KNOWLEDGE MANAGEMENT ORIENTED ENTERPRISE -COMPREHENSIVE LITERATURE REVIEW

Cristian-Dan Biriș*

West University of Timişoara, Timişoara, Romania

Abstract

The concept of knowledge economy refers to the ecosystem in which the most used way of growth is directly linked to access to quality information. On the other hand, knowledge management at organizational level prioritizes increasing the value and improving various processes and products at company level by creating new knowledge, absorbing knowledge from the ecosystem, managing it at organizational level and disseminating it. This paper aims to carry out an extensive literature review by explaining the different characteristics of knowledge management oriented enterprise. Moreover, this study will see the benefits and implications of applying knowledge-based management for facilitating product and process innovation, enhancing human resources management practices, as well as opening new clustering opportunities for a business organization.

The methodology used was based on a comprehensive literature review of articles identified in international databases according to the keywords specified in this paper, while the results of the study are represented by the identification of a potential model for a knowledge management oriented enterprise.

Keywords

Knowledge management enterprise, knowledge based economy, innovation, human resources management, clustering.

JEL Classification

M10, O31, D83

Introduction

Effective knowledge management at organizational level is a key factor for the success of a business in this century. However, the precursor concept of knowledge-based management is the knowledge economy. Thus, the knowledge economy has insight into the entire spectrum of an economic ecosystem. The concept of knowledge economy was first formulated by Peter Drucker in the second half of the twentieth century. This

^{*} Corresponding author, Cristian-Dan Biris – cristian.biris97@e-uvt.ro

concept becomes even more important in the current century as a result of the technological progress and directly correlated with the increase in intellectual work performed by human resources. Thus, knowledge-based management represents the application of the principles of knowledge economy and involves an increase in the value produced by a company and an improvement in living standards through the intensive use of knowledge in each field. Practicing knowledge-based management has become an imperative need for a business in order to be able to operate in today's turbulent environment, where conditions are constantly changing (Drucker, 1969) (Kurtzman, 2013).

Also, in addition to the turbulent business environment that has forced companies to move towards knowledge-based management, there is also technology, especially new digital technologies. Thus, within the current period, the acquisition of new technologies and digital tools has become a necessity, technology being one of the main factors of change for a business (Bahman-Zangi, Hoseinni, Mohammadi, & Tajpour, 2020).

Thus, although the perspectives on the knowledge management oriented enterprise varied according to the period to which the respective articles referred, very few of them covered the transition from the macro level of a knowledge-based economy to the micro level represented by the orientation towards knowledge-based management at company level. Furthermore, another aspect identified in the literature review process was represented by the limited variety of models related to knowledge-based management, an aspect that was covered in this article. From a structural point of view, this paper includes the description of the knowledge-based economy, the components and characteristics of knowledge-based management applied at company level, as well as the presentation of the facilitating role of knowledge-based management in order to generate process and product innovation, efficient human resources management and the facilitation of clustering initiatives.

1. Review of the scientific literature

1.1. Knowledge economy

The knowledge economy is a concept that emerged at the end of the twentieth century. During that period, the concept was directly associated with economic decentralisation at urban level, in the context of knowledge equally distributed to all urban actors. Its ultimate goal was to develop the social welfare of citizens in an equal manner. Three major elements with a high role in the smart economy have thus been identified:

- The importance of economic areas where information is obtained in an easy manner, but with a high potential for balance and growth;
- The social distribution of information and institutional system architecture is of high importance in terms of microeconomic opportunities and aggregate performance;
- From a perspective of learning and acquiring knowledge at local level, interdependent models of development can be obtained, at industry, technological or business level. (Dosi, 1995)

The idea of a knowledge-based economy was not perceived simply by the development of technological industries at the level of a region or an urban area. Thus, the perspective of a competitive advantage based on new sources, that can be applied at the

level of all sectors, companies and regions, not just the ultra-technological ones, is proposed (Leadbeater, 1999). Thus, it can be seen that the focus has been shifted from developing hard infrastructure to developing other intangible assets that provide competitive advantage. Landvall (2000) considers that in the new economy it is necessary to pay great attention to the creation of knowledge, new products and services through efficient management of existing resources. Furthermorne, we can observe the indirect introduction of the concept of sustainability into knowledge-based economic practices at the end of the twentieth century. The one who complements this perspective is Clarke (2001), who sees the role of creativity and innovation in the knowledge economy as defining (Clarke, 2001).

Another perspective on the knowledge economy is presented in terms of productivity, advanced technologies and flexibility. In contrast to the microeconomic perspective presented earlier, Snellma & Powell (2004) present smart economics in macroeconomic terms. This exposes the link between technology and productivity as a central element of a smart economy, because the more high technology is used, the higher the productivity of a particular economic sector. From the employee flexibility point of view, smart economy has shifted from the perception of twentieth-century Fordist production to a perception that capitalizes employees working flexibility. However, the question arises whether this transformation will increase productivity or will not bring any change among employees (Snellman & Powell, 2004).

In the last decade of the twentieth century, a new economic concept emerges, that of weightless economy. The increasing use of a knowledge-based economy is a major change in the contemporary economic ecosystem. It will be able to deliver productivity gains, rapid real economic growth (excluding artificial increases due to inflation) and commodity stock market growth (Quah, 1996). Then, at the beginning of the twenty-first century, it was debated whether the ICT revolution allowed firms to exploit all basic technical and scientific knowledge in order to facilitate competitive advantage.

At the same time with the aspects mentioned in the previous paragraph, it was concluded that all urban areas have access to the same information, and the difference between performing and non-performing regions and urban areas is given by the capacity to process and materialize the knowledge they have, within the market of products and services. Another important element in the knowledge ecosystem is given by the ability of an urban area to take advantage of the cross-regional network of existing experts, both at country level and from within neighboring countries. The application of knowledge in economic contexts is more important at the level of emerging countries. These regions have a real opportunity to raise their standard of living among citizens in urban areas. The use of knowledge from external experts is an advantage in the current context, due to new social structures that are able to identify and mobilize in an efficient manner skills and knowledge from a past context, and then translate them into a new context. The support received from external experts can also be perceived in terms of regions and countries benefits. Thus, they make available to a certain region all their intellectual abilities and areas of expertise, and through this they establish sustainable connections with that region, aspects that will be able to generate concrete business opportunities between the two regions in the future. In this way, the region receiving the expertise and advice will have a superior credibility and reputation

within the network of regions, unlike another region that has carried out the learning process alone and without help. Unfortunately, a number of potential problems have also been identified that may arise during the transfer of inter-regional expertise: lack of interest of people, lack of concrete mechanisms at regional level to facilitate knowledge exchange, impossibility for people to materialize in a practical way the knowledge received, the impossibility of replicating knowledge in another context due to very large differences. The transfer of inter-regional expertise is one of the foundations of the progress of an urban area within developing regions, and there is a real need to access a cross-regional network of skills (Filipovici, Devjak, & Putnik, 2012).

Doszhan et al., (2018) present the knowledge economy from the perspective of the intellectual capital of a given urban area. Intellectual potential is represented by the ability of the inhabitants of an urban area to carry out various activities that are important for the regional economic and social ecosystem. In this sense, the intellectual potential of an urban area and its methods of use are the main elements that will ensure the development of a "new type of economy". From the point of view of methodological aspects leading to the identification of intellectual capital characteristics, there are a number of ways to ensure the sustainable development of an urban area. Thus, a division is made according to the existing socio-economic context, the degree of economic development of the area, the available technological infrastructure, the agglomeration of existing urban activities at the level of the development poles. It can be seen, however, that it is not enough for an urban area to have an educated population, but it is necessary to develop human resources and use it within economic fields that provide added value. In the process of estimating the intellectual capital of a region, a number of problems related to the subjective and qualitative nature of the analysis have arisen. Among the problems identified are the following: the difficulty of measuring how new knowledge contributes to economic development and the complexity of the process of measuring a citizen's creative abilities. It can be seen that this intellectual capital is found at the basis of the concept of smart specialization so that a new economy is finally developed at the level of urban development poles (Doszhan, Ruzanov, Sagiyeva, & Zhuparova, 2018).

A practical perspective is that of the interdependence between the knowledge economy and types of STI capacities. STI capabilities are all the scientific, technological and innovation infrastructure that a region has. The two typologies of Scientific, Technological and Innovation capabilities are as follows:

- Use and acquisition of new knowledge The main prerequisite is considered the
 difficulty of developing knowledge by itself, without any external help. Thus, the
 process of importing, adapting, disseminating and finally implementing in a
 practical manner the knowledge developed in another region represents a viable
 solution for a developing region. ICT infrastructure is seen as the main
 precondition, but it cannot cover the entire strategic area needed to access the
 global knowledge network.
- Ability to produce and then use new knowledge This process aims to conduct research with the aim of developing new ways of solving certain problems at the level of the specific region. (Filipovici, Devjak, & Putnik, 2012)

The development of Scientific, Technological and Innovation capacity is carried out at regional level from the perspective of four specific levels, each of them with related particularities:

- The capacity of government to formulate Scientific, Technological and Innovation policies and connect them with concrete strategies.
- The ability of urban policy makers to involve human resources in technologically intensive activities. The aim is to recruit a workforce that has the skills required in the strategies and to train new generations through investments in education.
- The ability of businesses to use both new and already acquired knowledge for innovation, production, and market capitalization of products and services. Thus, the diffusion of technology from businesses in other regions to businesses in the current region is an important aspect in the process of triggering operations involving a high degree of knowledge.
- Capacity to facilitate educational, vocational activities and support research and innovation institutes (Filipovici, Devjak, & Putnik, 2012).

1.2. Company orientation towards knowledge-based management

Through the concept of "knowledge-based management", the transition is made from a perspective on the entire economic ecosystem covered by the term knowledge-based economy to a perspective on a business organization, an organization oriented towards knowledge-based management. Thus, the concept of knowledge economy, which refers to the implementation of knowledge-based activities within all economic environments, is transposed at firm level in the form of knowledge-based management. This process primarily involves managing knowledge and viewing it as a strategic intangible asset needed to generate competitive advantage in the medium and long term.

Davidson & Voss (2002) look at knowledge-based management from the perspective of activities that manage and capitalize on two distinct categories of knowledge. The first category is explicit knowledge, which involves information and knowledge transmitted between two or more people in an articulated manner, while tacit knowledge is directly correlated with the process of organizational understanding, targeting all ideas, skills, capabilities and competencies that an employee or several employees have at a given time (Davidson & Voss, 2002).

Continuous debates on the importance of focusing on knowledge-based management of business organizations took place at the beginning of the twentieth century, but the issue becomes even more important as the widespread use of new digital technologies. As a result, the retention and and the processing of a large number of information from the external environment of the organization has increased exponentially. Thus, Omotayo (2015) formulated a theory on knowledge-based management consisting of four elements – knowledge, employees / people at the organization level, process dynamics and technologies used (Omotayo, 2015).

In a study by Ho et al. (2020), facilitators of knowledge-based management were researched from a process perspective. They were represented by transformational leadership, information technologies, internal cooperation, mutual trust and network orientation. Moreover, organization-wide knowledge facilitates the sustainability of

competitive advantage (Ho, Nadarajah, Narayana, & Sambasivan, 2020). The perspective illustrated above is complemented by that of Bhatti et al. (2017) which presents knowledge-based management from the perspective of the human dimension, more precisely of employees, as a result of the fact that there are many differences in their perception of how they can be involved for a better management of knowledge at company level. As a result of the above, a need to strengthen the knowledge-based culture has been identified. The advantage of consolidation is given by the fact that the company's employees will have, on one hand, a higher area from which to obtain useful knowledge and information, and on the other hand, they will participate in the steps of creating new ones (Bhatti, Christofi, Santoro, Vrontis, & Zakaryia, 2021).

Also, within the scientific literature, an increase in interest in knowledge-based management has been observed, with a high share of articles published in the years 2021-2022, compared to other previous years (Durst, et al., 2023)

A knowledge-based management system was used to strengthen the production capacity, by going through a process made up of three pillars - pillar 1 focused on studying, categorizing and extracting knowledge; pillar 2 focused on evaluating and taking actions based on knowledge and pillar 3 focused on synthesizing activities, controlling knowledge, and opening a path to automate knowledge-based processes (Almanza & Cisneros, 2023). In another research, it was determined that the distribution of knowledge and the storage of knowledge lead to the achievement of organizational performance (abd Ghani, et al., 2024). In addition to the previous research comes the one carried out by Mumtaz&Sahibzada (2023), which identifies a direct and positive correlation of the processes of knowledge-based management and knowledge-based work of employees with the organizational performance (Mumtaz & Sahibzada, 2023). In tourism businesses, the importance of knowledge-based management practices has been identified in the context of a resource-based view of the competitiveness of companies (Adol, et al., 2023).

Another perspective is based exclusively on technology. This was studied by Koenig (2023) who researched the different ways of allocating technological and IT resources at the level of business organizations in order to obtain useful knowledge for decision-making and managerial processes (Koenig, 2023). Thus, it was identified that the allocation of IT resources has the highest efficiency when digital technologies have the role of facilitator, being constantly adapted to the needs and objectives of the organization. Moreover, the positive and direct analysis of the impact of knowledge management on the sustainability of a business was identified to be mediated by the adoption of artificial intelligence based solutions (Abdeslam, et al., 2023).

Following the literature study, five components related to knowledge-based management of a business were identified:

 Knowledge oriented organizational culture – This component has a direct connection with the activity of translating in a practical manner of the set of knowledge, information and ideas at company level. Studies that covered this topic focused on how decisions are made within a company by using business intelligence (Cody, Kreulen, Krishna, & Spangler, 2002), introducing knowledge at the level of the innovation process within business organizations and achieving

- organizational performance through the use of knowledge (Busso, et al., 2021;Byukusenge & Munene, 2017)
- 2. Knowledge diffusion This component refers to the way of disseminating and managing knowledge at the level of business organization, previously obtained from various external and internal sources of the organization. The studies covered topics such as the impact of information management on business performance (Mithas & Ramasubbu, 2011), analyzing how information management facilitates the digital transformation of a firm and ways to operationalize information within a business organization. (Fonstad, 2017;Nowduri, 2011).
- 3. Capitalization of information and knowledge from internal databases The component covers various issues related to the use of software and hardware infrastructure that a company owns to ensure knowledge-based and efficient organizational processes. At the literature level, it was researched the increase of business process efficiency through the operationalization of digital capabilities at business level (Law & Ngai, 2007), studying strategic reorientation processes from the perspective of information technologies (Hermawan & Suharnomo, 2020) and analyzing the efficiencies of digital applications and tools used within the business environment (Firescu & Stefan, 2007).
- 4. Capitalization of information and knowledge from external databases The component refers to the set of activities carried out by a company to procure and capitalize on the information acquired from the ecosystem within which it operates. Previous research studies how acquiring information influences a company's performance and proactivity (Garay, Font, & Pereira-Moliner, 2017), analyzing information acquisition systems in a real-time manner in the context of dynamic economy, ways of acquiring information at the level of financial organizations, analysis of the operational capacity of a company to obtain useful information from the business ecosystem, and last but not least the analysis of the correlation between the process of obtaining information and access to existing opportunities in the business environment (Gruzdev, Kabir, & Madria, 2020; Garcia & Vanden, 2009; David, 2005; Church, Hannan, & Kuang, 2013).
- 5. Knowledge Strategic intangible assets This component refers to the intellectual capital owned and managed by a company, consisting of the set of knowledge, capabilities and skills existing at company level, through which it can obtain competitive advantage. In past research, this topic has been approached from the perspective of analyzing the management of intellectual capital at university level as a component part of knowledge-based management (Kok, 2007), different matrices of analysis and measurement of intellectual capital, influence of intellectual capital in the activities of business organizations (Ding & Li, 2010; Dzinkowski, 2000;Hamzah, 2008; Abdulaali, 2018) and analyses on various ways to increase intellectual capital with the aim of increasing the performance of the business organization (Wudhikarn, 2018).

1.3. Benefits and implications of the company's orientation towards knowledge-based management on innovation

Research covering this topic has identified that both internal knowledge and external knowledge at the level of a business organization increases its ability to create new or improved services and products. Moreover, some authors identified that an accumulation of knowledge at organizational level brings with it a higher control and a better management of innovative processes at a business level (Cohen & Levinthal, 1990; Beneito, 2003). The bibliometric analysis of the scientific literature highlights that knowledge-based management has direct implications on the new product development process (Idrees, et al., 2023).

Another perspective from organizational level is exposed to us by Gloet & Terziovski (2004) who introduce a new variable in the analysis of the influence of knowledge-based management on innovation, namely human resources practices. They highlight the importance of effective human resource management practices in order for a company to be able to innovate based on its knowledge. Moreover, the research highlights the synergistic character of the contemporary economy in which organizational competitiveness can be achieved by correlating several dimensions of a firm, such as knowledge, innovation and human resources (Gloet & Terziovski, 2004). Also, research conducted by Aramburu et. al. (2017) confirms the one presented above, as a result of the fact that a direct and positive influence has been identified between a knowledge-based human resources management and the innovation results of a business organization.

A different perspective on this process is brought by Fagerberg et al. (2012) who present knowledge-based management from the perspective of absorbive capabilities held by a company to capture information and knowledge from the outside environment in order to apply them in innovation-based processes.

Thus, it can be seen that at the literature level, whether knowledge is viewed from an internal, external or mixed perspective, that it has a positive impact on innovative approaches and results at the level of a company. The general perspective illustrated in the previous paragraphs is complemented by one applied at the level of the work team. The processes of accessing, sorting and applying new knowledge help in the creative process at the level of a work team, which then lead to positive results in organizational innovations. Moreover, it can be identified that teamwork to innovate shows increased productivity as a result of teams distributing knowledge directly to other colleagues in order to overcome potential obstacles arising within a joint innovation-based activity or project (Khedhaouria & Ribiere, 2013)

To the perspective of innovation at the level of the work team is added the one that takes into account the customer. Thus Johannessen&Olsen (2010) consider that the perspective of the innovative process must be rethought by shifting the focus to the customer, and as an argument to support this hypothesis, it was identified that the customer ecosystem is an interconnected one, based on common needs. Thus, we can see that the source of the innovation, in this context, is the knowledge identified as a result of customer analysis (Johannessen, 2010).

The analysis of the impact of different ways of distributing knowledge on innovation was carried out by Wang&Wang (2012). The two ways of disseminating knowledge were represented by the distribution of knowledge through documents and methodologies (explicit distribution) and that of employee experience (tacit

distribution). As a result of the research carried out on the basis of the questionnaire, it was identified that explicit distribution, achieved through dissemination through concrete reports, documents and methodologies, has a direct and positive influence on innovation both in terms of its quality and speed of innovation. On the other hand, innovation has been influenced to a small extent by knowledge based on employee experience, with a weak correlation identified between tacit knowledge distribution and innovation at the level of a business organization (Wang & Wang, 2012). Furthermore, the direct and positive impact of organizational knowledge sharing on service innovation performance was identified in a study conducted within the hospitality industry (Mamgain, et al., 2024). Thus, it can be identified the efficiency of having clear procedures and methodologies, based on organizational knowledge, so necessary in today's turbulent business environment.

1.4. Benefits and implications of the company's orientation towards knowledge-based management on human resources management

At the literature level, a series of analyzes were developed, that aimed at identifying the connection between knowledge-based management practiced at business level and the management of employees at their level (both those in management positions and those in executive positions). Thus, within the framework of the smart economy, it is necessary for a particular company to carry out a series of actions that facilitate an environment in which knowledge is disseminated continuously.

Rozman, Shemeleva and Tominic (2019) designed a research model based on nine components of knowledge-based management that demonstrated the direct links they have on the involvement of employees in a positive manner in the work carried out – correct selection of employees, employee competencies, role of mentors, motivation, leadership, easy communication, adequate organizational climate, friendly work environment and investment in human capital (Rožman, Shmeleva, & Tominc, 2019). Complementing the previous aspects, the ecological perspective on knowledge-based management illustrates the positive and direct impact of the acquisition, storage, dissemination and application of green knowledge on knowledge-based leadership at the organizational level (Al-Faouri, 2023).

In another research, the performance perspective of an organization is also analyzed from the perspective of the impact of knowledge-based management on human resource management at organizational level. Thus, in order for human resources to generate organizational performance, it is necessary to build functional relationships between employees through knowledge-based management. However, an organization cannot achieve performance without talent management and a concrete strategy for talent retention. In this sense, the knowledge economy offers a number of determinants for a talent management carried out in a professional manner. Wilska (2014) identified that talent management is influenced by a number of factors both external to the firm, such as competition, legal aspects, cooperation with the environment, state policy, socioeconomic context, as well as by a number of internal factors, such as budget, company image, leadership, company culture and management (Alsalim & Mohamed, 2013; Wilska, 2014).

The impact of knowledge on employees can also be seen in a detailed context. Thus, in order to achieve performance, it was demonstrated by Kiruja & Mukuru (2013) that four components are needed – employee ability, understanding of the work task, motivation and work environment. In this formula, the employee's ability has as a precursor variable the knowledge acquired by him (Kiruja & Mukuru, 2013). Moreover, Hadad (2017) analyzed the impact of knowledge-based management at organizational level from several perspectives, identifying the importance of strategies based on increasing knowledge at organizational level in order to develop the competitive capabilities of employees and the company as a whole.

In the context of the knowledge economy, a strong and transformational leader is needed, able to constantly coordinate and motivate employees who carry out knowledge-intensive activities. In this context, an analysis was conducted by Amar&Hlupic (2016) which identified substantial differences between the leader within a traditional organization and the leader at the level of a knowledge-based organization. Differences related to perspectives on innovation, distribution of power, emphasis on informal style over formal style, fluidity of workflows, motivation of employees and emphasis on a set of common principles and values. Thus, the leader created through the knowledge economy must be able to build a team of people based on mutual trust, integrity and a solid professional ethics (Walumbwa, Christensen, & Hailey, 2011). Moreover, we can observe the dynamics of creating a transformational leader, as a result of the acute need for leadership skills aligned with the principles of knowledge economy. The implications of leadership in the smart and knowledge-based economy were researched by Gloet (2006), who reinforced with the help of his study, the importance and necessity of strong leadership in order to achieve economic sustainability.

The urgent need to manage a large amount of information from the external environment and use them at organizational level, has led to the emergence of knowledge-based leadership. Within the research model built by Cheng&Zhang (2015), knowledge-based leadership positively influences both the dissemination proccess of existing knowledge within external networks and the existing social capital viewed multidimensionally (structurally, relationally and cognitively). Thus, leadership is not only driven by knowledge and it also helps to enhance and manage the existing information flows at the level of a firm, in order for other knowledge to be created further, in the form of a process that flows in a bi-directional manner (Cheng & Zhang, 2015).

1.5. Benefits and implications of the company's orientation towards knowledge-based management on clustering opportunities

The rapid development of urban areas has driven the need to grow knowledge-intensive businesses. In turn, businesses have noticed that in order to increase their competitiveness it is easier to associate with the aim of progressing in a synergic manner. Thus, to increase both the efficiency of their knowledge use and their competitiveness, businesses began to emerge into formations called "clusters". Porter (1998) defined the cluster as a concentration of interconnected institutions and firms in similar fields of activity, such as suppliers of specialized components, machinery or

services on the one hand and manufacturers of specialized infrastructures on the other (Porter, 1998). From a circumstantial perspective, the cluster is seen by Najib & Kiminami (2011) from the perspective of a group of vendors, producers and suppliers from the same geographical area who develop a collaborative relationship due to unforeseen situations, in order to overcome it.

In 2005, Gertler & Wolfe discovered that a cluster is based on solid knowledge, as a result of information flows of different typologies, such as those based on innovation, new entrepreneurial initiatives or certain technologies likely to be used. Knowledge at cluster level is made up of two categories, namely vertical and horizontal. The category of vertical knowledge is based on those coming from companies that carry out activities of a complementary nature and which in turn are interconnected through relational dynamics established by service and product providers (Gertler & Wolfe, 2005).

Facilitators for service-based clusters were researched by Manning (2013), who identified the following – increasing knowledge-based activities across the business environment, increasing the range of knowledge-based services facilitated by companies, and increasing firms' interest in a talented workforce (Manning, 2013). A new perspective that transcends the business environment was researched by Cai & Liu (2014), who explored the university environment and the idea of trading the set of knowledge created as a result of the dynamics within universities in order to help develop the business environment. The ultimate goal is to create innovative clusters or facilitate support for existing ones. In this way, the business environment will move towards an economy based on an intensive use of knowledge. Their vision highlights the perspective of an academic environment capable of creating valuable knowledge that will be used at the level of creative clusters. There is also an urgent need to strengthen cohesion between business and universities in order to generate incremental knowledge-based economic growth (Cai & Liu, 2014).

2. Research methodology

The objective of the paper was to research and illustrate the characteristics, benefits, components and facilitating role of innovation, for ensuring an efficient human resources management and for enabling clustering initiatives by knowledge-based management, starting from the conceptual framework of a knowledge-based economy. In order to meet the proposed objectives, an extensive literature review was carried out at the level of international scientific databases such as Google Scholar, EBSCO and Web of Science. The keywords used were: "knowledge based economy", "knowledge based management components", "knowledge based management benefits", "from knowledge based management to innovation", "from knowledge based management to business clustering".

The article's selection process was carried out in accordance with the objectives of this research, including both the articles from the end of the last century that covered the early perspectives of the knowledge-based economy, as well as the brand-new articles from the last decade that present current perspectives on the concepts presented in this paper. The articles included in this paper are represented by empirical studies, meta-analyses and reviews, and these have been synthesized by identifying research results,

confirming or infirming research hypotheses, as well as illustrating the main conclusions from them.

3. Results and discussions

As a result of the research carried out, the transition towards implementing knowledge-based management at company level in the context of operating in a knowledge-based economy was accurately observed. Thus, companies made the transition to knowledge-based management, starting from activities aimed at identifying different ways of acquiring information, researching ways to manage knowledge and creating an architecture to enhance organizational learning. Without these activities, knowledge could not be created and used. Then, companies identified ways to correlate knowledge-based practices with processes to increase flexibility and then organizational productivity. Thus, the transition from the conceptual framework of knowledge to the need of a company to increase productivity and efficiency at organizational level is made.

Then, another defining moment was represented by the emergence of new information technologies that forced companies to introduce the digital environment within knowledge-based processes at organizational level. Moreover, it has been observed that technology has facilitated companies a favorable context for managing in a faster and more efficient manner all information from the internal and external environment, with the ultimate goal of creating useful knowledge for the company.

The conceptualization of the knowledge-based management framework was achieved from several perspectives, that of the elements of which it is composed (knowledge, employees, processes and technologies), of its facilitators (leadership, digital technologies, internal cooperation, trust and the company's orientation towards networks), of the existing knowledge typologies at organizational level (explicit and implicit), as well as the prioritization of the importance of allocating technological resources at company level. However, a potential model related to knowledge-based management, following the review of multiple bibliographic sources, is based on five components — knowledge-based organizational culture, knowledge diffusion, capitalization of information from external databases, capitalization of information from internal databases and last but not least knowledge seen as strategic intangible assets. Thus, the model conceptualized in this paper complements those existing in the scientific literature by facilitating a new perspective on knowledge management oriented enterprise.

However, the orientation towards knowledge-based management has a positive impact on the product/service and process innovation capacity, both in a direct manner and in a manner mediated by other intermediate variables, such as employees. Moreover, this orientation leads to an improvement of practices related to human resource management, from the perspective of leadership, functional relationships and skills and competencies that employees possess. Last but not least, it has been observed that knowledge orientation opens up opportunities for clustering at regional level or at the level of the business sector within which the business organization operates.

Conclusions

Knowledge management has become a necessity for contemporary economy companies to maintain their competitiveness in a sustainable manner.

The components of knowledge-based management have been studied in an intensive manner, through research based on knowledge-oriented organizational culture, ways and impact of knowledge diffusion, capitalization of knowledge from both internal and external databases, and last but not least the perspective of knowledge seen as strategic intangible assets for a business organization.

Therefore, companies must understand that their orientation towards an efficient knowledge management is necessary to be able to develop incremental or radical product, service or process innovations, to be able to manage the set of human resources at organizational level in an efficient manner and to be able to take part in clustering initiatives at the level of the business environment in which they operate. Thus, within this paper was integrated both the need to transition from a knowledge-based economy to the knowledge management oriented enterprise, as well as the conceptualization of a model made up of five components for knowledge-based management. Then, there were presented the benefits and implications of practicing knowledge-based management to enhance innovation, human resource management at organizational level and capitalize on clustering opportunities.

For future studies, other potential components of knowledge-based management can be researched and identified, as well as another series of benefits and implications for ensuring the progress and competitiveness of a business organization.

References

- [1] Abd Ghani, M. B., Bibi, S., Kashif, A. R. & Qadri, U. A., 2024. The learning effect on organizational performance during a crisis: a serial mediation analysis with knowledge creation, storage and sharing. *European Journal of Management and Business Economics*, 33(1), pp. 37-53.
- [2] Abdeslam, H., Ahmad, B., Al Halbusi, H. & Mosconi, E., 2023. Knowledge Management Systems and Artificial Intelligence Adoption for Increasing Business Sustainability. *AMCIS* 2023 Proceedings, 2(1), pp. 1-10.
- [3] Adol, G. și alții, 2023. Theoretical Nexus of Knowledge Management and Tourism Business Enterprise Competitiveness: An Integrated Overview. *Sustainability*, 15(3), pp. 1-11.
- [4] Al-Faouri, A. H., 2023. Green knowledge management and technology for organizational sustainability: The mediating role of knowledge-based leadership. *Cogent Business & Management*, 10(3), pp. 1-15.
- [5] Almanza, O. M. & Cisneros, J. R. A., 2023. Towards a knowledge management system for the strengthening of coffee production: A case study in the Panama Canal Basin, Panamá Oeste province. *Green Technologies and Sustainability*, Volumul 2(1), pp. 1-16.
- [6] Alsalim, M. S. & Mohamed, N. Y., 2013. Impact of Knowledge Management Processes on Organizational Performance: An Empirical Study in Institute of Technical Learning Iraq. *Information and Knowledge Management, Vol.3, No.11*, pp. 94-103.
- [7] Amar, A. & Hlupic, V., 2016. Leadership for knowledge organizations. *European Journal of Innovation Management 19*(2), pp. 239-260.

[8] Aramburu, N., Kianto, A. & Saenz, J., 2017. Knowledge-based human resource management practices, intellectual capital and innovation. *Journal of Business Research 81*, pp. 11-20.

- [9] Askerov, A., Doszhan, R., Ruzanov, R. & Sagiyeva, R., 2018. Intellectual input of development by knowledge-based economy: Problems of measuring in countries with developing markets. *Journal of Entrepreneurship and Sustainability Issues*, pp. 712-714.
- [10] Bahman-Zangi, B., Hoseinni, E., Mohammadi, M. & Tajpour, M., 2020. The Effect of Knowledge Management on the Sustainability of Technology-Driven Businesses in Emerging Markets: The Mediating Role of Social Media. *Sustainability* 14(4), pp. 1-15.
- [11] Bhatti, S. H. şi alţii, 2021. High-performance work systems, innovation and knowledge sharing: An empirical analysis in the context of project-based organizations. *Employee Relations* 43(2), pp. 438-458.
- [12] Busso, D., Gupta, S., Kamboj, S. & Singh, S., 2021. Top management knowledge value, knowledge sharing practices, open innovation and organizational performance. *Journal of Business Research* 128(1), pp. 788-798.
- [13] Byukusenge, E. & Munene, J. C., 2017. Knowledge management and business performance: Does innovation matter?. *Cogent Business & Management 4*, pp. 1-18.
- [14] Cai, Y. & Liu, C., 2014. The roles of universities in fostering knowledge-intensive clusters in Chinese regional innovation systems. *Science and Public Policy*, pp. 1-15.
- [15] Cheng, J. & Zhang, L., 2015. Effect of Knowledge Leadership on Knowledge Sharing in Engineering Project Design Teams: The Role of Social Capital. *Project Management Journal*, 46(5), pp. 111-124.
- [16] Clarke, T., 2001. The knowledge economy. *Education + Training 43(4/5)*, pp. 189-196.
- [17] Cody, W., Kreulen, J., Krishna, V. & Spangler, W., 2002. The integration of business intelligence and knowledge management. *IBM Systems Journal* 41(4), pp. 697-713.
- [18] Cohen, W. & Levinthal, D., 1990. Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, pp. 128-152.
- [19] David, B., 2005. Environmental scanning: how developed is information acquisition in Western European companies?. *Information Research 11(1)*, pp. 1-21.
- [20] Davidson, C. & Voss, P., 2002. *Knowledge management*. Auckland, Noua Zeelandă: Tandem Press.
- [21] Ding, Y. & Li, G., 2010. Study on the Management of Intellectual Capital. *International journal of Business and Management*, 5(2), pp. 213-216.
- [22] Dosi, G., 1995. The Contribution of Economic Theory to the Understanding of a Knowledge-Based Economy. *International Institute for Applied Systems Analysis*, pp. 4-5.
- [23] Doszhan, R., Ruzanov, R., Sagiyeva, R. & Zhuparova, A., 2018. Intellectual input of development by knowledge-based economy: Problems of measuring in countries with developing markets. *Journal of Entrepreneurship and Sustainability Issues* 6(2), pp. 711-728.
- [24] Drucker, P., 1969. The Effective Executive: The Definitive Guide to Getting the Right Things Done. London: HarperCollins.
- [25] Durst, S., Foli, S. & Edvardsson, I. R., 2023. A systematic literature review on knowledge management in SMEs: current trends and future directions. *Management Review Quarterly*, 74(1), pp. 263-288.
- [26] Dzinkowski, R., 2000. The Measurement and Management of Intellectual Capital: An Introduction. *International Management Accounting Study*, pp. 32-36.

- [27] Fagerberg, J., Fasaas, M. & Sapprasert, K., 2012. Innovation: Exploring the knowledge base. *Research Policy* 41(7), pp. 1132-1153.
- [28] Filipovici, J., Devjak, S. & Putnik, G., 2012. Knowledge Based Economy: The Role of Expert Diaspora. *Panoeconomicus*, pp. 370-371.
- [29] Firescu, V. & Ştefan, V., 2007. Unified tools and ITC applications for business administration systems. *MIBES*, pp. 942-953.
- [30] Fonstad, N., 2017. How big old companies navigate digital transformation. *MIS Quarterly Executive 16(3)*, pp. 197-213.
- [31] Garay, L., Font, X. & Pereira-Moliner, J., 2017. Understanding sustainability behaviour: The relationship between information acquisition, proactivity and performance. *Torusim Management Journal* 60(2), pp. 418-429.
- [32] Garcia, D. & Vanden, J., 2009. Information acquisition and mutual funds. *Journal of Economic Theory 144(1)*, p. 1965–1995.
- [33] Gertler, M. & Wolfe, D., 2005. SPACES OF KNOWLEDGE FLOWS: CLUSTERS IN A GLOBAL CONTEXT. *Economics Journal*, pp. 1-17.
- [34] Gloet, M. & Terziovski, M., 2004. Exploring the relationship between knowledge management practices and innovation performance.. *Journal of Manufacturing Technology Management*, 15(5), pp. 402-409.
- [35] Gloet, M., 2006. Knowledge management and the links to HRM: Developing leadership and management capabilities to support sustainability. *Management Research News*, 29(7), pp. 402-413.
- [36] Gruzdev, S., Kabir, Y. & Madria, S., 2020. STIMULATE: A System for Real-time Information Acquisition and Learning for Disaster Management. pp. 186-193.
- [37] Hadad, S., 2017. Knowledge Economy: Characteristics and Dimensions. *Management Dynamics in the Knowledge Economy, Vol. 5, Nr. 2*, pp. 203-225.
- [38] Hamzah, n., 2008. The Importance of Intellectual Capital Management in the Knowledge-based Economy. *Contemporary Management Research* 4(3), pp. 237-262.
- [39] Ho, J., Nadarajah, D., Narayana, S. & Sambasivan, M., 2020. Antecedents and outcomes of the knowledge management process (KMP) in Malaysian SMEs. *JOURNAL OF SMALL BUSINESS & ENTREPRENEURSHIP*, pp. 1-27.
- [40] Idrees, H., Haider, A., Tehseen, S. & Xu, J., 2023. A systematic review of knowledge management and new product development projects: Trends, issues, and challengesTagedEnd. *Journal of Innovation & Knowledge*, 8(2), pp. 1-10.
- [41] Johannessen, J.-A. B. O., 2010. The future of value creation and innovations: Aspects of a theory of value creation and innovation in a global knowledge economy. *International Journal of Information Management* 30(6), pp. 502-511.
- [42] Khedhaouria, A. & Ribiere, V., 2013. The influence of team knowledge sourcing on team creativity: Evidences from information system development. *The Learning Organization* 20(4/5), pp. 308-321.
- [43] Kiruja, E. & Mukuru, E., 2013. Effect of Motivation on Employee Performance In Public Middle Level Technical Training Institution in Kenya. *International Journal of Advances in Management and Economics, Vol. 2*, pp. 73-82.
- [44] Koenig, M., 2023. What is KM? Knowledge Management Explained. [Interactiv] Available at: https://www.kmworld.com/Articles/Editorial/What-Is-.../What-is-KM-Knowledge-Management-Explained-82405.aspx

[Accesat 19 02 2024].

[45] Kok, A., 2007. Intellectual Capital Management as Part of Knowledge Management Initiatives at Institutions of Higher Learning. *The Electronic Journal of Knowledge Management* 5(2), pp. 181-192.

- [46] Kurtzman, J.-C., 2013. Handbook on Knowledge Management 1. În: *Knowledge Fields: Some Post-9/11 thoughts about the knowledge-based theory of the firm.* s.l.:Springer Science & Business Media., pp. 72-88.
- [47] Law, C. & Ngai, E., 2007. IT Infrastructure Capabilities and Business Process Improvements: Association with IT Governance Characteristics. *Information Resources Management Journal* 20(4), pp. 25-47.
- [48] Leadbeater, C., 1999. New measures for the New Economy, s.l.: s.n.
- [49] Lundvall, B.-A., 2000. The Learning Economy: Some Imlication for the Knowledge Base of Health and Education System. In knowledge Management in Learning Society. *OECD Press*.
- [50] Mamgain, M., Pasumarti, S. & Singh, P., 2024. Organizational IT support and knowledge sharing behaviour affecting service innovation performance: empirical evidence from the hospitality industry. *VINE Journal of Information and Knowledge Management Systems*, 54(2), pp. 256-279.
- [51] Manning, S., 2013. New Silicon Valleys or a New Species? Commoditization of Knowledge Work and the Rise of Knowledge Services Clusters. 42(2), pp. 379-390.
- [52] Mithas, S. & Ramasubbu, N., 2011. How Information Management Capability Influences Firm Performance. *MIS Quarterly 35(1)*, pp. 237-256.
- [53] Mumtaz, A. & Sahibzada, U. F., 2023. Knowledge management processes toward organizational performance a knowledge-based view perspective: an analogy of emerging and developing economies. *Business Process Management Journal*, 29(4), pp. 1057-1091.
- [54] Najib, M. & Kiminami, A., 2011. Innovation, cooperation and business performance. *Journal of Agribusiness in Developing and Emerging Economies 1(1)*, pp. 75-96.
- [55] Nowduri, S., 2011. Management information systems and business decision making: review, analysis, and recommendations. *Journal of Management and Marketing Research*, pp. 1-8.
- [56] Omotayo, F., 2015. Knowledge Management as an important tool in Organisational Management: A Review of Literature. *Library Philosophy and Practice*, pp. 1-24.
- [57] Porter, M., 1998. Cluster and The New Economics Competition. *Harward Business Review 76(7)*, pp. 77-90.
- [58] Quah, D., 1996. The Invisible Hand and the Weightless Economy. *LSE Economics Department and Centre for Economic Performance NO.* 12, pp. 1-20.
- [59] Rožman, M., Shmeleva, Z. & Tominc, P., 2019. Knowledge management components and their impact on work engagement of employees. *Naše gospodarstvo / Our Economy, ISSN 2385-8052, De Gruyter Open, Warsaw, Vol. 65, Iss. 1*, pp. 40-56.
- [60] Snellman, K. & Powell, W., 2004. The Knowledge Economy. *Annual Review of Sociology 30*, pp. 199-220.
- [61] Walumbwa, F., Christensen, A. & Hailey, F., 2011. Authentic leadership and the knowledge economy: Sustaining motivation and trust among knowledge workers. *Organizational Dynamics*, Vol. 40, pp. 110-118.
- [62] Wilska, E., 2014. Determinants of Effective Talent Management. *Journal of Positive Management 5(4)*, pp. 77-88.
- [63] Wudhikarn, R., 2018. Improving the intellectual capital management approach using the hybrid decision method. *Journal of Intellectual Capital*, pp. 1-22.