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SUSTAINABLE KNOWLEDGE BASED ORGANIZATIONS DEFINITION AND CHARACTERISTICS

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Abstract

In the context of globalization, the economic environment started to be more dynamic, complex and uncertain. As a result, some managers focused on developing sustainable organizations while others became preoccupied with creating knowledge based firms. But sustainability and knowledge aren't as different as it seem; knowledge is a resource and sustainability concentrates on the rational use of resources. As a consequence, this article aims to highlight what a sustainable knowledge based organization may be. In order to achieve this goal, it had been employed an ethic approach and a documentary study was combined with a transversal descriptive research. Therefore, the survey based on questionnaire was used as a main research method and techniques like systematization, tabling and graphics were applied. The results collected from 268 Romanian and Spanish knowledge management specialists showed that, in the business environment, the sustainable knowledge based organization is real and may be described as an economic entity that focuses on maximizing its market value on short, medium and long term by dealing with knowledge, economic, social and environmental issues. The findings of this research generated some interesting theoretical and managerial implications. On the one hand, it brought to forefront the need for developing a new type of company and, on the other hand, it emphasized the elements that managers should take into account if they want to ensure their long time success. Based on these, ISO 26000 standards can be transformed into reality and its implementation is not made just for the sake of appearances.

Key words: knowledge management specialist, knowledge organization, sustainable firm

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1. Introduction

Evolving from the industrial economy to the post-industrial one generated some radical changes of market success coordinates (Istrate et al., 2017; Jamali et al., 2006; Leon et al., 2017). It started to depend less on company's ability to offer the products and services that customers wanted (Lau et al., 2005) and more on its ability to gain competitive advantages (Day, 1994). Besides, the specialized literature (Dodd, 1932; Friedman, 1970; Lozano, 2008) shows that the changes from the economic environment are reflected by the evolution of firm's theories and typologies.

Regarding the first aspect, it must be pointed out that, during the time, company's purpose has changed. The theories that had been developed in the late 19th and early 20th centuries (like, the classical

theory, the shareholder theory etc.) had their roots in the work of Adam Smith (1776) – *An inquiry into the nature and causes of the wealth of nations* – and claimed that profit maximization is the main goal of a company. A change of perspective was remarked in the theories that had been developed during the 20th and 21st centuries (namely, the neo-institutional theory, the knowledge-based view theory, the holistic theory etc.). These highlighted that firms have to develop continuously, and profit maximization is not a purpose but a source of motivation. In other words, they brought forward the need for firms to look beyond their profitability to the needs of a wider community.

Due to political pressure, progress in laws, and civil society's pressure, terms like “social responsibility” and “corporate social responsibility”

came into a widespread use. They became watchwords for boardrooms, major investors and other stakeholders, and started to be integrated into business and quality management systems. Management system standards, such as ISO 9000 and ISO 14000, became internationally used although they have been criticized by both practitioners (Seddon, 2000) and academics (Hallstrom, 2000). Despite the competitive benefits that these offer, they tend to be adopted for the sake of appearances (Vogel, 2005) and become a “must have” due to external pressure. A shift of perspective appeared in 2010 when ISO 26000 was launched; unlike previous standards, this was not requiring a third-part certification. Still, some attempts have been made in order to incorporate it in national rules and legislation (Hahn and Weidtmann, 2016; Moratis, 2016, 2017).

Since the proliferation of standards related to company’s responsibility for the community is criticized by many researchers (Capron and Quairel-Lanoizelée, 2010; Savall and Zardet, 2005), it could be assumed that firm’s involvement in community’s life is encouraged by internal forces. An organization’s interest in its stakeholders could be a sign of maturation and not an obligation. ISO 26000 could be part of organizational practices and policies without being labeled as an international standard.

Regarding the evolution of firm’s typologies, it must be remarked that in a complex economic environment, the bureaucratic organizations (based on Weber’s principles) proved to be inefficient and were changed with the post-bureaucratic ones (like, the sustainable organization, the learning organization, the knowledge based organization etc.). This marked the shift from a rigid to a flexible organizational structure; from a simple to a complex job description; from a short term to a medium and long term perspective; from a closed to an open organizational culture; from an autocratic to a democratic decision style (Sthyre, 2008; Weber, 1947). Further, the research focused on the most controversial types of companies namely the sustainable organization and the knowledge based one (Jennings and Zandbergen, 1995; Örtenblad, 2001).

The first one has its roots in the work developed by George Ludwig Hartig in 1785 (O’Riordan, 1976), and was described as an organizational entity during the 20th century. It appeared against the backdrop of an academic debate over the legality of using company’s profit for public interest (Dodd, 1932) and it gained the economists’ attention when Milton Friedman (1970) published his article. Researches (Eljington, 1994; Finksel, 2006) highlighted that firms must be sustainable – profitable and responsible to all the stakeholders. They have to establish economic, social and environmental objectives; to develop an organizational culture that increases stakeholders’ awareness to social and environmental issues and to rationally exploit resources (Kollmus and Agyeman, 2002). At the end of the 20th century, other researchers (Argyris and

Schön, 1978; Drucker, 1968) brought to the forefront a new organizational resource – knowledge, and created a favorable context for the appearance of learning organizations (Senge, 1990) and knowledge-based businesses (Davis and Botkin, 1994). The former are based on the work of Argyris and Schön (1978) and describe a real entity, while the latter represent a model of the future company and originate from Drucker’s book (1968). Besides, the second type is considered to be at the forefront of organizational performance (Bennet and Bennet, 2003), and it can also be found under the name of “knowledge-based organization” (Leonard-Barton, 1995), “knowledge creating company” (Nonaka and Takeuchi, 1995), “knowledge company” (Sveiby, 1997), “knowledge-intensive firm” (Nurmi, 1998).

It is described as an economic entity oriented to gain competitive advantages by developing employees’ knowledge and increasing the level of collaboration inside and outside company’s boundaries. Therefore, it develops an organizational identity, implements processes that encourage knowledge creation, dissemination and use, invests in research and development and hires specialized workers (Hess and Bacigalupo, 2010).

The sustainable organization and the knowledge based one are presenting two different ways of succeeding in a dynamic environment. One of them is focusing on the outside and intends to develop itself by satisfying stakeholders’ expectations while the other one concentrates on the inside and aims to use stakeholders’ knowledge. But is this approach useful in an environment where turbulences are generated by internal and external factors? Does a company really have to choose between sustainability and knowledge or both aspects could be addressed in a sustainable knowledge based organization (SKBO) which is capable of using its knowledge and its relationships in order to satisfy stakeholders’ expectations? Starting from these, in the next section, a theoretical model of a SKBO will be developed and the research hypotheses will be highlighted. Then the methodology that had been used in order to test the hypotheses will be illustrated. In the fourth part, the main results will be highlighted and this article will close with a couple of conclusions and further research directions.

2. Experimental

2.1. Sustainable knowledge based organization and research hypotheses

Since information is travelling from one continent to another in a couple of milliseconds and technological progress occurs in a faster pace, the business environment is described as being dynamic, complex and uncertain. As a consequence, a company must be oriented to anticipating and adapting to customers’ needs; it has to develop a strong relationship with its stakeholders, to employ qualified workers and to develop the proper organizational

processes. Although the utility of each of these elements was proved in previous researches (Finksel, 2006; Gottschalk et al., 2009), the opinions regarding the name of the organization that manages to reunite them are split.

The researchers from the environmental management area (Finksel, 2006; Ketola, 2010; Lozano, 2008; Sanchez-Fernandez et al., 2016) use these characteristics for describing the sustainable organization. This is a company capable of growing in a turbulent environment by developing short, medium and long term objectives (Finksel, 2006); it concentrates on satisfying stakeholders' needs (Ketola, 2010), creates an organizational culture that increases stakeholders' awareness to the environmental and social problems (Kollmus and Agyeman, 2002) and encourages employees' development and empowerment (Lozano, 2008).

The perspective from which the concept of "sustainable organization" was approached evolved from an ecological dimension to an ethical one. In the '90s, a sustainable organization was mainly focusing on being profitable while using rationally the natural resources (Eljkington, 1998); its activity was developed around two coordinates: profitability and natural environment. In order to encourage this development, Eco-Management and Audit Scheme and ISO 14000 standards were launched. These aimed to stimulate the use of environmental management systems and to improve firm's reduction of inputs, raw material utilization, energy consumption and operational safety.

During 2000-2006, social issues captured scholars' attention and sustainable organization was defined as an entity capable of being successful while increasing the quality of life, respecting cultural diversity and preserving the integrity of natural environment (Finksel, 2006; Kollmus and Agyeman, 2002); three coordinates were governing its activity, namely: profitability, stakeholders and natural environment. Its development continued to be supported by environmental management systems although this time there was a better alignment with ISO 9000 quality management standards. The revisions of ISO 14000 (especially, ISO 14001:2004 and ISO 14004:2004) improved the relationship between business effects on human activities and the natural environment (Misztal and Jasiulewicz-Kaczmarek, 2014). It stimulated the development of corporate social responsibility.

After 2007, the sustainable organization was described as an entity that aligns individuals, groups and organization's values and behaviors in order to facilitate its engagement in collaborative actions with its internal and external stakeholders (Ketola, 2010; Lozano, 2008); its activity was developed around four coordinates: profitability, stakeholders, natural environment and ethical behavior. In this complex context, ISO 26000 was developed and launched. This emphasized the shift from environmental management to sustainable management by highlighting "the responsibility of an organization for the impacts of its

decisions and activities on society and environment, through transparent and ethical behavior that contributes to sustainable development, including health and welfare of society" (International Organization for Standardization, 2010).

Although, they are not environmental management researchers, Kotler and Caslione (2009) sustained the same approach when they presented the sustainable business enterprise. They claimed that this may maximize its long term value by including the social, economic, environmental and ethical factors in the process of strategy development; developing programs of social responsibility and adopting an ethic and authentic behavior to all the stakeholders. The ethical dimension emphasizes that organizations need to go beyond promoting values like cooperation, equity and integrity to incorporating them into organizational culture, mental models, organizational practices and programs.

Researchers from the knowledge management field (Grant, 1996; Hess and Bacigalupo, 2010) argue that the elements mentioned above are characterizing the knowledge based organization. This is an open and dynamic system, in which problems are solved by knowledge workers. It aims to adapt to market's demands by employing qualified workers; developing an open organizational culture based on cooperation and communication which encourages employees' development and by organizing the activity so that it generates added value to its stakeholders.

So, these two companies are not as different as it seems. If their particularities are analyzed (Table 1), it may be remarked that although they are not describing the same reality, they have several elements in common. Both of them: (i) are establishing short and long term objectives; (ii) are developing an open organizational culture; (iii) are encouraging collaboration among stakeholders and the adoption of an ethic and authentic behavior, and (iv) are fostering employees' development and empowerment. Emphasizing the nexus between sustainability and knowledge represented a subject of interest for the researchers from both areas of study: environmental management (Ioan and Carcea, 2013; Ketola, 2010; Lozano, 2008) and knowledge management (Nicolescu and Nicolescu, 2005; Zollinger, 2004). Despite their different formation, most of them highlighted that knowledge dissemination and use is necessary in order to implement sustainability policies. They perceived knowledge as an instrument and included the organizational elements that stimulate knowledge creation, dissemination and use in what it had already been known as a sustainable organization. This may be caused by the fact that the concept of "sustainability" is correlated with the rational use of resources (Jennings and Zandbergen, 1995) while knowledge is described as an organizational resource (Bennet and Bennet, 2008; Senge, 1990). On the other hand, sustainability and knowledge are linked by organizational learning processes which allow converting tacit knowledge into explicit.

Table 1. Characteristics of the sustainable and the knowledge based organizations (Leon, 2012a)

	Sustainable organization	Knowledge based organization
Similarities	<ul style="list-style-type: none"> • establishing short, medium and long term objectives; • developing an open organizational culture; • encouraging the collaboration with all the stakeholders; • ensuring a working environment favorable for employees' development; • promoting employees' empowerment. 	
Differences	<ul style="list-style-type: none"> • focusing on the economic, social and environmental issues; • promoting transactional leadership; • the organizational culture includes values, norms and principles that aim to increase stakeholders awareness to social and environmental issues. 	<ul style="list-style-type: none"> • focusing on developing an internal knowledge base; • promoting transformational and charismatic leadership; • reducing the numbers and roles of the middle and first line managers; • outsourcing activities that are not essential.

The identification of organizational practices and policies for adopting sustainability requires experimental learning, using trial and error method. This implies developing single and double loop learning models which involve paying attention to stakeholders values, beliefs and emotions, developing shared mental models, codifying and incorporating them into organizational culture, practices, policies, and relationships; it focuses on valuing cognitive, emotional and spiritual knowledge. As a result, an organization is capable of understanding that it is part of a larger system and it has to integrate its vision and practices within system's processes.

Most of the previous researches focused on demonstrating how knowledge facilitates the achievement of multiple objectives without offering a name for that company. Some exceptions may be found in the work developed by Zollinger (2004) and Nicolescu and Nicolescu (2005). They used the concept of "sustainable knowledge based organization" in order to describe a company that is capable of achieving economic, social and environmental performance by using its internal knowledge base. Therefore, SKBO is a mix between the sustainable firm and the knowledge based one. It has the purpose of the former – maximizing company's performance on short, medium and long term – but it uses the instruments of the latter – organizational processes that stimulates knowledge creation, acquisition, dissemination and use.

Based on these assumptions, it may be argued that a SKBO is an entity that focuses on being successful on short, medium and long term by dealing with knowledge, economic, social and environmental issues. Reporting to the business environment, a SKBO is an economic entity that focuses on maximizing its market value on short, medium and long term by dealing with knowledge, economic, social and environmental issues. Therefore, it may be assumed:

Hypothesis 1. The sustainable knowledge based organization is more than just a mix between the sustainable and the knowledge based organization.

Knowledge is a purpose and an instrument. Its efforts are oriented to create and continuously develop its internal knowledge base in order to deal with economic, social and environmental issues. It develops short, medium and long term objectives that focus on creating, disseminating and using knowledge and also on the economic, social and environmental aspects; it creates a trustful work environment based on communication and collaboration; it promotes organizational values and norms that aim to increase stakeholders' awareness towards knowledge, economic, social and environmental issues; it develops and implements programs that bring benefits to internal and external stakeholders. These support the development of the seven principles of ISO 26000: accountability, transparency, ethical behavior, respect for stakeholder interests, respect for the rule of law, respect for international norms of behavior, and respect for human rights. Thus, the next hypothesis is proposed:

Hypothesis 2. Most characteristics of the sustainable knowledge based organization concentrate on the processes that encourage knowledge creation, dissemination and use.

Despite the fact that "knowledge" and "sustainability" are broad and multidisciplinary concepts with no unanimous definitions, in the field of comparative management, some researchers aimed to develop a methodology (Crossley, 2008) by highlighting the influence of national culture on organizational behavior and practices. Since national culture includes a set of values, beliefs and morals which guides individuals (Vitell et al., 1993) and also generates differences in people's attitudes and persuasion, it could be assumed that it may influence the way in which the concept of "sustainable knowledge based organization" is perceived.

Based on the work of Hofstede (1980), the research focused on Romania and Spain, two countries that share almost the same cultural profile (Table 2). Both of them have a high level of uncertainty avoidance and tend to be feminine societies – dimensions that influence the way in which the

“sustainable knowledge based organization” is perceived.

Table 2. Comparative analysis between Romania and Spain, based on Hofstede’s dimensions (Itim International, 2012)

<i>Dimension</i>	<i>Country</i>	<i>Romania</i>	<i>Spain</i>
Power distance		90	57
Individualism		30	51
Masculinity / Femininity		42	42
Uncertainty avoidance		90	86
Long term orientation			19

The high level of uncertainty avoidance reflects that people are more anxious, more cautious when it comes to new things and tend to create rules and regulations (Hofstede, 1980). Uncertainty avoidance societies are less innovative than uncertainty accepting ones (Shane, 1995), prefer to conform to organizational norms and procedures (Schneider, 1989) and are usually associated with ethical orientation and corporate governance (Hofstede, 2004). Besides, femininity reflects the degree in which a society focuses on the quality of life (Hofstede, 1980). As a result, values like developing warm personal relationships, collaboration, open communication, care for the weak and solidarity are shared among the individuals. People coming from these societies are more receptive to aspects regarding sustainability and knowledge but not so open to a new subject like, the sustainable knowledge based organization. Starting from this, it could be assumed that:

Hypothesis 3a: There are no significant differences between the Romanian and Spanish knowledge management specialists regarding “sustainable knowledge based organization” definition.

Both, Romanian and Spanish specialists will be oriented to correlate the new concept, with what they already know about sustainable and knowledge based organizations. Their highly uncertainty avoidance will determine them to return to the organizational structures and concepts that had already been consecrated. Based on this assumption and the moderate femininity that characterized both cultures, it can be sustained that:

Hypothesis 3b: There are no significant differences between the Romanian and Spanish approach regarding the sustainable knowledge based organization characteristics.

2.2. Research methodology

The research regarding SKBO is relatively poor although some significant attempts had been made. Given the fact that “sustainability” and “knowledge” are dynamic and controversial concepts and businesses are still being blamed for causing environmental damages, it was aimed to identify what

a SKBO is from knowledge management specialists’ perspective.

In order to achieve this goal, it was combined the inductive with the deductive approach and the qualitative with the quantitative analysis. Since the focus was on an emerging concept, an analytical framework had been used and the documentary study was combined with the transversal descriptive one.

First, it was developed a documentary study which concentrated on identifying the potential characteristics of SKBO. Based on these, SKBO can be described as an economic entity oriented to create, disseminate and use knowledge in order to achieve economic, social and environmental objectives on short, medium and long term. Therefore, the concept has two dimensions: sustainability and knowledge. Each dimension includes as variable: the nature of objectives and the organizational processes and structures.

When the types of objectives were chosen as an independent variable, it was taken into account the fact that SKBO deals with economic, social, environmental and knowledge issues. Therefore, it must establish at least one objective in each area. Besides, economic, social and environmental objectives may be achieved due to an open organizational culture, team work and a flexible organizational structure.

Further, it was developed a questionnaire with 12 open questions that concentrated on defining SKBO and identifying its characteristics. This was administrated to the first six academics that had investigated knowledge management issues in the university’s centers from Romania (Bucharest, Iasi, Cluj-Napoca) and Spain (Madrid, Valencia, Granada). Based on their experience, each of them completed the questionnaire with possible definitions and characteristics of SKBO.

After analyzing their responses, it was created a new questionnaire that included 29 items which focused on four areas, namely: defining the SKBO; identifying its characteristics; determining the sources of firm’s sustainability and identifying respondents’ socio-demographical characteristics. The items regarding the first and the third aspect were designed using a multiple choice scale. A five points Likert scale was used for the items regarding the second issue where: “1” represented “little importance” and “5” – “extremely important”.

This questionnaire was pretested on a sample of 24 different persons that were coming from the same six cities – Bucharest, Iasi, Cluj-Napoca, Madrid, Valencia and Granada. There were selected 12 academics and 12 professionals. The questionnaire reliability was proven using Alpha Cronbach coefficient which had a value equal with 0.873. From February 2011 until March 2012, it was conducted a questionnaire survey among the Romanian and Spanish knowledge management specialists. The Romanian Knowledge Management Community database was used as a starting point in selecting the Romanian sample. According to this, from February

2009 until February 2011, 170 persons had been certified as knowledge management specialists.

In the case of Spain, there were identified 548 specialists that were members of the Knowledge Society Research Centre, the University Research Institute on Business Administration from the Autonomous University of Madrid, the Spanish Association of Accounting and Business Administration and the Scientific Association of Economy and Management.

The research population was represented by 718 knowledge management specialists. Each of them was invited to submit the questionnaire using Google Docs application. A snowball sampling technique was used and 274 questionnaires were collected. After analyzing them, it was noticed that only 268 questionnaires were valid and it had been offered by 134 Romanian specialists and 134 Spanish specialists. The sample distribution regarding respondents' occupation, age and formation is presented in Fig. 1; 32.09% of them were managing knowledge management activities or departments while 67.91% were teaching and investigating themes like knowledge creation, dissemination and use. In order to test the research hypotheses, statistical analysis and techniques like systematization, tabling and graphics were used. First, it was made a frequency analysis of the knowledge management specialists' responses and then the results obtained from the Romanian sample were compared with the ones gathered from the Spanish sample.

Since the analysis was based on nominal data collected from two independent samples, it was more appropriate to use a nonparametric test. Therefore, in order to determine the differences between the two samples, the Kruskal – Wallis test was used; this is an extension of the Mann – Whitney test and allows the comparison of two independent groups.

3. Results and discussion

Analyzing responses' distribution regarding the definition of SKBO (Fig. 2), it can be observed that

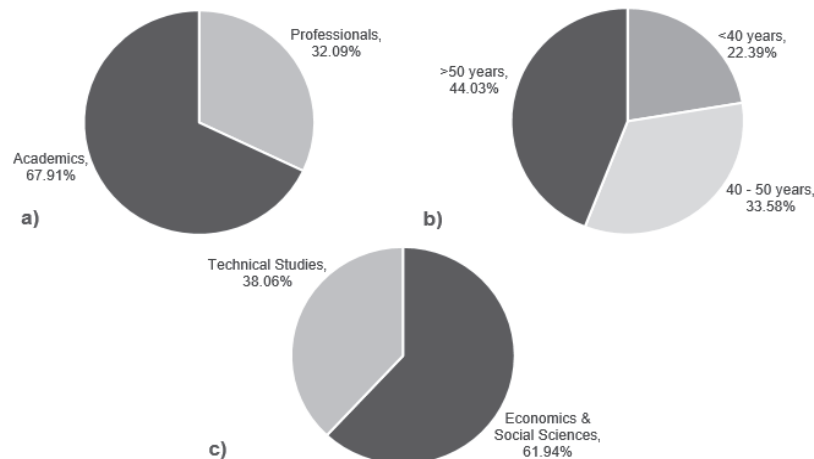


Fig. 1. Romanian and Spanish sample distribution by occupation (a), age (b) and type of formation (c) (Leon, 2012b)

most of the knowledge management specialists (46.80%) presented it like a structure in which sharing knowledge between employees is the key to gain competitive advantages at the economic, environmental and social level. Besides, 20.80% of the respondents described it as a complex and adaptive system based on self – organized teams while 15.00% highlighted that this is a way of adapting to the current economic environment.

Based on these and on the data presented in Table 3, it can be argued that SKBO is more than just a mix between the sustainable and knowledge based firm, like Zollinger (2004) and Nicolescu and Nicolescu (2005) have declared. This is not only focusing on using knowledge in order to obtain performance at the economic, social and environmental level; it concentrates on dealing with knowledge, economic, social and environmental issues in order to adapt in a timely manner to the challenges that are generated by the micro- and macro-environment factors. Its sustainability is the result of a continuous process of adaption to environment rather than a consequence of solving environmental issues.

Table 3. Testing the hypothesis 1

	<i>Chi-Square</i>	<i>df</i>	<i>Asymp. Sig.</i>
Common elements	6.895	3	.08

Therefore, it can be sustained that the hypothesis 1, according to which the SKBO is more than just a mix between the sustainable and knowledge based organization, is supported

$$(p = 0.08; df = 3; \gamma^2 = 6.895 > \gamma^2_t = 6.758)$$

Some changes appear when it had to correlate this new type of firm with the knowledge based organization and with the challenges that occur in the environment. The Spanish specialists argued that this firm tends to be more a subsequent stage of the knowledge based organization than a way of adapting to challenges.

Due to their long history of investigating and practicing knowledge management, they are more oriented towards identifying future trends of evolution; they emphasize the progress that needs to occur at the organizational theories level. On the other hand, for the Romanian specialists the adaptive character was more powerful, more visible than its relationship with the other types of companies.

They adopted a more restrictive approach and focused on sustainability as a process of adaption, of continuous learning and development. According to knowledge management specialists, these companies become sustainable if they adapt, in a timely manner, to the challenges that appear in the economic environment, plan their activity for short, medium and long term and if they adopt an ethic attitude to all the stakeholders (Fig. 3). But all these elements influence one another. The most important one is the adaption in a timely manner to the economic environment challenges (30.90%). This represents the goal of

company’s activity and may be achieved by planning on short, medium and long term (26.80%). So, if a company wants to be sustainable and capable of valuating the opportunities that may appear, it has to be interested and prepared for what is happening now and what may happen in close and distant future.

But anticipating and reacting is not enough. Therefore, 22.10% of the respondents highlighted the importance of adopting an ethic attitude to all the stakeholders. If a company wants to pass the test of time then it has to pay attention to stakeholders’ needs, values and beliefs, to be concern for its stakeholders’ well-being and to be committed to address the impact of its activities and products/services on stakeholders’ interests. Developing some social responsibility programs is not enough; an organization must prove that it understands its role in the general system and its actions are based on a set of values which sustain the current and future development of economic, social and natural environment.

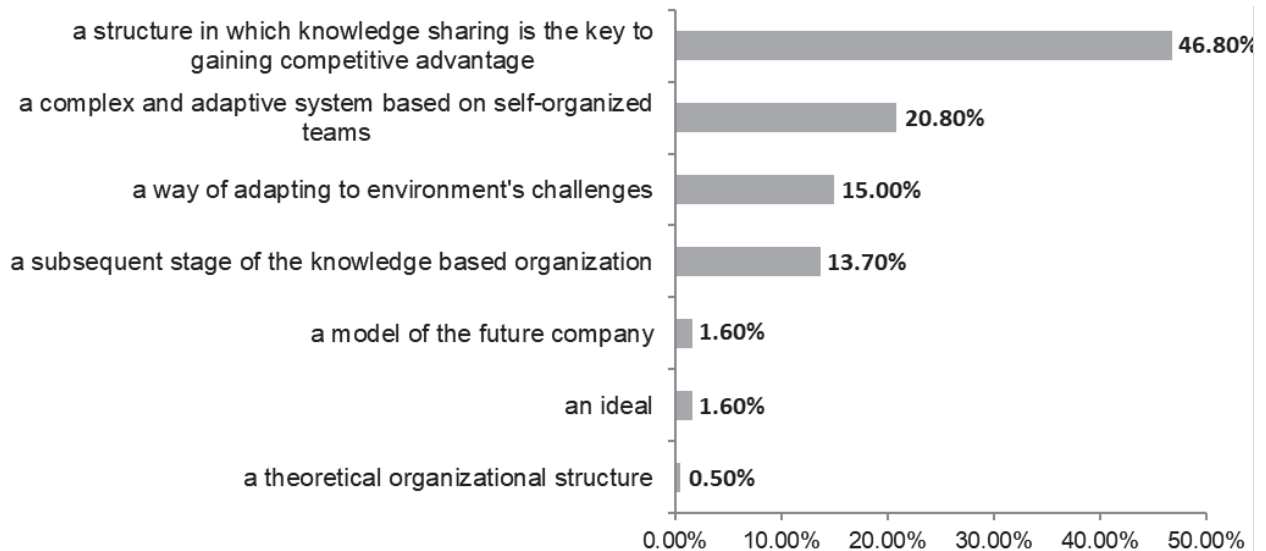


Fig. 2. The responses’ distribution regarding the SKBO’s definition (Leon, 2012b)

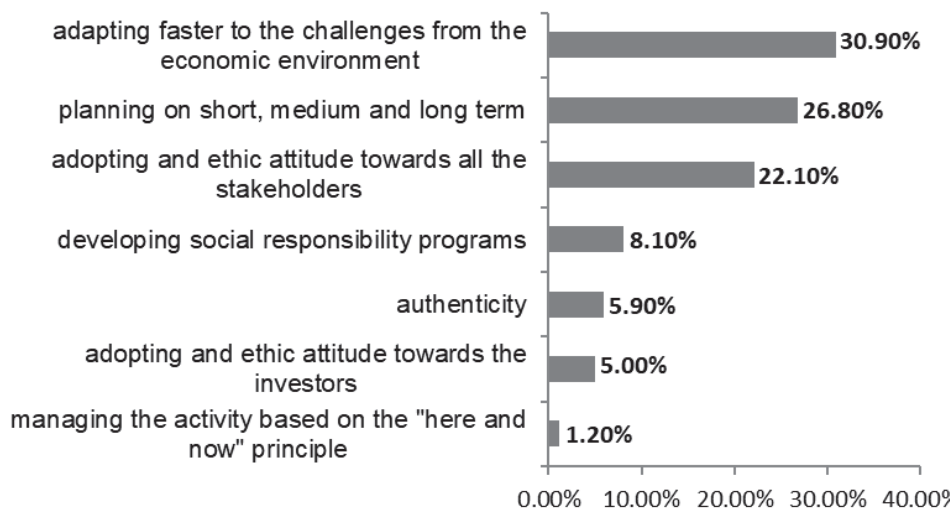


Fig. 3. Responses’ distribution regarding the elements that ensure firm’s sustainability



Fig. 4. The main SKBO's characteristics

Based on these, it can be argued that any company may become sustainable if it has an ethical behavior and its managers are focusing on current problems by satisfying stakeholders' needs and, at the same time, they are making scenarios regarding what could happen on medium and long term. If those two conditions are not met simultaneously then the firm will never be sustainable. If the characteristics of this firm are taken into account (Fig. 4), it may be noticed that its managers must be preoccupied with establishing multiple objectives (13.00%) and creating an open organizational culture (11.00%).

The fact that managers have to concentrate on four different areas (economic, social, environmental and knowledge) allows them to keep informed; they are able to anticipate the threats and opportunities that could appear in both general and specific external environments. Besides, the achievement of any objective depends on employees' commitment. If the organizational culture is open then employees can express their ideas, share their explicit and tacit knowledge (experiences, thoughts, beliefs, and values) and use their skills in a trustful environment. These facilitate the development of an internal knowledge base which had been considered important by 10.70% of the respondents.

Furthermore, managers must develop activities and programs that are encouraging employees to share their knowledge with one another and to improve their capacity of making decisions (10.20%). Also, the organizational programs and activities must bring benefits to suppliers, customers and community (9.00%). As a consequence, company's access to stakeholders' knowledge improves and innovation is fostered.

In order to develop the first three characteristics, a company must have a flexible organizational structure that encourages knowledge creation, dissemination and use and, in the same time, it has to develop a close relationship with its stakeholders. As it may be noticed more than 50% of SKBO's characteristics focus on creating and disseminating knowledge (Table 4).

Table 4. Characteristics' distribution based on the area in which they focus

Area of interest	Frequency	Percent	Valid Percent	Cumulative Percent
ecological	2	10.5	10.5	73.7
knowledge and ecological	5	26.3	26.3	100.0
Total	19	100.0	100.0	

Taking into account these aspects and the data presented in Table 5, it can be argued that hypothesis 2, according to which most characteristics of the SKBO concentrate on the processes that encourage knowledge creation, dissemination and use and not on the ecological issues, is supported ($p = 0.016$; $df = 2$; $\chi^2 = 8.316 > \chi^2_t = 8.270$).

Table 5. Testing the hypothesis 2

	Chi-Square	df	Asymp. Sig.
Focus on ecological issues	8.316	2	.016

If the analysis is made on the national level some differences appear, but they are not statistically significant (Table 6). So, hypothesis 3a is supported, and it can be stated that there are no significant differences between the Romanian and Spanish knowledge management specialists when it comes to define the concept of “sustainable knowledge based organization”. As it may be noticed from Fig. 5, 11.7% of the Spanish experts are skeptical regarding the existence of SKBO; they are describing it like “an ideal”, “a model of the future company” or “a theoretical structure”. Although the sustainable firm and the knowledge based ones are usually presented like two distinct entities that do not have anything in common, the Romanian specialists seem to disagree and analyze the concept as if it was characterizing a real firm. Despite the fact that the differences are not statistically significant, they could have been caused by the distinct nature of the two samples; the Romanian sample was homogenous – all the respondents were members of the same community of practice – while the Spanish sample was inhomogeneous. Besides, the Spanish researchers started to investigate knowledge management issues long before the Romanian had. As a result, they were more oriented towards preserving what they already knew. The same considerations may influence respondents’ perception on the main elements that ensure firm’s sustainability; it may be observed that the first three positions are occupied by the same aspects (Fig. 6), namely: (i) adapting to the economic environment challenges; (ii) adopting an ethic attitude to all the stakeholders, and (iii) planning on short, medium and long term.

However, 11% of the Spanish knowledge management experts are still focusing on satisfying only investors’ needs and 2.60% of them sustain that managing the activity by the “here and now” principle is the best way. They claim that in order to survive to the changes that occur in the environment, a firm should focus on solving the current problems without taking into account the future implication of their actions. On the other hand, these two issues are not taken into consideration by any of the Romanian respondents. Hypothesis 3b is also supported since there are no significant differences between the Romanian and Spanish sample (Table 7). The only major change concerns the position occupied by the development of an internal knowledge base (Fig. 8). This represents the most important aspect for the Romanian specialists while the Spanish ones are placing it on the sixth position. This situation may be generated by the fact that the issues regarding knowledge management have a shorter history in Romania than Spain. As a consequence, the first ones considered that it is the most important aspect while the second ones took it for granted.

Synthesizing, SKBO is an adaptive system in which knowledge creation, dissemination and use is the key to gain competitive advantages in terms of knowledge, economic, environmental and social performances. Its sustainability is coming from the

fact that managers are oriented towards planning for short and long term, the company is adapting to the challenges that may appear and last but not least, the firm is adopting an ethical attitude to all the stakeholders. Its main characteristics are combining the need for developing by using organizational knowledge with the one of establishing a strong partnership with the community. SKBO has knowledge, economic, environmental and social objectives; an open organizational culture; a developed knowledge base; activities that encourage knowledge sharing among employees; programs that bring benefits to all the stakeholders; activities based on self-organized and interdependent teams.

The findings of this research have several theoretical and managerial implications. From a theoretical perspective, the research may be included in the holistic theory of the firm since it presents a dynamic and ethic economic entity that manages to gain competitive advantages on short, medium and long term.

Therefore, it is based on the efficiency of using tangible, intangible and human resources. Besides, it extends the literature regarding SKBO by proving that this manages to distinguish itself from the other types of companies. It focuses on: (i) establishing economic, social, environmental and knowledge objectives; (ii) developing activities that encourage knowledge sharing among employees and, improve their capacity of making decisions; (iii) investing in research and development activities; (iv) outsourcing the activities that are not essential for the firm, and (iv) reducing the number and roles of the first line and middle managers.

Last but not least, the findings extend the model of “the four waves” developed by MacLean (2009). A shift has been made from protection to exploration, from a reactive approach to a proactive one (Table 8). A SKBO is not just waiting for things to happen; it anticipates changes and it can even generate them. From a managerial perspective, the research brings forefront the elements that may increase company’s success on a dynamic environment. A firm may succeed only if it has a double approach. It concentrates on what is happening inside and outside its boundaries and it develops economic objectives in order to have a long term direction and to ensure its profitability. Besides, it establishes social and environmental objectives in order to increase its reputation and to get closer to its stakeholders. A closer relationship with those will ensure company’s access to stakeholders’ knowledge (experiences, thoughts, ideas, beliefs, values etc.). Within this framework, managers will better understand stakeholders’ expectations and will be able to anticipate the changes that may occur regarding customers’ preferences. Last but not least, it offers some guidance on how to transform ISO 26000 standards into reality. It emphasizes the elements that have to be changed in order for the social responsibility to be an organizational purpose and not an activity developed for the sake of appearances.

Table 6. Statistical differences between the Romanian and Spanish sample regarding SKBO's definition

<i>Definitions of the SKBO</i>	<i>Chi-Square</i>	<i>df</i>	<i>Asymp. Sig.</i>
a structure in which knowledge sharing is the key to gaining competitive advantage at the economic, environmental and social level	15.701	1	.001
a complex and adaptive system in which the activity is based on self-organized and interdependent teams	79.879	1	.001
a way of adapting to environment's challenges	51.126	1	.001
a subsequent stage to knowledge based organization	29.643	1	.001
a theoretical organizational structure	3.023	1	.082
an ideal	9.278	1	.002
a model of the future company	11.428	1	.001

a. Kruskal Wallis Test; b. Grouping Variable: nationality

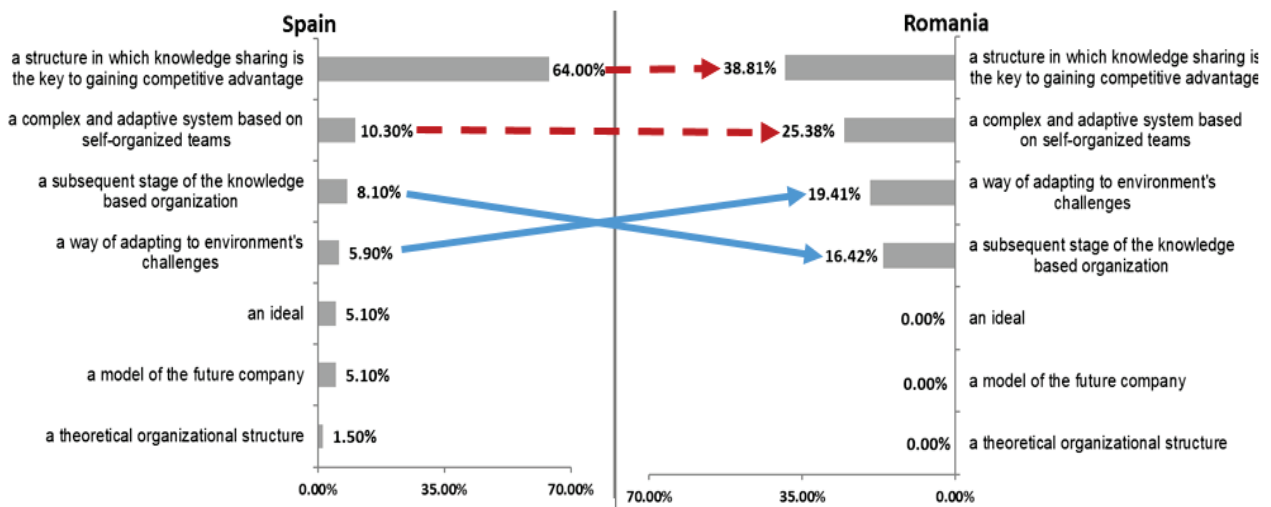


Fig. 5. Defining SKBO from the Romanian and Spanish perspective (Bueno and Leon, 2012)

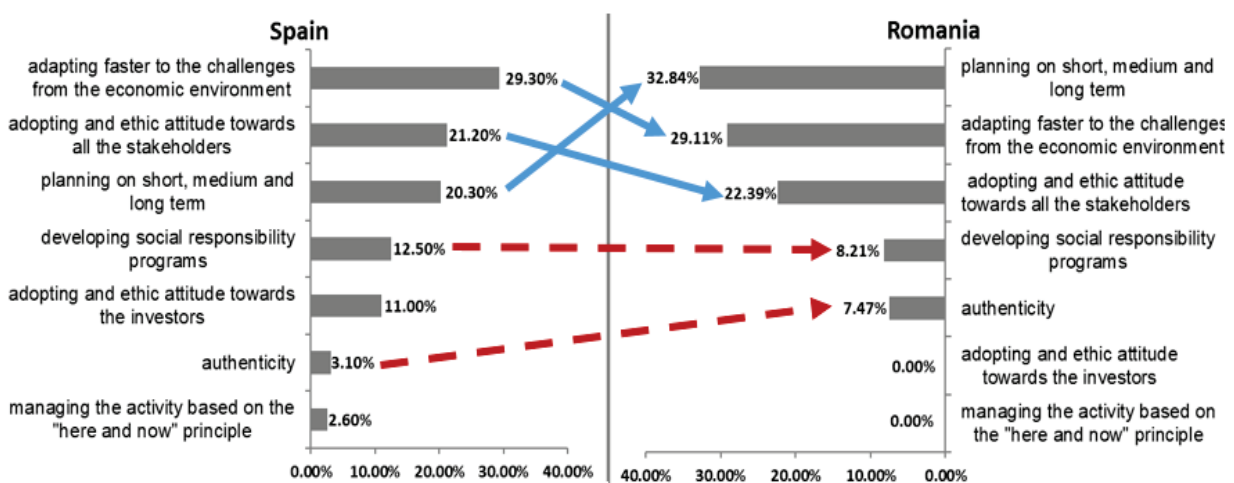


Fig. 6. Comparative analysis of the elements that ensure firm's sustainability from-Romanian and Spanish specialists' perspective (Bueno and Leon, 2012)

The change must come from the organization; it has to reflect organization's actions and not reactions. As a result, the policy makers have to pay

attention to all their stakeholders, to improve their communication and collaboration policies and practices, and to satisfy the needs and expectations of

each category of stakeholders. Despite these implications, research results are limited by sample’s characteristics and context.

The results may have been different if the respondents would’ve had distinct areas of specialization. From this perspective, they only reflect the opinion of the Spanish and Romanian knowledge management specialists. Furthermore, given the economic recession, the respondents were more oriented to value the intangible aspects. included specialists from ecology and sociology. Other results may have been highlighted if we would have approached specialists with a distinct cultural profile and in another economic context.

4. Conclusions and further research

Synthesizing, it may be sustained that SKBO is an entity that plans its activity on short, medium and long term so that knowledge creation, dissemination and use can facilitate the achievement of multiple objectives. This complements the current literature and it helps managers understand how to foster their company’s sustainability.

The determined characteristics will be used for identifying at least two sustainable knowledge based organizations from Romania and Spain. For each, an early warning system, based on neural networks, will be created.

Table 7. Statistical differences between the Romanian and Spanish sample regarding SKBO’s characteristics

	Chi-Square	df	Asymp. Sig.
focusing on satisfying market’s demands in timely manner	21.332	1	.001
encouraging sharing ideas and improving employees’ capacity of making decisions	21.495	1	.001
applying a transformational or charismatic leadership	.033	1	.857
developing an internal knowledge base	16.671	1	.001
extending the relationships with all the stakeholders	45.955	1	.001
collaborating with firms from inside and outside the domain	30.147	1	.001
outsourcing secondary activities	.000	1	.996
organizing the activity around self-organized teams	1.183	1	.277
developing a flexible organizational structure	.013	1	.911
reducing the numbers and the roles of middle managers	15.952	1	.001
investing in research and development	36.887	1	.001
developing programs that bring benefits to all the categories of stakeholders	.232	1	.630
establishing objectives that focus on knowledge, economic, environmental and social levels	5.302	1	.021
increasing the level of innovations’ absorption	3.673	1	.055
developing an open organizational culture	4.643	1	.031
planning on short, medium and long term	83.765	1	.001
developing social responsibility programs	12.289	1	.001
adopting an ethic attitude towards all the stakeholders	7.692	1	.006
being authentic	14.075	1	.001

a. Kruskal Wallis Test; b. Grouping Variable: nationality

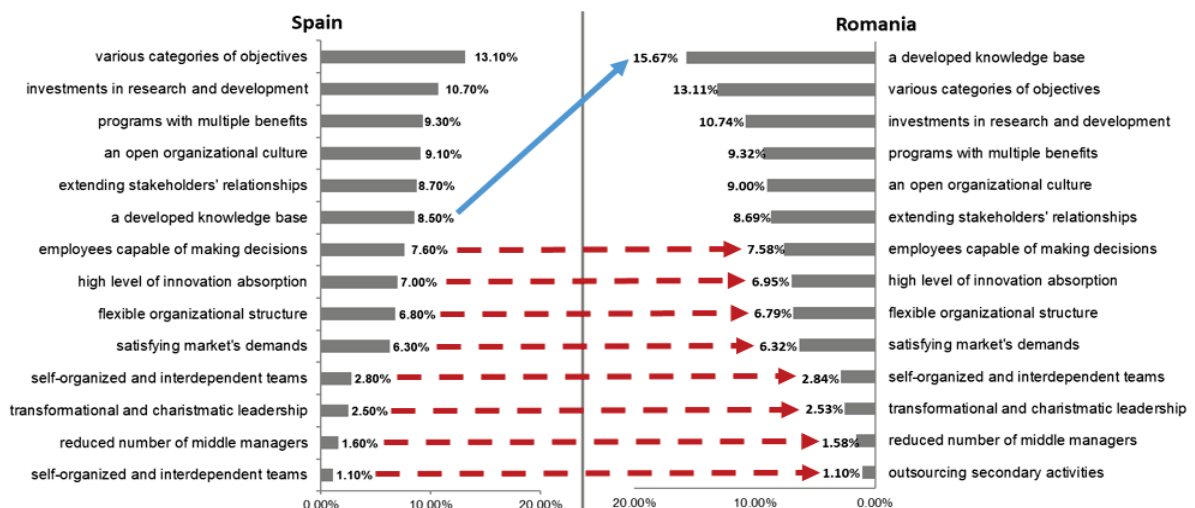


Fig. 7. The Romanian and Spanish specialists’ perspective on SKBO’s characteristics (Bueno and Leon, 2012)

Table 8. Generations of business approaches (adapted by MacLean, 2009)

<i>Dimension</i> \ <i>Wave</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	<i>Fifth</i>
Name	Regulations	Sustainable development	Resource	Sustainable knowledge
Objective	Reacting to problems; short term issues	Identifying solutions; preventing long term problems	Securing low-cost raw materials	Dealing with multiple issues; planning on short, medium and long term
Major themes	Regulatory compliance and cost containment	Social responsibility, image management, and green markets	Strategic resource positioning	Social responsibility, strategic knowledge management
Operative business questions	Are we in compliance? How do we cut environmental, health, and safety (EHS) costs?	Are we doing the right thing? How do we gain competitive advantage?	How do we ensure a reliable supply chain? What alternative resources and technologies can be utilized?	What needs to be done to improve their well-being and ours?
Power drivers	Regulations	Market mechanisms	Innovation and control over scarce resources	Cognitive, spiritual and emotional knowledge

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