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Chapter 2 Knowledge Management Within the Context of Organizational Innovation

M. Hanefi Calp Karadeniz Technical University, Turkey

ABSTRACT

Knowledge management aims to provide easy access and management of the information resource for the institutions and thus to create value by taking the right decisions. Since knowledge management has a decisive impact on the business performance and innovation process at different stages and requires a different knowledge management concept, enterprises should integrate innovation selection activities into knowledge management processes. Otherwise, businesses may face problems in the management processes of the information resources they have. The purpose of this chapter is to first specify the definition and tasks of knowledge management, then to examine the knowledge management processes and to correctly identify of the problems encountered in these processes to find and to implement effective solutions and to realize effective management of the knowledge management within the scope of organizational innovation. This study is very important for businesses with a large scale of the budget, human resources, corporate memory, and thus, a data source.

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INTRODUCTION

The production capacity of the enterprises is increasing day by day, and so their internal and external knowledge sources are increasing too. At this point, knowledge is a decisive element of social and economic activities, which is very important for all areas (especially for businesses) (Dong, 2017; Lee & Kim, 2001). Considering that knowledge is an important asset for all institutions and organizations, it is understood that Knowledge Management (KM) is also important in growing enterprises. The main purpose of the KM is to provide easy access and management of the information source for the institutions and thus to create value by taking the right decisions. KM is a systematic whole of the human, technology, process and organizational structure of an organization in order to add value. This greatly affects the operation efficiency of the enterprise (Grudin, 2006a; Grudin, 2006b). The American Production and Quality Center define knowledge management as systematic approaches to ensure the spread of knowledge and creation of value at the right time and to the right person (Buckman, 2004: 17). Knowledge management is a discipline that updates the information capacity that is constantly increasing in the organizational environment, makes the information available, identifies the processes necessary to reach the required information and enables the necessary information to be shared with the company employees (Harrison and Kessels, 2004: 39).

Nevertheless, the sustainable competitive advantage of growing enterprises should be ensured. This is only possible through the management of knowledge in the context of organizational innovation by creating technology infrastructure in enterprises and effectively using this technology. Obtaining/collecting, storing, reusing (when it is needed) and managing the information resources of the institutions is very important in terms of managing the institutions more efficient and with high performance. This process significantly increases the efficiency and efficiency of institutions in today's business activities (Zhao et al., 2012; Oun et al., 2016).

KM enables the organization to learn and adapt to its changing environment to minimize time and cost in service production, and consequently to achieve competitive advantage. Since KM has a decisive impact on the business performance and innovation process at different stages and requires a different KM concept, enterprises should integrate innovation selection activities into KM processes (Cormican & O'Sullivan, 2003; Brahma & Mishra, 2015; Jordão & Novas, 2017). Innovation is the development and implementation of a new idea, product or process. The issue of innovation is a wider concept than the invention of any idea. Because the invention refers to the physical output of either a physical product or a physical system and excludes improvements called routine innovations. Therefore, innovation should be understood not only as product and technology innovation but also as a thought accepted by the enterprises in the broad sense. When this idea is adopted, business

processes will be renewed through innovative philosophy within the company, and thus, the emergence of new products will be easier (Iraz, 2004; Topal and Kurt, 2004). Innovation is an issue that can be used or applied in almost all areas, and be allowed to provide new solutions to new demands, needs, and problems. It aims to performance and efficiency for the organization or community. At this point, all technology-based innovations so far can be considered in this context. In addition, innovation at the level of organizational behavior leads to an increase in performance of important factors such as productivity, quality, competition, and market share of an institution/organization (Seker, 2014). In order to maximize profitability in the innovation process, as a central link in the innovation process and to increase the internal growth and competitiveness of enterprises, enterprises with technical infrastructure should base their innovation processes based on KM. However, as a discipline, method, and practice aiming at benefiting from information sources, it can positively affect the production and organizational performance of knowledge, store information at the organizational level, and make it usable and safely shareable if necessary (Cormican & O'Sullivan, 2003; Brahma & Mishra, 2015; Jordão & Novas, 2017).

In light of all this information, institutions may face some problems or risks in the management processes of the information resources they have. At this point, identifying and controlling the problems or risks that may be encountered is one of the important tasks of business management. Managers and researchers should provide effective solutions by looking for ways to eliminate problems/risks in the most accurate way.

In this section, firstly the definition, objectives, and contributions of KM were determined. Later, KM processes and the correct identification or determination of the problems encountered in these processes, the finding and implementing of the efficient solution ways, and knowledge management within the scope of organizational innovation and effective implementation of this management were examined. Finally, some conclusions and suggestions were presented on this issue. This study is especially very important for businesses with a large scale of the budget, human resources, corporate memory and thus a data source.

KNOWLEDGE MANAGEMENT

Knowledge Management has been scientific for many years and has become an indispensable part of organizational life rather than an academic approach. In a conference held in Boston in 1993, Larry Prusak described knowledge management as a good turning point to mark the start of the timeline (Girard & Girard, 2015; Prusak, 2001, p.1003). In fact, it is difficult to define and measure knowledge

management because it is complex, multi-dimensional and process-oriented. Knowledge management is the capacity to define, obtain, store, distribute and use clearly documented information. Knowledge management shows a movement to manage knowledge, emphasize information sharing and create interpersonal interaction (Abdi and AmatSenin, 2014; Gorelick and Tantawy-Monsou, 2005; Kumar and Thondikulam, 2006; Choi and Lee, 2002; Zack, 2002). KM has begun to play an increasingly significant role in enterprises or organizations in various industries. The KM process covers two main processes. These include knowledge management adoption and knowledge management development. The KM deals with the principles of managing the information and is included in the organization. However, KM development consists of all organized activities that the enterprises uses to form, store, transmit, share and implement information (Ceptureanu et al., 2018; Ceptureanu & amp; Ceptureanu, 2015; Ceptureanu et al., 2017; Patil & Kant, 2014a; Patil & Kant, 2014b; Cerchione & Esposito, 2016; Centobelli et al., 2018).

KM is primarily concerned with creating value from all activities, from organization to business information. For similar projects in the future, such issues as the implementation and reuse of previously completed projects are the main subjects of knowledge management. Many researchers believe that KM is necessary for more efficient management of business processes and indicates that KM has many advantages in business asset management. However, although the companies use some knowledge management tools and software in line with their own needs, the problems in the knowledge management processes continue. For example, if users cannot easily find information about the project, or what information is available. This is a big problem for businesses because most users do not know which project information is stored in the organization. In particular, a network information map is recommended to solve this problem. Because this information map plays an important role in ensuring that engineers and experts, easily find their past knowledge and experience on the project or the subject matter (Lin et al., 2006).

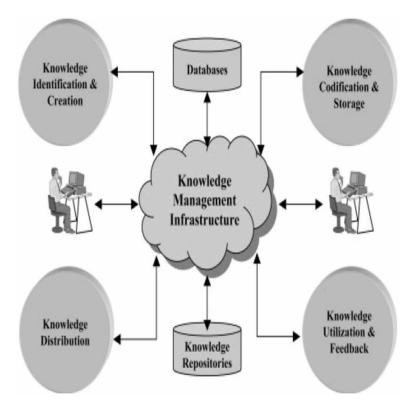
KM is the selection, dissemination, production and distillation of the organized and systematic information that is made available for the purpose of creating a unique value and making available the explicit and implicit information available to the organization or business to achieve a strong competitive advantage in the market. KM is an important process that improves organizational efficiency and efficiency by acquiring, sharing, using and storing for reuse when needed. KM enables the organization to learn and adapt to the changing environment, to reduce costs in the production process and to streng then its competitive advantage. However, by making use of basic information sources and providing a discipline, it positively affects knowledge production and organizational performance, and can make information available and shareable at the organizational level (Hult, 2003; Yılmaz, 2017).

KM includes the analysis and planning of activities to analyze and identify the information required and obtained, and to develop information assets to achieve organizational goals. Information assets are information about organizations, technology, production and market. This information can make the organization a powerful position by enabling organizational activities. KM is not only managing the information assets but also managing the processes that will affect the information assets. This includes the processes of developing, preserving, using and sharing knowledge. After these explanations, the KM can be defined as the acquisition, sharing and use of information within the organization, including management information systems and learning processes (Alavi & Leidner, 2001; Yılmaz, 2017). According to Kim (2009), while providing benefit to the KM organization, it is to improve the ability of the organization to use knowledge to realize its learning and adaptation to its changing environment and to maximize the use of information resources in organizational activities (Kim, 1999). KM can be described as a sequence of strategies and processes for obtaining, recording, sharing and using information to increase the level of competition. In other words, knowledge management is a systematic process about with how to create, obtain, use and manage of information to achieve organizational goals (Iraz, 2005; Özgener, 2002: 485).

KM consists of three components: people, processes, and technology. KM emphasizes individuals and organizational culture to accelerate and increase the sharing, and use of information. It attaches importance to methods or processes for finding, acquiring, creating and sharing information, and focuses on technology to enable people in different locations to work together with information storage and accessibility (Aktan and Vural, 2005: 11). KM is often considered as a process involving various activities. The classification of processes and their uncertainty in terms of numbers, rather than the concepts highlighted in the literature, brought about the diversity and diversity of the KM processes. At the very least, however, four main processes are considered, namely, the use, transfer, acquisition/storage and creation/ evaluation of information. These basic processes are divided into sub-sections such as, for example, the creation of internal information, the provision of information from outside the organization, sharing of internal and external information, and the updating of information, as well as the storage of information in documents against routine storage (Civi, 2000; Yılmaz, 2017).

KM is the management of the business processes, corporate information and information assets of an enterprise in order to ensure a more consistent decision by any institution or business. In Figure 2, a general framework of the knowledge management process is given. Businesses can leverage the capabilities of analytical systems by integrating operational data with information from all over the organization and make customer-oriented business decisions with them. For example, businesses can offer goods, products, or services that are tailored to the needs of a particular

Figure 1. The framework of knowledge management (Bose & Sugumaran, 2003)



customer, or they can dynamically personalize content based on the web visitor's profile, according to the customer's prior purchase status (Probst et al., 2000; Bose & Sugumaran, 2003).

In view of all these definitions, the main objectives of knowledge management in general can be listed as follows:

- To contribute to increasing competitiveness,
- To activate decision making and to avoid wasting time,
- To increase responsibility for customers,
- To encourage employees to share information by preventing confidentiality of information,
- To strengthen support and cooperation among colleagues by increasing the value of knowledge and sharing knowledge,
- To ensure that the employees and the activities carried out are efficient and to increase the quality of products and services,

• To promote innovation and invention (Cakar, Yildiz & Serkan, 2010; Jarrar, 2002).

In summary, knowledge management includes the steps of obtaining or collecting information, converting it into a reusable format, storing it, recalling it when necessary and reusing it. Small organizations often focus on the step of acquiring information; the steps of sharing or reusing information are relatively less applicable. However, large organizations face great challenges in collecting and reusing information. Because it can be quite difficult to determine whether the information exists within the enterprise. Nevertheless, businesses still attach importance to the implementation of these steps (Grudin, 2006a).

PRINCIPLES OF KNOWLEDGE MANAGEMENT

Davenport (1996) proposed ten basic principles regarding knowledge management. While each of these principles is discussed in terms of their content, many enterprises face these principles and seek solutions to the different problems they cause. The ten principles of knowledge management are as follows:

1. Knowledge management is expensive and ignorance is expensive too:

Although knowledge management is expensive, it is necessary to know the cost when the management of knowledge is not available too. For example, what would be the cost of these problems to the enterprise in the event that personnel working in a critical role in an organization forget about what they know, or staff cannot respond quickly to customer problems when they leave their jobs for any reason? Organizations should try to measure the cost of ignorance in the same way (as they attempt to determine the value of information), as well as how they determine the cost of products and services of poor quality when determining the value of quality.

2. Effective knowledge management requires common solutions of people and technologies

Information technologies help to acquire, store, transform, distribute, and stream information largely by interpreting and synthesizing different information in a unique way to make decisions. Data and information can only be interpreted and made meaningful by people.

3. Knowledge management is political

If knowledge means power, money and success, there will be lobbying, political games and some bargaining to seize information.

4. Knowledge management requires knowledge managers

There are several functional areas for the successful management of basic resources such as labor and capital. Likewise, information cannot be managed well if there is no senior management responsibility for the information.

5. Knowledge management uses information maps rather than models, and information markets rather than hierarchy

Knowledge management, such as a large encyclopedia, collects and categorizes information to create a hierarchical model or structure of knowledge that may appeal to many businesses. However, most organizations create and organize the information market within the organizational structures and organize and organize the information in accordance with the wishes of their users. With the help of information maps, information users can easily find the information they are looking for and in which specific terms they can easily find it.

6. Sharing and using information is often unnatural

There is a tendency for people to hide information and to suspect the knowledge of others. However, as information is used, it will contribute to the organization and new information will be obtained as the information is shared. Therefore, individuals working in the enterprise should be encouraged and motivated by knowledge managers to share and use information.

7. Knowledge management means developing information business processes

Developing a comprehensive knowledge management process is very important. However, the information is intensively produced, used and shared in a number of specific business processes. These specific processes vary in firms and industries, but also include functional processes such as market research, product design and development, order preparation and pricing. In short, these processes, including the creation, use and sharing of information, should be developed or improved.

8. Accessing information is just the beginning

Information users should be more active to redefine the complex issues associated with the information and turn the information into useful formats. Because access to information is important but not sufficient.

9. Knowledge management never ends

Knowledge management is not a one-time initiative. Knowledge management is an ongoing management task, such as financial and human resources management.

10. Knowledge management requires an information contract

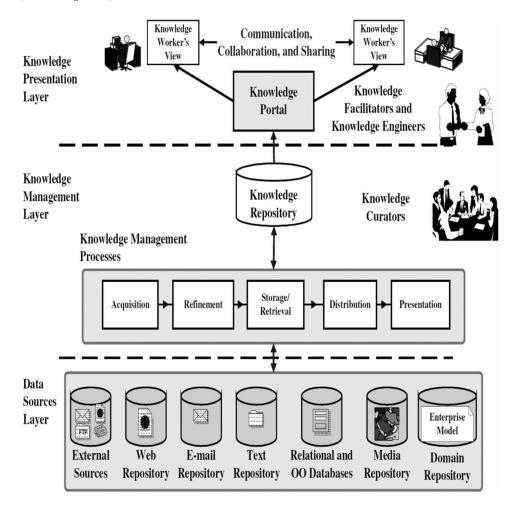
The information that most companies have or employees have is not clear. The intellectual property law on the legal aspects of all these issues is developing rapidly (Ipcioglu & Erdogan, 2005; Davenport, 1996).

KNOWLEDGE MANAGEMENT MODEL AND ITS ADVANTAGES

Knowledge management covers the processes from creation or coding of information to dissemination and use of information. Previous researches have focused exclusively on knowledge creation or coding processes in businesses (Chen, Huang, 2007). There are several knowledge management models in the literature. For example, Lee and Kim (2001), Malhatro (2004), Lin et al. (2007), Kanapeckiene et al. (2010), Lee and Lan Y (2011). When these models are examined in detail, it is understood that each model focuses on one or two aspects of knowledge management. Some of these take only two criteria such as the use of technology and the production of knowledge, which is the focus, while others include information processes, information culture and leadership, etc. draws attention to issues. A corporate knowledge management model is a set of hierarchical rules that enable the disclosure of events and interaction models. It also represents or models a business's natural knowledge management system (Oztemel et al., 2011; Chen & Huang, 2007; Lee & Kim, 2001; Malhotra, 2005; Lin et al., 2007; Lee & Lan, 2011).

The process model for knowledge management consists of well-defined activities. A knowledge management model helps to preserve the quality of data and information used by information personnel, to help in the acquisition of data and information, to effectively ensure the storage and retrieved of metadata and information, to encourage the dissemination and dissemination of information in a timely manner and to support the specific presentation of information provides such contributions. These contributions or activities are also presented in the sections in Figure 2.

Figure 2. Three-layer knowledge management architecture (Kerschberg, 2001).



Although some of the current techniques and models take into account of information tactics or strategies, they do not ensure any information about how these will be compatible with enterprise/organizational structures. It should not be overlooked that these skills are essential to effectively achieve a KM.

Knowledge management approaches have several advantages. Öztemel and Arslankaya [Oztemel & Arslankaya, 2012] highlighted the significance of efficient knowledge management and listed the following advantages;

- Provides convenience to maintain expertise within the business/organization,
- Rises the compliance and flexibility of the business,

- Provides higher return on investment,
- Maintains competitive advantage,
- Defends intellectual property rights,
- Promotes the formation of a customer-oriented organization,
- Ensures a unified knowledge manipulation within the general establishment,
- Provides information planning and organization which is generally left to the natural results in available models,
- Provides a standard information framework to be set within the general enterprise,
- Evaluates knowledge management as a section of strategic planning process.

In Table 1, knowledge management models are given comparatively.

There are different perspectives on knowledge management systems in literature. However, almost all researchers think that knowledge management systems have a

Table 1. Comparison of knowledge management models

	Knowledge Management Models							
	SECI	EvEr	8 + 3	E-CKM	Life- Cycle Model	KMS	CEN/ ISSS	EKMM
1. to develop a knowledge infrastructure		+	+	+	+		+	+
2. to design and apply knowledge management processes	+	+	+	+	+	+	+	+
3. to utilize knowledge sharing techniques	+		+					+
4. to plan the knowledge flow and programs	+		+		+			+
5. to create and apply knowledge strategies		+			+	+	+	+
6. to establish knowledge centered organization		+	+				+	+
7. to form an enterprise-wide knowledge culture		+		+		+		+
8. to create enterprise-wide knowledge activities	+			+				+
9. to evaluate of enterprise- wide knowledge management implementations the enterprise		+	+	+	+	+	+	+

(Oztemel & Arslankaya, 2012)

great contribution to the enterprise or to the production organization. At this point, Vukašinović et al. list the benefits of the knowledge management system as follows:

- Improvement of information and resources,
- Ensuring learning as a result of mistakes and continuous improvement of the process,
- Referral to good practices,
- Faster and improved decision making within the enterprise,
- Improved environment of staff and their dedication,
- Reduction of experienced personnel loss,
- Protection against copying information,
- Less time is spent to develop and market a product,
- Improved brand awareness,
- Early detection of possible changes in the market (Vukašinović et al., 2018).

Building an organization-wide knowledge management system is not an easy mission. However, the utilities of a well-designed system are enormous. In general, these benefits can be categorized under four headings:

- **Awareness:** Everyone knows where to look the information of the organization, it provides people time and effort.
- Accessibility: All individuals can usage the business's/organization's unified knowledge and practice according to their roles.
- **Usability:** Information can be used wherever needed from home office, on the road or on the customer's side. This increases the sensitivity to customers, business partners and colleagues.
- **Timeliness:** information is available when needed, eliminating the time-consuming loss of information that people are interested in (Offsey, 1997).

KNOWLEDGE MANAGEMENT IN THE CONTEXT OF TECHNOLOGY AND INNOVATION

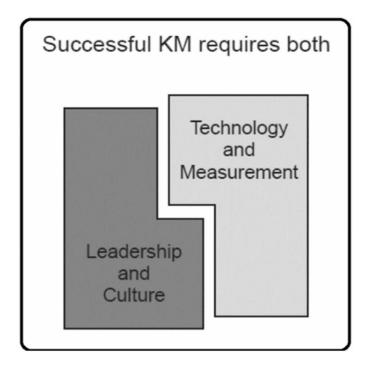
Knowledge management is dominated by two different ideas. The first is to determine how much information is passed between individuals who maintain organizational behavior and protect individual socialization. Those who hold this view believe that technology in general is not the answer and that issues such as change management, culture and leadership are important. The other idea is that information technology focuses on technology as a resolution to the question of knowledge management. However, realized many researches have indicate that a successful knowledge

management program needs a change in institutional attitude, method and technology substructure (see Figure 3). Technology is not a single element for resolution to an enterprise's knowledge management demands, but it is openly necessary to active the enterprise's knowledge management process and operations (Offsey, 1997).

Businesses should have appropriate infrastructures for their activities in order to implement knowledge management processes successfully and to get effective results. Because the technology, innovation, culture, intellectual capital and organizational structure that constitute the infrastructure of the knowledge management system positively affect the success of the knowledge management processes. In addition, information technology not only increases the possibilities of obtaining and reaching information, but also enables the sharing and transfer of information more quickly. However, the use of technology contributes to facilitating business processes, increasing productivity and reducing costs (Türkmen & Yilmaz, 2019; Baykam, 2010:18; Zaim, 2010: 62; Zaim, 2005:295; Davenport & Prusak, 2001:177; O'dell, Jr., & Essaides, 2003:112).

Gold (2001) addressed the entire knowledge management process in four basic dimensions. These are: acquisition, storage, transfer and implementation. All

Figure 3. Knowledge management requirements (Offsey, 1997).



dimensions have major implications for innovation activities and the company's innovation performance. Effective knowledge management is first possible with effective knowledge acquisition. Businesses cannot find all the resources needed for development, so they need to constantly learn from outside to satisfy the demands of information innovation. External information acquisition effectively meets for the constraints of restricted internal resources that hamper the enterprise's improving and innovation activities. This is very important for decreasing product and service investments and abbreviationing the innovation cycle. In addition, knowledge obtaining is offered as deeper information mining within the enterprise. In addition, outside the company, it represents a great extent to the search, filtering, identification and organization of information. As an important strategic resource for the development of the company, timely and effective access to information sources directly determines the ability to progress over time. Therefore, it is important that businesses integrate innovative activities into all processes (Cong et al., 2017; Gold et al., 2001). The use of knowledge-based techniques in decision-making processes is an important method for enterprises to realize their business processes effectively. Traditional data storages will transform not only operationally embroidered data, but also knowledge management environments, including semi-structured, heterogeneous information collected from outer resources and unified into decision-oriented information for corporate decision makers (Kerschberg, 2001).

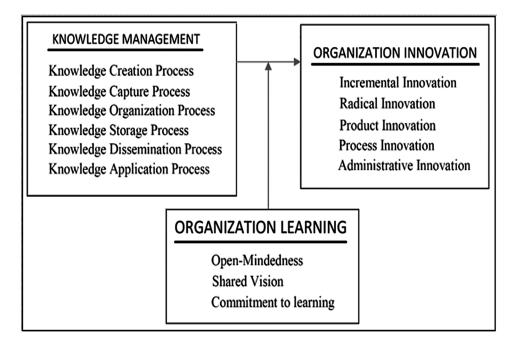
One of the basic requirements of achieving organizational success and standing in a competitive environment is the realization of knowledge management with a technology and innovation support based on needs. Innovative approach ensures customer satisfaction and facilitates organizational behavior. Because there is knowledge in the nature of innovation. The innovative approach of enterprises is the most fundamental element in their successful implementation. If the source of innovation is information, the enterprises will provide a sustainable advantage over their competitors. In other words, innovation should be supported with information to provide benefit. The implementation of innovation-supported knowledge management in enterprises is possible by the widespread use of this process at the organizational level and the dominance of innovative thinking. Innovative culture; it requires a sharing that enables the transfer of information and knowledge into creativity (Demirel & Seçkin, 2008; Barker, 2001, p. 23; Drucker, 2003, p. 130–134).

When the subject of knowledge management is considered within the scope of organizational innovation, it can be determined that there is a powerful relationship between innovation and KM (Figure 4). Because one of the ways in which any business can survive or create competitiveness makes innovation in business processes effective. According to Leal-Rodríguez et al. (2013) organizational innovation, KM assists to protect competitive advantage and form new markets. The information obtained from the outside environment will absolutely lead to

the customer's admission of the produce or services. Plessis (2007) specified that universal economic expansion has altered with the speed of innovation, which is possible with fast developing technology or techniques, less product life cycles and higher new product development rate. He also added that the complexity of innovation increases with the increase for information available to organizations. It is clear that there is a powerful relationship between technology, innovation, novel methods, techniques and KM. In addition, there are components that are very important for innovation as well as technology. Leal-Rodríguez et al. (2013) found that there is a powerful knowledge-innovation relationship in enterprises that have low obstacles to knowledge creativeness, sharing and transfer and those who encourage open cultures. Abdi and AmatSenin (2014) demonstrated the impact of knowledge management on innovation through direct and organizational learning. They conclude that organizational learning has a complete mediatorship impact on KM and organizational innovation. They also specified that the performance level of the business could benefit greatly from experienced business members in the KM. Krstić and Petrović (2012) involved creating an organizational culture based on knowledge and innovation as the role of KM. Moreover, it also means that the organizational culture that promotes information sharing can have a positive effect on innovation. The role of KM will not only make use of these relevant and important data, but will also ensure the most efficient access to those concerned information and communication technologies play a important role in real-time evaluation and in obtaining appropriate information, which is noted to be an important problem. The rise of new technologies is the outcome of innovative developments and, the similar novel technology can lead to various innovative applications. For example, the development of PDAs and smartphone technology. Although the main purpose is communication, there have been numerous innovative and novel practices that cannot be improved without smartphone and internet technology. It is also true that information and communication technologies have a major impact on the KM, and that any innovation in information and communication technologies is directly related to creativity in the KM. The occurrence of novel techniques and technologies has importantly affected tactics of business are willing to advance their existing models/ systems with these new improvements, and even fully modify their old models/ systems with new ones (Rafiq et al., 2014; Leal Rodríguez et al., 2013; Du Plessis, 2007; Abdi & AmatSenin, 2014; Krstić & Petrović, 2012).

In addition, knowledge management within the scope of organizational innovation enables managers to better anticipate and analyze some problems they face and to take more correct measures against these problems. By taking advantage of an effective and efficient knowledge management process, business managers can better evaluate environmental factors and clearly demonstrate the priority objectives of the enterprises in the short and long term. In order to achieve a healthy result in modern

Figure 4. Relationship between organizational innovation and KM (Abdi & AmatSenin, 2014)



business organizations, knowledge management culture should be established within the scope of innovation (Carniero, 2000:92). The main purpose of innovation is to obtain value. In order to do this, it needs to ensure product, service, strategy and process, technical and market improvement. Innovation typically involves creativity, but it is not exactly the same thing. Innovation involves acting on creative ideas in order to make a specific and concrete difference in the field of innovation. Based on Davila et al. (2012), as in many business functions, innovation is a management process that requires special tools, rules and discipline. Innovation refers to the production, acceptance and implementation of novel opinions, processes, products or services. Organizational innovation, product, process and management or marketing systems are defined as the application of new ideas for innovation (Weerawardena et al. 2006). At this point, it is clear that organizational learning is closely related to organizational innovation (Abdi & AmatSenin, 2014; Davila et al., 2012; Weerawardena et al., 2006).

In the advanced knowledge economy, the basic proficiency of the organization is increasingly relying on the use and innovation of knowledge. Without utilizing knowledge management process, businesses cannot reach competitive advantages in the modern market. However, there are very few applications of KM in practical

areas, especially in terms of innovation performance. The KM implementation process requires the appropriate organizational structure, and the innovation performance occurs by the marginalization of the organization. The KM and organization influence the mechanism of influence between innovation performance and the organizational performance of the KM. In order to improve innovation performance, not only the direct impact of the KM should be taken into account, but also the indirect impact of institutional innovation performance should be underlined (Bai & Yu, 2017; Neamtu & Scurtu, 2016; Darestani et al., 2016).

CONCLUSION AND RECOMMENDATIONS

In this study, knowledge management is focused on organizational innovation. In this context, knowledge management, knowledge management models and the importance and contributions of knowledge management in terms of enterprises have been put forward. At this point, it can be said that the two views are the most common in knowledge management. First, technology is not effective in many issues; change management, culture and leadership are more effective. Secondary, it is the need to focus on technology in knowledge management.

Businesses tend to prefer innovative approaches to gain profits from the benefits of information resources. They can effectively control the ways of using and sharing information sources with innovative approaches and provide benefit. Moreover, according to the findings, the applications firstly show that knowledge management plays an important role in innovation and has a direct effect on organizational innovation, especially a full mediation effect. The members of the organization whose information capacity or the information obtained are too large increase the performance of the organization in terms of adherence to learning, shared vision, and openness. Knowledge management within the scope of innovation has been seen as an issue that should be taken into consideration for managers to create and maintain a sustainable competitive advantage. However, in recent years, enterprises that take into account the importance of information and knowledge management have begun to use methods or strategies such as innovation and creativity. The effective use of innovative approaches in the business processes of the company primarily constitutes the business culture and plays an important role in the effective management of knowledge management processes. This ensures that knowledge management is provided within the scope of organizational innovation, thus enabling enterprises to have a more flexible and structured knowledge management culture. In addition, it has been observed that the use of special tools or programs for a successful KM process in organizational innovation is effective. At this point, knowledge-based organizational culture is also an important issue. Organizational factors and KM

applications positively affect and develop each other. This situation also increases organizational innovation performance. On the other hand, studies on knowledge management have become more and more application-based. Businesses focus on the techniques or strategies that will bring maximum value to the information sources they have and the problems encountered in the implementation of these strategies. At this point, businesses are concerned with identifying the most appropriate knowledge management tools for business processes and creating a knowledge management organizational culture that is specific to different regions, sectors and even business departments.

Finally, more research is needed on the likely role of knowledge management in technology and innovation and how to maximize the importance of knowledge management to provide a more influential and powerful innovation model and process. Studies in this field can be very precious, particularly in organizations that have different knowledge management and innovation strategies. Businesses have to implement innovative approaches taking into account the developing techniques and technologies in the world for effective knowledge management. At the same time, successful knowledge management must implement processes such as the acquisition, storage and updating of information and the knowledge management system must have a sound infrastructure. In addition, knowledge management activities should be considered as a lifestyle, which will bring success to businesses. Beyond all, it is need to provide that knowledge management processes are implemented correctly and those problems are identified and corrected by possible updates. Because, businesses in which knowledge management processes are implemented successfully will easily adapt to the changes occurring in their environment and will gain a considerable competitive advantage against their competitors in the global competitive environment where competition has reached a very serious level. Otherwise, it will be very difficult for enterprises to survive in the long term.

REFERENCES

Abdi, K., & AmatSenin, A. (2014). Investigating the impact of knowledge management on organizational innovation: Conceptual framework. *International Research Journal of Applied and Basic Sciences*, 8(6), 686–691.

Aktan, C. C., & Vural, İ. Y. (2005). Knowledge management in the information age. *Information age, knowledge management and information systems*, 101-120.

Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *Management Information Systems Quarterly*, 107–136.

Bai, D., & Yu, H. (2017). Knowledge management impacts on organizational innovation performance. *International Journal of Innovative Computing, Information, & Control*, 13(6), 2133–2141.

Barker, A. (2001). *Yenilikçilik Deyince Ne Anlıyoruz? Yenilikçiliğin Simyası*. İstanbul: MESS Yayınları.

Baykam, H. (2010). Bilgi Toplumu ve Bilgi Yönetimi. İstanbul: Etap Yayınevi.

Bose, R., & Sugumaran, V. (2003). Application of knowledge management technology in customer relationship management. *Knowledge and Process Management*, 10(1), 3–17.

Brahma, S., & Mishra, S. (2015). Understanding Researchable Issues in Knowledge Management: A Literature Review. *IUP Journal of Knowledge Management*, 13(4).

Buckman, R. (2004). *Building a Knowledge – Driven Organization*. McGraw-Hill Companies Pub.

Cakar, N. D., Yildiz, S., & Serkan, D. (2010). Bilgi Yönetimi Ve Örgütsel Etkinlik İlişkisi: Örgüt Kültürü Ve Örgüt Yapisinin Temel Etkileri. *Ege Akademik Bakış Dergisi*, 10(1), 71–93.

Carneiro, A. (2000). How does knowledge management influence innovation and competitiveness? *Journal of Knowledge Management*, 4(2), 87–98.

Centobelli, P., Cerchione, R., & Esposito, E. (2018). How to deal with knowledge management misalignment: A taxonomy based on a 3D fuzzy methodology. *Journal of Knowledge Management*, 22(3), 538–566.

Ceptureanu, E., Ceptureanu, S., Popescu, D., & Vlad, L. (2017). Two stage analysis of successful change implementation of Knowledge Management strategies in energy companies from Romania. *Energies*, 10(12), 1965.

Ceptureanu, S., & Ceptureanu, E. (2015). Knowledge Management in Romanian Companies. *Quality-Access to Success*, 16(145).

Ceptureanu, S., Ceptureanu, E., Olaru, M., & Popescu, D. (2018). An Exploratory Study on Knowledge Management Process Barriers in the Oil Industry. *Energies*, 11(8), 1977.

Cerchione, R., & Esposito, E. (2016). A systematic review of supply chain knowledge management research: State of the art and research opportunities. *International Journal of Production Economics*, 182, 276–292.

Chen, C. J., & Huang, J. W. (2007). How organizational climate and structure affect knowledge management—The social interaction perspective. *International Journal of Information Management*, 27(2), 104–118.

Choi, B., & Lee, H. (2002). Knowledge management strategy and its link to knowledge creation process. *Expert Systems with Applications*, 23(3), 173–187.

Civi, E. (2000). Knowledge management as a competitive asset: A review. *Marketing Intelligence & Planning*, 18(4), 166–174.

Cong, H., Zou, D., & Wu, F. (2017). Influence mechanism of multi-network embeddedness to enterprises innovation performance based on knowledge management perspective. *Cluster Computing*, 20(1), 93–108.

Cormican, K., & O'Sullivan, D. (2003). A collaborative knowledge management tool for product innovation management. *International Journal of Technology Management*.

Darestani, H., Ismail, W. K. W., & Heng, L. H. (2016). Investigating a New Framework for the Impact of Knowledge Management Strategy on Organizational Performance. *Journal of Soft Computing and Decision Support Systems*, *3*(5), 1–23.

Davenport, T. H. (1996). Some principles of knowledge management. *Strategy & Business*, 1(2), 34–40.

Davenport, T. H., & Prusak, L. (2001). İş Dünyasında Bilgi Yönetimi; Kuruluşlar Ellerindeki Bilgiyi Nasıl Yönetirler? Çev. Günhan Günay. İstanbul: Rota Yayınları.

Davila, T., Epstein, M., & Shelton, R. (2012). *Making innovation work: How to manage it, measure it, and profit from it.* FT Press.

Demirel, Y., & Seçkin, Ö. G. Z. (2008). Bilgi ve bilgi paylaşımının yenilikçilik üzerine etkileri. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *17*(1), 189-202.

Dong, Z. (2017). A New Type of Enterprise Knowledge Management Performance Measurement Index System and Triangular Fuzzy Measurement Model. *Revista de la Facultad de Ingeniería*, 31(9).

Drucker, P.F. (2003). Yenilikçilik Disiplini. İstanbul: MESS Yayınları.

Du Plessis, M. (2007). The role of knowledge management in innovation. *Journal of Knowledge Management*, 11(4), 20–29.

Girard, J., & Girard, J. (2015). Defining knowledge management: Toward an applied compendium. *Online Journal of Applied Knowledge Management*, *3*(1), 1–20.

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185–214.

Gorelick, C., & Tantawy-Monsou, B. (2005). For performance through learning, knowledge management is the critical practice. *The Learning Organization*, *12*(2), 125–139.

Grudin, J. (2006a, January). Enterprise knowledge management and emerging technologies. In *Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06)* (Vol. 3, pp. 57a-57a). IEEE.

Grudin, J. (2006b, January). An Exploratory Study on Knowledge Management Process Barriers in the Oil Industry. *Energies*, *11*(8), 1977.

Harrison, R., & Kessels, J. (2004). Human Resource Development in a Knowledge Economy. New York: Palgrave Macmillan Pub.

Hult, G. T. M. (2003). An integration of thoughts on knowledge management. *Decision Sciences*, 34(2), 189.

Ipcioglu, I., & Erdogan, B. Z. (2005). The Analysis of the Knowledge Management Infrastructure in Business Strategy Formulation. *Anadolu University Journal of Social Sciences*, 5(2), 89–112.

Iraz, R. (2005). İşletmelerde bilgi yönetiminin yenilik ve rekabet gücü üzerindeki etkileri. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 19(1), 243–258.

Iraz, R., & Yildirim, E. (2004). İşletmelerde Stratejik Bilgi Yönetiminin Yenilikçi Faaliyetlerin Sürdürülebilirliğine Etkisi. *Sosyal Ekonomik Araştırmalar Dergisi*, 4(8), 79–95.

Jarrar, Y. F. (2002). Knowledge management: Learning for organisational experience. *Managerial Auditing Journal*, *17*(6), 322–328.

Jordão, R. V. D., & Novas, J. C. (2017). Knowledge management and intellectual capital in networks of small-and medium-sized enterprises. *Journal of Intellectual Capital*, *18*(3), 667–692.

Kanapeckiene, L., Kaklauskas, A., Zavadskas, E. K., & Seniut, M. (2010). Integrated knowledge management model and system for construction projects. *Engineering Applications of Artificial Intelligence*, 23(7), 1200–1215.

Kerschberg, L. (2001, September). Knowledge management in heterogeneous data warehouse environments. In *International Conference on Data Warehousing and Knowledge Discovery* (pp. 1-10). Springer.

Kim, S. (1999). *The Roles of Knowledge Professionals for Knowledge Management*. Academic Press.

Krstić, B., & Petrović, B. (2012). The role of knowledge management in increasing enterprise's innovativeness. *Economics and Organization*, *9*(1), 93–110.

Kumar, S., & Thondikulam, G. (2006). Knowledge management in a collaborative business framework. *Information, Knowledge, Systems Management*, *5*(3), 171–187.

Leal Rodríguez, A. L., Leal Millán, A., & Roldán Salgueiro, J. L. (2013). *Knowledge management and the effectiveness of innovation outcomes: The role of cultural barriers*. Academic Press.

Lee, J. H., & Kim, Y. G. (2001). A stage model of organizational knowledge management: A latent content analysis. *Expert Systems with Applications*, 20(4), 299–311.

Lee, M. R., & Lan, Y. C. (2011). Toward a unified knowledge management model for SMEs. *Expert Systems with Applications*, *38*(1), 729–735.

Lin, C., Yen, D. C., & Tarn, D. D. (2007). An industry-level knowledge management model—a study of information-related industry in Taiwan. *Information & Management*, 44(1), 22–39.

Lin, Y. C., Wang, L. C., & Tserng, H. P. (2006). Enhancing knowledge exchange through web map-based knowledge management system in construction: Lessons learned in Taiwan. *Automation in Construction*, *15*(6), 693–705.

Malhotra, Y. (2005). Integrating knowledge management technologies in organizational business processes: Getting real time enterprises to deliver real business performance. *Journal of Knowledge Management*, 9(1), 7–28.

Neamtu, D. M., & Scurtu, L. E. (2016). The need of using knowledge management strategy in modern business organizations. *The USV Annals of Economics and Public Administration*, 15(2 (22)), 157–165.

O'dell, C. Jr, & Essaides, N. (2003). *Ne Bildiğimizi Bir Bilseydik*. Çeviren Günhan Günay. Dışbank Kitapları.

Offsey, S. (1997). Knowledge management: Linking people to knowledge for bottom line results. *Journal of Knowledge Management*, *1*(2), 113–122.

Oun, T. A., Blackburn, T. D., Olson, B. A., & Blessner, P. (2016). An enterprise-wide knowledge management approach to project management. *Engineering Management Journal*, 28(3), 179–192.

Ozgener, S. (2002). *Global ölçekte değer yaratan bilgi yönetimi stratejileri*. I. Ulusal Bilgi, Ekonomi ve Yönetim Kongresi, Kocaeli Üniversitesi İİBF.

Oztemel, E., & Arslankaya, S. (2012). Enterprise knowledge management model: A knowledge tower. *Knowledge and Information Systems*, *31*(1), 171–192.

Oztemel, E., Arslankaya, S., & Korkusuz Polat, T. (2011). Enterprise knowledge management model (EKMM) in strategic enterprise resource management (SERM). *Procedia: Social and Behavioral Sciences*, *24*, 870–879.

Patil, S. K., & Kant, R. (2014a). A hybrid approach based on fuzzy DEMATEL and FMCDM to predict success of knowledge management adoption in supply chain. *Applied Soft Computing*, *18*, 126–135.

Patil, S. K., & Kant, R. (2014b). Ranking the barriers of knowledge management adoption in supply chain using fuzzy AHP method. *International Journal of Business Innovation and Research*, 8(1), 52–75.

Probst, G., Romhardt, K., & Raub, S. (2000). *Managing knowledge: Building blocks for success. J.* Wiley.

Prusak, L. (2001). Where did knowledge management come from? *IBM Systems Journal*, 40(4), 1002.

Rafiq, M., Bashar, A., & Shaikh, A. (2014, October). Innovative trends in knowledge management: A cloud computing perspective. *Proceedings of the First Middle East Conference on Global Business, Economics, Finance and Banking*.

Seker, S. E. (2014). Yenilik [Innovation]. YBS Ansiklopedi, 1, 20–24.

Topal, Y., & Kurt, M. (2004, May 18). Avrupa Birliği Sürecinde Kobi'lerin Rekabet Stratejileri. *Yenilik Stratejisi*.

Türkmen, İ., & Yilmaz, H. (2019). The Relationship between Strategic Entrepreneurship and Knowledge Management Performance: A Research on Top 500 Information Companies. *Journal of Yasar University*, 14(53).

Vukašinović, N., Vasić, D., & Tavčar, J. (2018). Application of Knowledge Management System to Injection Mold Design and Manufacturing in Small Enterprises. In *DS92: Proceedings of the DESIGN 2018 15th International Design Conference* (pp. 1733-1744). Academic Press.

Weerawardena, J., O'Cass, A., & Julian, C. (2006). Does industry matter? Examining the role of industry structure and organizational learning in innovation and brand performance. *Journal of Business Research*, 59(1), 37–45.

Yılmaz, M. (2017). Knowledge Management and Knowledge Management within the Frame of the Concepts of Information and Knowledge. *The Journal of the Faculty of Languages and History-Geography*, 49(1).

Zack, M. H. (2002). Developing a knowledge strategy: Epilogue. *The strategic management of intellectual capital and organizational knowledge: A collection of readings*, 268-276.

Zaim, H. (2005). Bilginin Artan Önemi ve Bilgi Yönetimi. İstanbul: İşaret Yayınları.

Zaim, H. (2010). Bilgi Yönetiminin Alt Yapısı ve Bilgi Yönetimi Performansı: Türkiye'de Bir Saha Çalışması. *Sosyal Siyaset Konferansları Sayı*, *59*, 51–67.

Zhao, J., de Pablos, P. O., & Qi, Z. (2012). Enterprise knowledge management model based on China's practice and case study. *Computers in Human Behavior*, 28(2), 324–330.

KEY TERMS AND DEFINITIONS

Enterprises: A unit that produces goods or services in a planned and systematical way.

Innovation: New idea, creative thoughts, new imaginations.

Knowledge Maangemet: It is the creation, storage, use, and sharing of knowledge.

Management: The process of using financial resources, tools, materials and time factor in a coherent and effective manner in order to achieve certain objectives.

Organization: People or system who work together in an organized way for a shared purpose.

System: The whole of the interactive parts that are brought together to achieve or achieve a common purpose.

Technology: Skills, methods and processes used in the production of goods or services.