability has an effect on the innovation activities of the banks through empirical research.

Design/Methodology/Approach: The questionnaire method was used to collect the research data. The concept of organizational learning capability was measured with 15 questions; the innovation was measured with 5 questions. Organizational learning was measured within the dimensions of commitment to learn, shared vision, open-mindedness and intraorganizational knowledge sharing. The last part of the questionnaire is composed of 6 questions to identify the demographic characteristics of the firms in the research. 272 questionnaire was assessed. The questionnaires were applied with the factor analysis and the reliability test. A regression analysis was applied to determine the effect of the organizational learning capability on the innovation performance. The SPSS package software was used for the analysis of the research data.

Findings: As a result of the evaluation of the questionnaire data, it is seen that there is a positive relationship between organizational learning and innovation in general. It was also determined that there is a positive relationship between the sub-factors of the “commitment to learn”, “shared vision” and “intraorganizational knowledge sharing” that belong to the organizational learning concept, which is decisive on innovation. However, it is seen that there is no significant relationship between the “open-mindedness” dimension and innovation.

Originality/Value: In the literature, many studies about organizational learning and innovation carried out on the industrial sector. The effect of organizational learning capability on innovation has not been studied much. There is an important gap in the literature on relationship between organizational learning and innovation. Therefore, the results and the method will contribute as literature and are expected to show the direction to future work. The result of negative relationship between open-mindedness and innovation management and possible reasons is an important finding in terms of creating awareness and provide a different view.

Keywords: Organizational Learning, Organizational Learning Capability, Innovation, Banking Sector

Paper Type: Research paper

Introduction

The intense global competition and the information boom in every field have been compelling all producers who fight to maintain the competitiveness anywhere in the world to develop their

capabilities to strengthen all of their tangible and intangible assets. These changes and transformations have brought forwards new methods and techniques in the management ideas. The concepts of organizational learning and innovation have become a phenomenon often addressed and discussed both in the literature and the business world since 1990s. The fact that firms can take and maintain the advantage in the competition depends on providing a sustainable development. In this context, what is there in the center of sustainable development? What enables a firm to get better over time? The answer to these questions is based on the intangible assets of a firm which will create the real difference between the competitors of the firms such as talents of the personnel, creating database, organizational learning and innovation (Yeung et al., 2007:2459).

Lynn et al. (2000:221) stated that there is a linear relationship between the effective learning of a firm and having a say in the competitive environment, and the firms which cannot learn will constantly lose power against their competitors with the learning capability. Therefore, firms can survive in the challenging competitive environment to the extent that they can add value to their goods, service and processes and produce them differently and superiorly than their competitors rather than offering quality products (Cumming, 1998:27-28). When the studies by the academicians are examined, it is suggested to the firms which want to have the innovation capability and make it a habit that they should first be open to the innovative ideas and adopt those ideas (Weerawardena et al., 2006:39)

In many studies, lots of factors are mentioned, which are considered to be bringing the innovation capability to the firms. Among those factors, it is often emphasized the fact that firms have the organizational learning capacity and indicate the quality of a learning firm is quite important for being innovative (Calantone et al., 2002; Keskin, 2006; Naktiyok, 2007; Therin, 2003). Because the organizational learning offers significant opportunities about securing the information that forms the infrastructure for the innovation and managing the innovation (Dishman and Pearson, 2003:615-616; İraz, 2005:127; Vokaca and Rezgui, 2000:177). In addition, the firms with the capability of organizational learning have already acquired the capability to adapt themselves to the environmental change. Therefore, the organizational learning is considered to be an important tool for firms to improve their performances and competitiveness as well as developing their innovation capabilities.

The effect of organizational learning capability on innovation has not been studied much in banking sector. In recent years, banks has started to develop innovative products for their customers and the increasing amount of publicity campaigns. Innovation has become an important success indicator for banks. It has become a constant matter of discussion what the banks can do, which organizational model they will adapt and which method they will use to be innovative. The objective of this research within the framework of all these elements is primarily to measure the organizational learning capability level of public banks operating in Denizli and reveal the nature of the relationship between the organizational learning capability levels of the banks in the research and their innovation mentalities and innovation activities.

Literature Review

Organizational Learning

Today, every firm needs to adapt to the changing environment, learn from successes and failures of the past, identify and correct mistakes of the past, anticipate the impending threats and deal with the threats, be in an ongoing innovation and have the advantage in the competition. The organizational learning, at this point, is considered to be a key factor of which the validity has been proven in meeting the needs of firms (Argyris and Schön, 1996; Bhatnagar and Sharma, 2005). The organizational learning reflects the effort of creating the organizational knowledge and theorizing the methods so that this knowledge can be managed in practice. It is thought that

the organizational knowledge and the processes that create the knowledge provide an advantage for the firm as a sustainable and inimitable source in a business environment in which technologies and products can be easily copied and reproduced (Spicer and Smith, 2006:133). Even though the concept of organizational learning was first addressed by March and Simon (1958) and Cyert and March (1963) at Carnegie Mellon University, the first comprehensive study in this field was conducted by Argyris and Schön (1978). Argyris and Schön defined a firm's capability to identify and correct mistakes as organizational learning (Kamaşak and Yücelen, 2009:111). In the literature, the definitions of organizational learning emphasize the following points: changing the organizational routines, accessing the knowledge which is useful for the firms, increasing the organizational capacity for new production, creating interpretations and visions, developing knowledge in relation with the activity-output relationship, identifying and correcting mistakes (Edmonson and Moingeon, 1996:18).

For the process of organizational learning, a consensus stands out. The process of organizational learning is defined as a four-stage information processing process divided into categories such as the acquisition, dissemination, interpretation, reuse of the knowledge and storing it in the organizational memory to be used (Huber, 1991:90; Garavan, 1997:25). These are as follows:

Knowledge acquisition: Both internal and external resources can be utilized for the knowledge acquisition. These resources are past experiences, indirect experiences, non-organizational experiences and strategic activities, experiences obtained from others or the organizational memory, acquiring new information (Huber, 1991:91; Garavan, 1997:25).

Dissemination of the knowledge: This stage plays an important role in the extensivity of the learning process. Disseminating the knowledge effectively increases its value in the eyes of the firm members who become more effective by using it and therefore handle the knowledge in a wider context (Garvin, 1993:81; Huber, 1991:91).

Interpretation of the knowledge and adding meaning to it: This is a creative process. Knowledge can be created at different levels within the process of adding meaning. Since different interpretations emerging within the firm will expand the potential behavior area of the organization, it means an increase in the organizational learning (Huber, 1991:91).

Storing and reutilizing the knowledge: Organizational memory is a constitution which has a structure for the activities of storing and reutilizing the knowledge and is represented with various concept at the individual and organizational level (Walsh and Ungson, 1991:58; Akgün et al., 2003:852). Storing the knowledge and experiences obtained through learning is as important as putting them into practice for an ongoing organizational success. In this way, the "acquisitions" recorded on the memory (Tsang, 1997: 79) are transferred to other departments, and so, it is not necessary to "reinvent the wheel" (Aydemir, 2000). The stored knowledge is effective in the way of perceiving and the decision-making processes in future. And development of the organizational memory which acts as the knowledge storage of the firm is possible through organizational learning (Huber, 1991:91; Nederhof et al., 2002:321).

Organizational Learning Capability

Organizational learning capability is composed of the properties that shape the organizational learning process. Organizational learning capability is the organizational activity patterns and the capability series of the firm that allows it to process the knowledge and experience, develop the knowledge in accordance with this knowledge and experience and store the knowledge to utilize it when necessary. The organizational learning capabilities are stored in the structural characteristics, practices, policies and other activity patterns that allow the firm to learn and use what it has learned (Garbi, 1998:29; Ussahawanitchakit, 2008:1).

DiBella et al. (1996:41) handled the concepts of organizational learning and organizational learning capability together and suggested that the organizational learning can be enhanced

through being built on the current capabilities or newly-developed capabilities. Goh (2003:577) defined the learning capability as the ability to realize the management activities concurrent with the structures and procedures of a firm that support and facilitate the learning. Yeung et al. (1999:2461) stated that the organizational learning capability is the ability to create and generalize ideas effectively through the specific management initiatives and practices of the organization. The organizational learning capability is composed of three structural blocks: 1- Producing (attaining, exploring, finding or purchasing the ideas), 2- Generalizing (sharing the ideas intraorganizations), 3- Identifying the learning hindrances (finding and solving the problems that prevent producing and generalizing).

Hsu and Fang (2008:2) suggested in their article that only one aspect of the capability has been emphasized while previous researchers have defined the concept of organizational learning capability. The researchers handled the concept of organizational learning capability in two dimensions: capability to incorporate and capability to transfer. As Cohen and Levinthal (1990:128) stated, the capability to incorporate is to evaluate and utilize the external knowledge; it emphasizes the external elements of the capability. According to the Garud and Nayyar, the capability to transfer emphasizes the internal elements of the capability; it sets forth the ability to select technology, develop the selected technologies over time and synthesize those technologies with the efforts of technology development and restore them. Based on previous studies, Hsu and Fang defines the organizational learning capability as the ability to incorporate and transfer the new knowledge and apply this knowledge into the new product development process for the competitive advantage and high production rate within this context. According to Argyris, the organizational learning occurs when the firm members find and correct the faults in the behavioral theory effective in the organization, answer to the changes in the inner and outer environment, and the new acquisitions are recorded on the organizational memory (Sinkula et al., 1997:306).

Innovation

The word “innovate” was derived from “innovore” in Latin and carries the meanings “to renew something, to make something new and change something”. In the literature, there are different definitions of the innovation concept by different authors. Some of these definitions are similar while others focus on different points of the innovation concept (Durna, 2002:5). Drucker (1985:30-31) defined innovation as “the useful information that offers the employees who work at a firm together and have different knowledge and capability with an opportunity for the first time to make them productive”. According to Drucker, innovation is an instrument of entrepreneurship and an activity that provides the necessary resources for the formation of a new capacity (Drucker, 1985:30-31). Innovation is “the transformation of knowledge into economic and social benefit”. The most important characteristic of the innovation is that new ideas, new products or process can provide benefits economically and socially and these benefits can become commercial (Elçi, 2006:1-2).

It is seen that many studies recently conducted on the innovation concept are based on the Oslo Manual. According to the definition in the manual, innovation is that a new or extremely improved product (goods or service) or process, a new marketing method or a new organizational form are realized in the intraorganizational practices or external relationships. In other words, the minimum condition requested for the innovation is that the product, process, marketing or organizational method should be new to (or extremely improved) to the firm (OECD and Eurostat, 2006:50).

It can be observed that the innovation process is composed of three interlocked stages which are “idea creation”, “problem solving” and “practice” in the simplest term if the innovation is defined as the process of transforming an idea into a marketable product, service or marketing

methods. This is followed by the promotion of the innovation. The first two phases generally occur at the R&D level and wind up with an invention. Putting the invention into practice, that is, the commercialization of it brings forth the innovation, and the promotion follows if the innovation has an economic effect out of the firm (Güleş and Bülbül, 2004:126).

Innovation represents a sustainable process. Innovation occurs either with great attempts created from improved product or production methods which have never been tried before as a result of the radical ideas (radical innovation) or as a result of the studies involving a series of developing and improving activities performed gradually (gradual innovation). The innovation process has its own stages. These are as follows:

Emergence of the need: For the innovation process to be able to start, the needs and opportunities at a firm should be noticed first. After noticing the need, the obtained idea should be identified and evaluated. The innovation may occur due to a need which can come out as a result of the analysis of the opportunities with creative power and new scientific information.

Researching and collecting the innovative ideas: The research activity for an innovative idea is performed in two ways: the basic research and the applied research. The basic research is the effort to identify new ideas and activities in the firm and may always aim a special commercial practice. The applied research is the practice of the basic research of a very special product or process which potentially has a proper use (İraz, 2005:117). The innovative ideas should be collected consciously and systematically. The resources of these ideas are generally the intraorganizational employees, customers, scientists, competitors and managers (Güleş and Bülbül, 2004:184).

The developmental stage: This is the stage in which the collected innovative ideas are subject to an internal and external evaluation; the ones not approved are omitted and the approved ones are sorted according to their importance. In the internal evaluation, it is examined whether the innovative ideas comply with the goal and resources of the organization. In the external evaluation, the answers to the following questions are sought: How do the customers perceive the innovative ideas? Who will be using them? (Güleş and Bülbül, 2004:184) The developmental stage is basically the stage of putting an innovative thought or plan at a theoretical level into a real product or process (İraz, 2005:118).

The application stage: In this stage of the innovation process, the plans based on the matured ideas are applied. It is a phase in which the innovation is properly established within the current organizational culture. It is also possible that a resistance against this new movement may be experienced within the organization. The full support of the management is therefore very important in the stage. The innovative ideas successfully analyzed in the firm are forwarded to the related engineering units to be transformed into a physical product. The innovative idea which is intangible until reaching the engineering unit becomes tangible in this stage (Güleş and Bülbül, 2004:185).

The commercialization stage: In the commercialization stage, the new product which has passed the application stage successfully is mass-produced, launched and commercialized in the market. This is the stage in which the new product which has successfully passed the market tests will be produced in great amounts, launched and positioned. The firm either creates its own production facilities or must make deals for the production of the new product. In this stage, significant amounts are spent for the marketing efforts to publicize the innovation (Bruce, 2000:280; Güleş and Bülbül, 2004:186).

The Relationship between the Organizational Learning Capability and Innovation

There are many disciplines to which the organizational learning is related such as organizational sociology, organizational behavior and psychology, organizational theory, industrial economy, history of economics, business, and management. Beside these disciplines, the innovation, also

related to these disciplines, is another important discipline to which the organizational learning is related. (Templeton et al., 2002:180). One of the most important reasons of this relationship is that the innovation is considered to be the result of organizational learning. The employees will only repeat the old practices in a firm in which the learning does not occur (Garvin, 1993:78). It is a necessity for firms to learn constantly to solve the problems and develop new products, processes, marketing and management practices. The organizational learning processes are important parts of the innovation processes. For example, according to Stata (1992:8) the organizational learning is a very important process especially for administrative innovations.

The firm must have the learning capacity to be able to put the ideas into practice during the innovation process (Bouwen and Fry, 1991:37). The firms try to explore new knowledge to make scientific enhancements in the current markets and/or create new product ideas or enter new markets (Jamrog et al., 2006:10). The process necessary for these innovations to be possible are the processes of obtaining the knowledge related to the potential innovation and transforming it into the innovation. The organizational learning is the basis of these processes. The innovation is usually the name for the new good, service, and process, management and marketing practices offered. However, what is actually new here is the new technical and/or management knowledge that serves as the input for these new outputs (Yu Lin, 2006:271).

Senge stated that the 5 disciplines which he set as conditions to be a firm are also necessary for the firms to learn how to make innovation (Senge, 1991:7-8). These disciplines developed by Senge help creating an organizational culture that is open to learn and make innovation for individuals, groups and firms. With this organizational culture, the interactions which will enable the firm to make more enhancements and innovations will increase (Smith, 1997:281). The firms that are able to see the important role of organizational learning within innovation and of innovation in gaining the competitive advantage focus their learning activities on innovation. Such firms learn to be able to understand their customers' needs and requests and transform those needs and request into a new good, service, process and/or management operation. Flexible, quick-learning and fast-responding firms succeed in producing innovative goods and services as well as offering their products at the times and places the customers demand (Slocum et al., 1994:35). The quick-learning firms can find the ways that will enhance the business processes and the revolutionary innovations they can make to develop their products fast (Goh and Richards, 1997:581). Therefore, they will have the competitive advantage against the slow-learning organizations.

The most innovative firms are also effective learning systems. Such firms try to maximize their abilities to acquire the knowledge coming from customers, competitors and technological developments and process that knowledge (Tushman and Nadler, 1986:81). When looked at the firms that somehow could realize the organizational learning successfully, these firms have made the learning their basic capabilities and accepted these capabilities as a starting point for new goods and services.

In summary, if the firms have the learning capability, they are also capable of transforming the knowledge they acquired accordingly into innovation. The type of the innovation into which this knowledge will be transformed depends on the resource, type and use of the acquired knowledge. For example, the market knowledge can be transformed into a marketing innovation; the technology knowledge into a product innovation; knowledge on the firm structure into an administrative innovation; and the business knowledge into a process innovation. The organizational learning capability, in other words, management commitment, system perspective, openness and experimentation as well as knowledge transfer and integration play an important role in the transformation of knowledge into transformation.

Research Hypotheses and Model

Aim and Importance of the Research

The ability to think independently and the teamwork have become important factors for the firms to sustain their activities successfully in today's world in which the global competition continues intensely. Therefore, it is highly critical that the firms provide their employees with a developing and encouraging environment. It can be said that the firms with high organization learning level of which all employees are open to learn, can think independently and operate as creative individuals are more likely to be successful.

The organizational learning activities can be not only for firms of certain industries but also all kinds of firms and handle the economy as a whole. In other words, organizational learning can be useful for economy as a whole too. After all, organizational learning may affect an economy in terms of creating the best organizational practices, creating new industries and enhancing firms' international competition level. Today, the fact that firms can continue their existence is closely connected with making the "constant innovation" mentality their basic capabilities.

The aim of this research within the framework of all these elements is primarily to measure the organizational learning capability level of public banks operating in Denizli and reveal the nature of the relationship between the organizational learning capability levels of the banks in the research and their innovation mentalities and innovation activities.

The Questions and Hypotheses of the Research and Model

It was primarily examined in the research which factors are effective on the organizational learning concept and the structure of organizational learning. In addition, the innovation concept was emphasized. Next, the effect and dimensions of the organizational learning capability on the innovation capabilities of the banks were measured. Accordingly, the hypothesis of the research is as follows:

H1: There is a positive relationship between the organizational learning and innovation.

H1a: There is a positive relationship between the "commitment to learn" sub-dimension of the organizational learning capability and innovation.

H1b: There is a positive relationship between the "shared vision" sub-dimension of the organizational learning capability and innovation.

H1c: There is a positive relationship between the "open-mindedness" sub-dimension of the organizational learning capability and innovation.

H1d: There is a positive relationship between "the intraorganizational knowledge sharing" sub-dimension of the organizational learning capability and innovation.

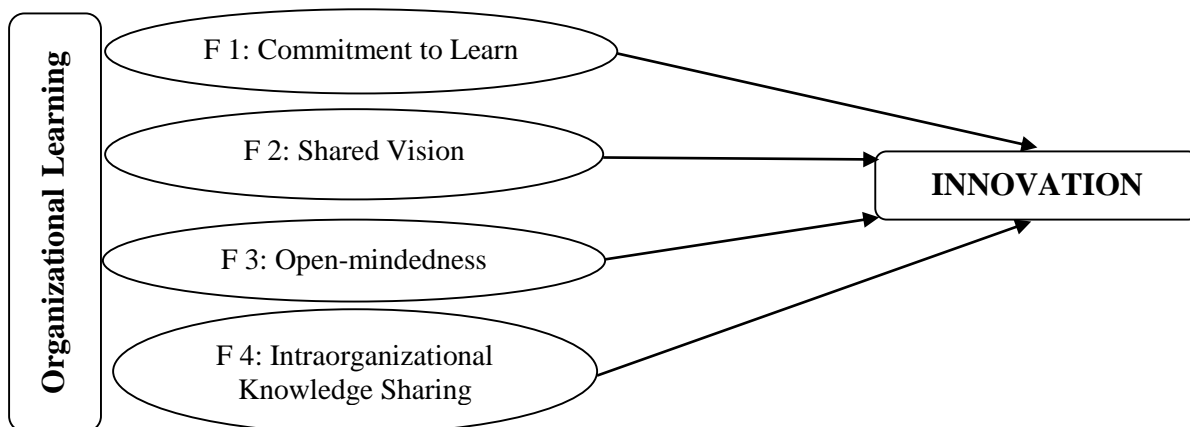


Figure 1: The Conceptual Model of the Research

Research Methodology

The literature related to the organizational learning capability and the innovation was examined. The questionnaire method was used to collect the research data. Organizational learning capability and innovation questionnaires were created utilizing the previous studies. The questionnaires were applied with the factor analysis and the reliability test. The research questionnaire is composed of two parts. The first and second parts were created according to the 5-point Likert type scale. In the first part of the questionnaire, the concept of “organizational learning capability” was measured with 15 questions; the innovation was measured with 5 questions. The dimensions of the commitment to learn, shared vision, open-mindedness and intraorganizational knowledge sharing were also included in the questionnaire. These questions were retrieved from the scale created by Sinkula et al. (1997) with three dimensions and developed by Calantone et al. (2002) with four dimensions. This scale has often been used in related studies and is a scale highly referred in the literature. A five-expression scale developed by Calantone et al. (2002) was utilized to measure the innovation performance. The second part of the questionnaire is composed of 6 questions to identify the demographic characteristics of the firms in the research. A regression analysis was applied to determine the effect of the organizational learning capability on the innovation performance. The SPSS package software was used for the analysis of the research data.

Research Findings

Properties of the sample were primarily mentioned in this section. In addition, the reliability and validity of the questionnaire form was tested, and a factor analysis was conducted to determine the sub-dimensions of the organizational learning concept. Finally, the relation of the organizational learning capability and its sub-factors with the innovation concept was revealed.

The Characteristics of the Research Sample

272 valid questionnaire forms were obtained as a result of the questionnaire study. The statistical results of the control variables of these questionnaires, in other words, the demographic data are shown in Table 1.

When the distribution is considered in terms of the educational background of the participant employees, 72.8% of them are undergraduates; 21.4% are postgraduates. In terms of age of the participants, they are intensely in the age group of 26-40 and the rate is about 82%. As for the gender groups, the majority of 67.4% is male while females constitute 32.6% of the participants. 80% of the participants are the employees of various units within the firm when looked at their positions within the organization.

When considering the job experience of the participants in the research, 41.9% of them had been working there for 0-3 years, 24.4% for 4-7 years, and 22.1% for 8-11 years. It is seen here that a great majority of the participants, 88.4%, were working at their firms for 0-11 years. When considering the professional experience, 26.2% of the participants had an experience of 0-3 years, 34.9% of 4-7 years, and 15.1% of 8-11 years. Accordingly, 76% of the employees had a professional experience of 0-11 years.

Table 1: The Demographic Findings of the Participants of the Research

Gender	n	%	Educational Background	n	%
Male	183	67,4	Graduate School	16	5,8
Female	89	32,6	Undergraduate	198	72,8
			Postgraduate	58	21,4
Age	n	%	Duration at the Company	n	%
20-25	16	5,8	0-3	114	41,9
26-30	117	43,0	4-7	66	24,4
31-40	104	38,4	8-11	60	22,1
41-50	25	9,3	12-15	8	2,9
51-60	9	3,5	16-19	5	1,7
Position at the Company	n	%	20 and above	19	7,0
Member of Board of Directors	5	1,7	Professional Experience	n	%
Manager	16	5,8	0-3	71	26,2
Vice Manager	33	12,2	4-7	95	34,9
Engineering Manager	22	8,1	8-11	41	15,1
Department Manager	147	54,1	12-15	19	7,0
Department Employee	49	18,1	16-19	25	9,2
			20 and above	21	7,6

The Reliability of the Questionnaire Form

The scales used for measuring the organizational learning capability and the innovation levels were applied with the reliability test, and none of the questions were excluded since all of the 15 questions created to measure the organizational learning concept and 5 questions for the innovation scale provided the expected reliability levels. The results of reliability analysis for these scales are given in the tables below.

Table 2: Reliability Results of the Organizational Learning Capability and Innovation, Average and Standard Deviation Values

	Number of Questions	Average	Standard Deviation	Alpha
Organizational Learning Capability	15	3.66	12.456	0.925
Innovation	5	3.34	5.519	0.869

It can be seen in the table above that the alpha value which shows the reliability coefficients of the organizational learning capability and innovation scales are above 0.6 and has an acceptable value for the research.

Table 3: Organizational Learning Capability Sub-factors' Average, Standard Deviation and Alpha Coefficient Values

	Number of Questions	Average	Standard Deviation	Alpha Coefficient
F1: Commitment to Learn	4	3.83	4.053	0.829
F2: Shared Vision	4	3.68	3.525	0.838
F3: Open-mindedness	3	3.68	3.028	0.817
F4: Intraorganizational Knowledge Sharing	4	3.45	4.255	0.879

The alpha coefficients of the organizational learning sub-dimensions are shown in Table 3. It can be seen that the alpha coefficients which show the reliability coefficients in the table are above 0.6 and have an acceptable value for the research.

Factor Analysis Results

The exploratory factor analysis was applied to test whether the variables forming the questionnaire are in the related factor as expected.

Table 4: KMO and Bartlett's Test Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.840
Bartlett's Test of Sphericity	Approx. Chi-Square	699.542
	df	105
	Sig.	0.000

The KMO test result of this research is 84% as seen in Table 4. It can also be seen that the Bartlett's test result is significant. These two results show that there is no harm to continue the factor analysis and the data can be applied with the factor analysis.

Table 5: Analyses of the Organizational Learning Capability Variables

Factors	Variance Values (Eigenvalues)	Variance Percentage	Cumulative Variance Percentage
F1: Commitment to Learn	7.397	49.311	49.311
F2: Shared Vision	1.629	10.863	60.175
F3: Open-mindedness	1.159	7.728	67.903
F4: Intraorganizational Knowledge Sharing	1.011	6.739	74.642

The structure validity of the scale was examined using the factor analysis on the data obtained from the questionnaire questions prepared to measure the organizational learning capability and 4 factors which affect the organizational learning were obtained. The first of the factors explain 49.31% of total variance for the scale, the second one 10.86%, the third one 7.72% and the fourth one 6.73%. These values explain 74.64% of total variance of the scale. The factor load values which were calculated in themselves of the four factors affecting the organizational learning capability are given in the table below.

Table 6: Factors Related to the Organizational Learning Capability

	Factor Load Value
F1: Commitment to Learn	
Managers basically agree that our organization's ability to learn is the key to our competitive advantage.	0.861
The basic values of this organization include learning as key to improvement.	0.836
The sense around here is that employee learning is an investment, not an expense.	0.590
Learning in my organization is seen as a key commodity necessary to guarantee organizational survival.	0.551
F2: Shared Vision	
There is a commonality of purpose in my organization.	0.827
There is total agreement on our organizational vision across all levels, functions, and divisions.	0.808
All employees are committed to the goals of this organization.	0.764
Employees view themselves as partners in charting the direction of the organization.	0.473
F3: Open-mindedness	
We are not afraid to reflect critically on the shared assumptions we have made about our customers.	0.610
Personnel in this enterprise realize that the very way they perceive the marketplace must be continually questioned.	0.828
We rarely collectively question our own bias about the way we interpret customer and market information.	0.760
F4: Intraorganizational Knowledge Sharing	
There is a good deal of organizational conversation that keeps alive the lessons learned from history.	0.804
We always analyze unsuccessful organizational endeavors and communicate the lessons learned widely.	0.572
We have specific mechanisms for sharing lessons learned in organizational activities from department to department (system, etc).	0.860
Top management repeatedly emphasizes the importance of knowledge sharing in our company.	0.771

Explained Variance % 74.64%

The factor loads of the items in the first factor vary between 0.551-0.861; of the items in the second factor between 0.473-0.827; of the items in the third factor between 0.610-0.828; and of the items in the fourth factor between 0.572-0.804.

Table 7: Factors Related to the Innovation

Innovativeness	Factor Load Value
Our company frequently tries out new ideas.	0.917
Our company seeks out new ways to do things.	0.932
Our company is creative in its methods of operation.	0.946
Our company is often the first to market with new products and services.	0.925
Our new product introduction has increased over the last 3 years.	0.870

As a result of the descriptive factor analysis, it was determined that the expressions for the innovation performance are explained with a single factor. This factor explains 87.54% of the total variance. The factor loads of the variables of the factor are also quite high.

Regression Analysis for Determining the Relationship between Organizational Learning Capability Level and Innovation

The concept of organizational learning capability that is suggested to be a determinant of innovation was taken as the independent variable while innovation was taken as the dependent variable in the regression analysis. The regression analysis results for the organizational learning concept and innovation relationship are given in Table 8.

Table 8: The Relationship between Organizational Learning Capability and Innovation.

Independent Variables	B Values	Standard Error	Beta Values	t Values	p Significance Levels
Constant	0.110	0.446		0.247	0.806
Organizational Learning	0.882	0.119	0.664	7.427	0.000

When the test results for the significance of regression coefficients are examined, it is seen that the organizational learning level has an important decisiveness on innovation.

Regression Analysis for Determining the Relationship between the Sub-factors of Organizational Learning Capability Level and Innovation

The sub-factors of the organizational learning capability that is suggested to be a determinant of innovation was taken as the independent variable while innovation was taken as the dependent variable in the regression analysis. The regression analysis results for the relationship between the sub-factors of organizational learning and innovation relationship are given in Table 9.

Table 9: The Relationship between the Sub-factors of Organizational Learning Capability and Innovation.

Independent Variables	B Values	Standard Error	Beta Values	t Values	p Significance Levels
Constant	0.722	0.380		1.897	0.062
F1: Commitment to Learn	0.304	0.120	0.279	2.538	0.013
F2: Shared Vision	0.367	0.130	0.293	2.816	0.006
F3: Open-mindedness	0.087	0.107	0.080	0.816	0.417
F4: Intraorganizational Knowledge Sharing	0.720	0.115	0.694	6.694	0.000

$$R = 0.640, R^2 = 0.618$$

When the relationship between the independent variables and the innovation which is the dependent variable is examined in the analysis, ($R = 0.640$) ($R^2 = 0.618$) results are obtained. According to this, the multi-determinism coefficient is 0.618, and 62% of the innovation is explained by the sub-dimensions of the organizational learning capability which are the independent variables (commitment to learn, shared vision, open-mindedness, intraorganizational knowledge sharing). In other words, the above mentioned four sub-dimensions of the organizational learning capability explain 62% of the total variance on the innovation.

According to the standardized regression coefficient (Beta), the relative order of the independent variables on the innovation is intraorganizational knowledge sharing, shared vision, commitment to learn and open-mindedness respectively. When the test results for the significance of the regression coefficients are examined, it is seen that the variables intraorganizational knowledge sharing, shared vision and commitment to learn are an important determinant of innovation.

Accordingly, it was determined that there is a positive relationship between the sub-factors of “commitment to learn”, “shared vision” and “intraorganizational knowledge sharing” that belong to the organizational learning, which is decisive on the innovation, and the innovation. However, it is seen that there is no significant relationship between the “open-mindedness” dimension and the innovation. Therefore, main hypothesis H1 was accepted as well as H1a, H1b and H1d; hypothesis H1c was declined.

Conclusion and Evaluations

In the study, the effect of organizational learning capability on the innovation performance was analyzed collecting data from the employees of the public banks operating in Denizli. The fact that the banks has started to develop innovative products for their customers and the increasing amount of publicity campaigns in recent years draw attention. All these developments have compelled the firms to follow the outer environment more closely and turn what they have learnt into systematic knowledge. No firms can become successful by shutting themselves down for the changes around and considering only the financial criteria and performance criteria such as quality anymore. In this process, innovation and the capacity to make innovation have become an important success indicator for banks. It has become a constant matter of discussion what the banks can do, which organizational model they will adapt and/or which method they will use to be innovative. One of the organizational models recommended in recent years is that firms should develop their learning capabilities. Within this context, it was examined whether the organizational learning capabilities of the firms are effective on the innovation performance in the study.

The model developed by Calantone et al. (2002) was utilized to measure both the learning capability and the innovation performance in the research. The analysis results show that three of the four dimensions constituting the learning capability are effective on the innovation performance. Accordingly, the main hypothesis of the study H1 and the sub-hypotheses H1a, H1b, and H1d were accepted.

In this study, it is possible to explain why open-mindedness has no effect on innovation with several reasons. Many organizational managers may have answered these questions positively to make the corporate image of the firm look positive. The fact that firms are away from open-mindedness and have adopted a management mentality which involves insufficient communication may prevent the organizational learning and innovative activities from being supported. It can be seen that the firms actually exhibit a transparent and open management mentality but from the point of view of the employees, this mentality is not at a sufficient level. It is important for the innovation activities how the employees perceive the transparent and open management mentality as well as the managers. As a result of the analysis of the obtained data, a negative relationship was shown between open-mindedness and innovation management, and hypothesis H1c was declined. Even so, the fact that the learning capability and the three dimensions constituting it are effective on innovation shows us the organizational learning capability is also effective on innovation.

It can be thought that a process of creating innovation having an infrastructure based on the use of knowledge as in the learning process can support the development of the innovation. An organizational climate exploring the new ideas and opinions and these ideas and opinions enabling the innovation to be created is an important example for the effect of learning on the innovation performance. The study by Naktiyok (2007:224) on SMEs reached similar results. The author stated that the tendency of innovation in a firm cannot be achieved without the fact that the top management encourage, finance and support the innovation.

The learning capability being effective on the innovation performance at the firms participated in the research may help these firms adopt creating the competitive advantage with a source-oriented approach since the organizational learning can assist the process of creating innovation with an organizational structure and creating the innovative advantage with a PR-oriented management mentality, and therefore, the competitive advantage. The firms can acquire an important advantage by analyzing the outer environment well, using the acquired knowledge to create innovation and developing the organizational structure and processes.

As a result, it can be said that the learning capability is effective on the innovation performances of the firms. According to the results of this study, it is recommended for the firms participated in the research to create a learning-oriented organizational culture to develop their innovation performance. The organizational learning capability provide the firms with significant advantages especially in the environments that bear the complete conditions of the competition market and help them acquire a source-based competitive advantage.

Limitations and Future Research Directions

This study emphasizes the importance of organizational learning capability and links it with innovation. Future research could identify the antecedents of organizational learning capability and construct a comprehensive framework of both antecedents and consequences. For example, many studies have explored learning from other firms through strategic alliance and other intraorganizational forms. Future research can be conducted to link intraorganizational relationships with learning orientation and firm performance.

This study is limited to the effect of organizational learning capability on firm innovativeness, but the general outline can be applied to other types of activities, such as firm performance, marketing, and their linkage with organizational learning.

As the world economies become increasingly interdependent, an urgent issue is to test the applicability of the learning and innovation constructs in other cultures. Cross-national studies should be conducted to compare the strength of the framework and assess its generalizability across varying business systems and organizational forms. This is essential for continuous advancement of the body of knowledge on organizational learning and innovation.

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