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CORPORATE ENTREPRENEURSHIP, ORGANIZATIONAL LEARNING AND KNOWLEDGE IMPLEMENTATION

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The main research purpose in this paper is to perform an in-depth analysis of the relationships between corporate entrepreneurship, organizational learning and knowledge, the topic mostly neglected by academicians so far. The main research objective is to conduct a comprehensive analysis and make a step forward in understanding the nature of interdependencies, expand the knowledge base and offer a more profound answer to the dilemma of how to make an organization more innovative and flexible, by using the internal cognitive potential. Qualitative research incorporates a descriptive study, a comparison and an innovative interpretation of the relevant scientific achievements. The main result indicates that the knowledge implementation results in various forms of corporate entrepreneurship, more specifically the application of technical knowledge, lead to product lines extension, the integrative initiating of a new platform development and the exploitative creating of a new business venture. Knowledge is not only a result of organizational learning and corporate entrepreneurship, but also the trigger of future entrepreneurial activities. The research implications refer to the improved contemplation of the corporate entrepreneurship concept from a theoretical standpoint, while the practical contribution lies in providing recommendations to managers on how to stimulate specific types of entrepreneurial initiatives through corresponding approaches to organizational learning and knowledge. Finally, the potential avenue of research is indicated in relation to entrepreneurship as a learning process.

Keywords: corporate entrepreneurship, organizational learning, knowledge, new venture

JEL Classification: L26, D23, O31, M13

INTRODUCTION

The evolution of traditional toward entrepreneurial organization takes place within a complex and dynamic environment, under conditions of rapid technological changes and hyper-competition. The ability to adapt to constant pressure for more innovative and higher

quality products is determined by an organization's capacity to learn and systematically generate knowledge. While innovative in the early stages of the lifecycle, organizations gradually become more and more rigid. Therefore, even though the need for an entrepreneurial initiative is getting stronger, the intensity of innovative activities is going down.

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Corporate entrepreneurship represents the framework for constant change and innovation in organizations, intended to create an effective response

to contemporary competitive challenges. The recent reaffirmation of entrepreneurship in general, and hence, corporate entrepreneurship as a relatively new research field, is a result of a need to revitalize organizations during the global economic crisis and a necessity to empower them to lean on internal abilities as one of the most sustainable sources of growth. Corporate entrepreneurship is a complex and dynamic process, founded on a set of cognitive, motivational, structural and managerial assumptions, and as such requires a comprehensive analytical approach. Researchers noted that, despite a substantial potential, ambiguities remain in terms of the essence of the concept (Dess, Ireland, Zahra, Floyd, Janney & Lane, 2003; Hornsby, Kuratko, Shepherd & Bott, 2009), and therefore it is necessary to conduct a more in-depth study of the heterogeneity and scope of corporate entrepreneurship (Phan, Wright, Ucbasaran & Tan, 2010). An overview of recent scientific achievements and the literature indicates that significant research gaps still exist, representing the main reason for initiating new research in this field.

One of the most reliable sources of competitiveness in the long run is the ability to learn, at the level of entrepreneurially oriented employees, as well as at the level of the organization as a whole. Effective learning requires broad participation, commitment and agility at all hierarchical levels. Learning implies giving up old business methods and ways in favor of new ones, as well as embedding acquired knowledge in daily operations. The capacity to forget old ways and embrace new ones is particularly important in the context of innovation, because the dominant logic and routines, although eventually becoming more and more outdated and obsolete, hinder the entrepreneurial initiative in the organization. Continual learning positively affects the organizational potential to deploy resources effectively, systematically innovating business processes and approaches to the creation of a new value. Learning organization is the gathering of relevant information from the external environment in order to boost performances, reevaluate the dominant logic and expand the core competency. It has the ability to transform itself, encouraging a systematic search for the best solutions, experimenting, drawing learning by doing, and most importantly, implement the acquired

knowledge. Thus, the knowledge of how something was done is upgraded by the profound comprehension of the reason why it happened.

Only learning organizations are truly entrepreneurial; in other words, learning is the *spiritus movens* of corporate entrepreneurship. Organizational learning, knowledge and entrepreneurial activities are interdependent, because corporate entrepreneurship contributes to learning at all organizational levels, but at the same time it is the result of the previously acquired knowledge and experience. The main purpose of organizational learning should reflect in facilitating and strengthening entrepreneurial endeavors, intended to foster innovation and enable competitiveness in the long run. Entrepreneurially oriented organizations consider organizational learning as an integral part of business; therefore, the quality of learning is superb, while the experience is founded on a wide portfolio of innovative activities. Learning has substantial significance in the context of drawing valuable conclusions from a failure, contributing to expanding experience and the knowledge base, due to the „falling forward” effect. Accordingly, an analysis of the causal relations and interdependence of corporate entrepreneurship, organizational learning and knowledge is in the research focus of this paper.

In accordance with the defined research subject, the main objective of this paper is to enhance the scientific development of corporate entrepreneurship in several directions. First, the purpose is to shed more light on the relationship between corporate entrepreneurship and the learning process in the organization, as well as to elaborate alternative strategies of corporate entrepreneurship depending on the type and focus of knowledge implementation. Second, the study aims to contribute to spreading the knowledge base, reduce research ambiguities and identify organizational learning and knowledge as an inseparable aspect of corporate entrepreneurship, its starting and end points. Third, the research intends to provide a finer grained response to the eternal dilemma of how to make a traditional organization based on a hierarchy and bureaucracy more effective and flexible, using solely internal potentials and resources.

In line with the research subject and the goals, the scientific hypothesis has been developed, claiming that the implementation of corporate entrepreneurship and the strategy depend on the type of the knowledge arising from the organizational learning process.

Qualitative research has been conducted encompassing a descriptive study, a comparison and an innovative interpretation of the selected scientific achievements relevant within the defined research field. The theoretical verification has been completed in a logical manner, using the methods of analysis, synthesis, deduction and induction, in order to derive valid general conclusions based on abstraction and generalization.

The paper structure consists of three sections, followed by the appropriate concluding considerations. After the introduction, the first section elaborates the nature of the corporate entrepreneurship concept, indicating the main organizational forms and stressing the relevance of knowledge for the implementation of entrepreneurial activities. The second section is devoted to a more in-depth determination of organizational learning, with special highlights on the different theoretical perspectives in relation to the identified types of knowledge. Within the third section, an analysis of the impact that corporate entrepreneurship and organizational learning have in the context of alternative strategies of knowledge implementation will be presented. Finally, in the last section, relevant conclusions will be derived and a standpoint will be taken on the validity of the proposed hypothesis. In that manner, a methodological consistency is achieved and a connection between the subject and the research objectives established. Following the concluding remarks, the theoretical and the practical implications of the research are highlighted, the key limitations are specified and a future research avenue is proposed.

DEFINITION AND NATURE OF CORPORATE ENTREPRENEURSHIP

The rapid evolution of knowledge and technology in the last two decades has led to an increasing dependence of corporate performance on the organization's

ability to innovate, therefore shifting the focus of the management's efforts towards encouraging the entrepreneurial spirit internally, within the existing hierarchical and bureaucratic structure, through corporate entrepreneurship. The concept of corporate entrepreneurship has emerged as a response to the growing need to empower organizations to create internal prerequisites for encouraging their employees' entrepreneurial initiatives. Today, corporate entrepreneurship mainly involves the creation of new ventures or the transformation of the fundamental values, which the organization is based on.

The issue of entrepreneurial transformation has become a hot topic recently, when numerous organizations, heavily affected by the global economic crisis, have been faced with the challenge of how to achieve growth and a sustainable competitive position. The entrepreneurial transformation of the organization can be regarded from the narrow perspective, through the concept of corporate entrepreneurship, as well as from a wider context, through alternative strategies of growth, incorporating the concept of corporate entrepreneurship as well. Growth can be achieved internally, through capital investments or investments in working capital, and externally, too, through buying shares in an established promising venture. The management may opt to invest in new or the existing facilities, as well as to enter entirely new business domains. When it is important to enter a business domain as quickly as possible, due to the perceived market potential and long-term strategic importance, while, at the same time, estimates suggest that the establishment of a new venture requires significant time and resources, the strategic alternatives which should be considered are a merger or an acquisition. In addition, it is possible to significantly improve the entrepreneurial potential of the organization through different kinds of cooperative strategies, such as strategic alliances and joint ventures. Organizations are very often simultaneously involved in several cooperative deals with various stakeholders. All of the above mentioned strategic approaches lead to the significant expanding of the knowledge base and the strengthening of the core competence.

Corporate entrepreneurship refers to individual or group actions, initiating innovation, an organizational

renewal or the creation of a new venture. Thanks to corporate entrepreneurial activities, organizations are capable of leading or promptly adjusting ever-changing market preferences (Kuratko, 2009, 53). The most cited definition of corporate entrepreneurship was given by W. D. Guth and A. Ginsberg (1990), stating that „corporate entrepreneurship involves the birth of new businesses within the existing organization and / a transformation of the organization through the renewal of the key ideas on which they are built.“ Corporate entrepreneurship is in the focus of numerous researchers (Morris, Kuratko & Covin, 2008; Narayanan, Yang & Zahra, 2009), paying closer attention to: profitability (Zahra, 1993a; Vozikis, Bruton, Prasad & Merikas, 1999), a strategic renewal (Guth & Ginsberg, 1990), knowledge acquisition (McGrath, Venkataraman & MacMillan, 1994), innovation (Baden-Fuller, 1995), an effective resource allocation (Borch, Huse & Senneseth, 1999; Covin & Miles, 1999) etc.

Corporate entrepreneurship incentives are numerous. They primarily encompass environmental conditions, changes in technology and customer preferences, competitive actions, market changes, regulatory threats, macroeconomic trends and other externally caused factors (Stopford & Baden-Fuller, 1994; Sathe, 2003; Kuratko, Hornsby & Goldsby, 2004). Internally, the role of the management is crucial for encouraging an entrepreneurial initiative. The entrepreneurial approach to management is different comparing to the traditional one, since entrepreneurial managers understand that the existing activities provide stability for now, but without the entrepreneurial initiative, it will not be possible to sustain competitiveness in the long run. Support depends on the characteristics, values and vision of transformational leaders, who have the responsibility to shape the entrepreneurial organizational culture, which is also influenced by the quality of leaders' interpersonal relations with employees. Entrepreneurial propensity is under the influence of employees' knowledge, emotions and cognitive predispositions, enabling them to identify opportunities and make decisions under uncertainty and time pressure, being at the same time fully aware of the high failure rate. Entrepreneurial initiatives also depend on motivation mechanisms, referring to the evaluation of employees' contribution, the work

design and an adequate compensation system. The level of the individual initiative is heavily affected by the entrepreneurial processes in the organization. Different approaches to corporate entrepreneurial activities exist in the context of aligning the strategic management process and the turbulent competitive arena. Among the most significant internal processes that favor the corporate entrepreneurial activity are organizational learning and knowledge management.

The recent affirmation of corporate entrepreneurship as a research field has led to a perspective of the organization as a collective entity capable of learning, with the ultimate goal of improving performances through entrepreneurial activity. Entrepreneurial organizations vary between one another depending on their ability to accumulate, effectively assimilate and implement knowledge. The high venture-failure rate has further crystallized the need for a more refined understanding of the learning process in these organizations (Wang, 2008). The most successful entrepreneurial organizations are those who took a chance to embed in the strategy the knowledge gained in previous entrepreneurial ventures, in order to effectively exploit and take full advantage of it in the future.

There are two main forms of corporate entrepreneurship, namely the creation of new ventures and strategic entrepreneurship (Morris, Kuratko & Covin, 2008, 81). The essential difference between these two approaches relates to the fact that the creation of new ventures involves the creation of a new business entity, whereas strategic entrepreneurship refers to the reconfiguration of the activities within the existing organizational setting. Expanding the existing business portfolio encompasses the creation of ventures in new areas of competence, adding up new, but related business activities, as well as investing in external promising start-ups. Internal corporate ventures are created within the organization, either as part of the existing organizational structure or within newly-founded organizational units, as well as an externally located semi-autonomous entity. Joint cooperative ventures, widely known as joint ventures, refer to entrepreneurial activities established and owned by multiple organizations. They usually exist

as independent external legal entities operating outside the boundaries of the mother organization. External corporate ventures are usually business entities that the organization invests in or conducts an acquisition of, founded by third parties and already established on the market. These are generally undertakings with a tremendous potential, but in the early stages of the lifecycle (Erić, Babić & Nikolić, 2011). The concept of strategic entrepreneurship refers to the initiation of entrepreneurial activities with a strategic perspective. It incorporates a wide range of entrepreneurial initiatives that may or may not result in the creation of new ventures and may have several forms (Morris, Kuratko & Covin, 2008, 89-93) (Figure 1):

- Strategic renewal - It refers to the transformation of the organization through the re-evaluation of the fundamental ideas and values it is built on. The fundamental determinant of a strategic renewal lies in the strategic innovation of the corporate strategy; in other words - in performing a radical turn-around, substantial repositioning within the competitive arena.
- Sustainable regeneration - It Involves the systematic and continuous launching of new products or entering new markets. This form of strategic entrepreneurship involves a never-ending search for opportunities, in most cases resulting in incremental innovation, and occasionally, the final outcome is the emergence of a new business venture. Sustainable regeneration is the most appropriate in the industries with changing technology standards, a short product lifecycle and a significant market segmentation. This is the most common form of strategic entrepreneurship, and organizations that are carrying it out have a reputation of being highly innovative.
- Business domain redefinition - It refers to a proactive search for opportunities, regardless of whether it is a product or a market that other competitors have failed to exploit or even recognize. The goal is to establish an industry standard as a benchmark for potential competitors. This form of strategic entrepreneurship always results in the creation of a new businesses venture.

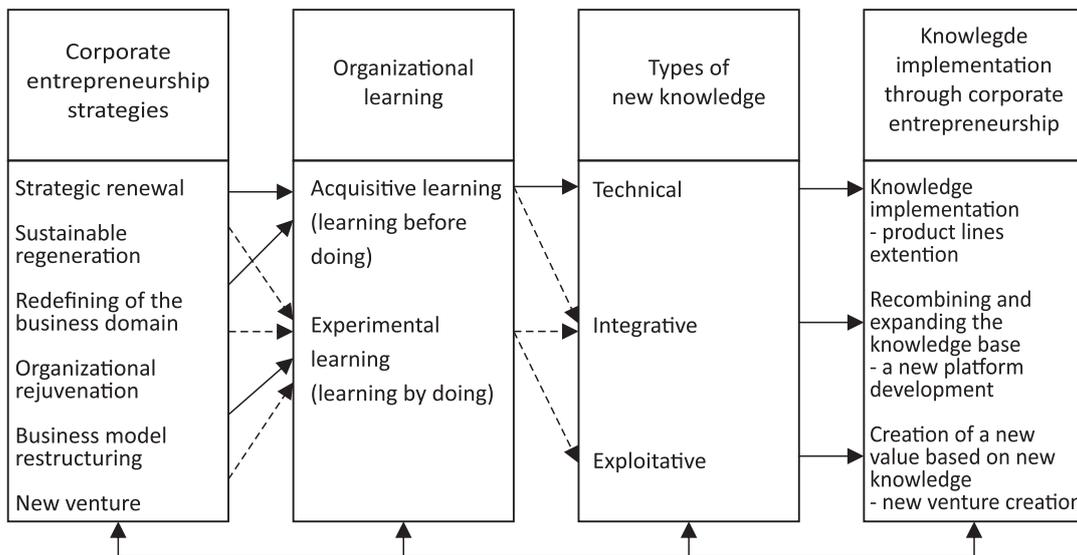


Figure 1 The interdependence of the corporate entrepreneurship strategy, organizational learning, different types of knowledge and implementation

- Organizational rejuvenation - It refers to increasing competitiveness through internal processes and/or the structure modification. The idea is to innovate the organization *per se*, i.e. to improve the implementation of the corporate strategy, without changing products or the market. Rejuvenation may include the reengineering of business processes through the reconfiguration of the value chain or the modification of organizational patterns.
- Business model restructuring - It is related to the implementation of innovations in the process of the (re)designing of the business model in order to raise operative efficiency and differentiate the organization from its competitors. In most cases, the forms of the restructuring of the business model refer to outsourcing, subcontracting activities outside the core competence, and to a less extent, vertical integration.

Knowledge is one of the most important results of corporate entrepreneurship (Dess *et al*, 2003). Traditionally, entrepreneur was perceived as an individual, learning as the process of the new company establishment goes on, but at the same time being the creator of and the mediator in the dissemination of new knowledge as well (Zahra & George, 2002, Todorova & Durisin, 2007). Effective entrepreneurs generate knowledge from the environment, stakeholders, entrepreneurs, and their own experience. The wider the knowledge base is, the better the interpretation of reality and the evaluation of opportunities will be. The primary role of the entrepreneur is to generate new information and knowledge, systematize them, recombine them and, hence, contribute to the creation of new knowledge (Hardagon & Douglas, 2001). Knowledge creators identify the organizational members who possess relevant knowledge and strive to establish an open communication with them. They collect, analyze and disseminate information about technological and market innovations, establishing a strong network along the way. Entrepreneurial learning and knowledge are especially important during the formulation of a strategy when future activities require a significant irreversible investment of resources.

ORGANIZATIONAL LEARNING CONCEPT

Learning is a process of adopting new knowledge, acquiring skills and developing specific competencies, embedding, aligning with the previously acquired knowledge base and making it applicable in routine and non-routine situations (Anderson, 1982). There is a fundamental difference between the knowledge of what has been adopted as known and the learning process. In the knowledge economy, the learning capacity, rather than knowledge itself, is the critical factor. Organizational learning is inextricably linked to organizational knowledge, where knowledge is the static and learning the dynamic category. Taken together, learning and knowledge are the key strategic resources for creating a sustainable competitive advantage.

Organizational learning refers to the creation of new knowledge that affects the improvement of organizational performances (Hitt & Ireland, 2000). Organizational learning is defined as changes in organizational members' cognitive structures and behaviors that increase the capability of the organization to adapt to the environment (Reinhardt, Boremann, Pawlovsky & Schneider, 2003). It is a framework that incorporates intuition, the interpretation, integration and institutionalization of knowledge at the individual, group and organization levels (Dutta & Crossan, 2005). Organizational learning refers to the adoption of behaviors contributing to the organizational development and to improving competitiveness. When the organization changes the structure and the processes, simultaneously expanding the knowledge base, it acquires the ability not only to adapt, but also to initiate change. Learning occurs when the organization possesses the necessary absorptive capacity, regarded as the ability to identify and evaluate the knowledge taken from external sources, as well as to assimilate it into the existing business operations (Cohen & Levintal, 1990). As the absorptive capacity grows, the organization's ability to learn how to develop and exploit new knowledge becomes stronger (Zahra, Filatotchev & Wright, 2009). Some researchers argue that organizational learning strengthens the organization's ability to identify

opportunities and provide support for the development of new ventures (Lumpkin & Bergman Lichtenstein, 2005). Organizational learning can be perceived as an empirical process, with an emphasis on the distinction between experience and the knowledge resulting from such experience (Politis, 2005). An organization that nurtures organizational learning through systematic encouraging and guiding its employees is a „learning organization“.

The learning organization concept has gained considerable attention in the management literature, predominantly leaning about the impact that previous business experience has on the learning process and further organizational activities. The assumption that successful organizations, just like people, have the ability to acquire and effectively implement knowledge is essential to it. One of the biggest dilemmas related to organizational learning is whether the organization is capable of learning at all, as individuals are, or not. In other words, how likely is it that a certain quantum of knowledge is in the possession of the organization as a whole, rather than in its individual employees' possession? A debate on this issue is meaningful and purposeful because the knowledge that the core competence is based on is located at the organizational, rather than the individual, level. The learning capacity of the organization is reflected through the organization's memory, i.e. the constant repetition of business activities. This practice is institutionalized and codified through routine activities, embodied in the form of business rules, policies and procedures enabling the preservation and accumulation of knowledge over time. The system systematically evolves, based on everyday experience and learning how to solve problems. Employees constantly expand, build upon and develop a range of routine activities, accumulating new knowledge, strengthening the core competence and encouraging innovative activities (Hitt, Ireland, Camp & Sexton, 2002, 58). The learning organization has the ability to react promptly and change routines, building new competencies. However, the paradox lies in the fact that, at the same time, routine activities act as the most powerful source of organizational inertia and a kind of learning inhibitor, since it is very difficult and time-consuming to change them, due to the resistance of whole system.

Organizational learning can be adaptive, i.e. single loop learning, and generative, i.e. double loop learning (Wang, 2008; Janićijević, 2008, 381-390). Adaptive learning means acquiring knowledge and change within a predefined set of dominant assumptions, perceived as dogmatic and unquestionable. The organization only corrects activities deviating from the default framework. This type of learning requires the measuring of performances in relation to the predefined standards and leads to incremental changes and improvements. Generative learning involves the acquisition of the knowledge acquisition that initiates radical change due to the redefinition of the dominant assumptions and the mindset that the current business routines are based on. The majority of organizations are involved in adaptive learning, which is satisfactory under the conditions of a relatively stable environment. However, in times of turbulence and change, organizations are forced to integrate generative learning into the structure and processes, so that learning itself becomes part of routine activities. They adapt their organizational design, processes and culture, encouraging organizational learning and the effective implementation of knowledge, thus becoming learning organizations.

There are different conceptualizations of organizational learning (Miller, 1996). Learning has two basic forms, namely learning before doing and learning by doing (Figure 1). Learning before doing incorporates all forms of the systematic collection, dissemination, storing and interpreting of information in order to expand the organizational knowledge base. This type of learning is well known as acquisitive because it involves extracting information from external sources, structuring and interpretation within the process of the accumulation of new knowledge. External knowledge adopted by acquisitive learning contributes to the expanding of the knowledge base, thus raising the innovative potential of the organization through the reevaluation of dominant assumptions and the alteration of the dominant logic. Learning by doing is experimental learning, based on iterations, from personal experience, and represents the most significant learning model. Experimental learning leads to unique internal knowledge, building

up the core competence of the organization in the long run (Dess *et al.*, 2003).

Organizational learning involves the identification of the current knowledge relevant for the improvement of the key competencies, the creation of new knowledge and its dissemination through the organizational structure, and, most importantly, the assimilation through which knowledge is structured, adopted and permanently embedded in all internal processes. The purpose of learning is a permanent change in employees' behavior patterns due to the implementation of new knowledge. One of the most interesting classifications was provided by I. Nonaka (1991), who identified two forms of organizational knowledge, i.e. explicit (objective, open, tangible) and implicit (subjective, hidden, intangible). Explicit knowledge can be expressed in a formal and codified manner, in the form of information, procedures, documents etc. Such knowledge is easily transferrable and transformed, as it is independent from the context. In contrast, implicit knowledge is deeply personalized, dependent on individual cognitive capacities and complicated to define. This knowledge is incorporated into the human activity, intuition and values, represents what a person knows, although, however it cannot be easily expressed or transferred to others. The interaction between cognitive abilities and tacit knowledge results in mental models, which the individual perception of reality and consequent actions are based on.

The learning organization has several characteristics (Hellriegel, Jackson & Slocum, 2005, 343-348):

- shared leadership - the responsibility for the decision-making process and achieving goals is mutual, shared between leaders and employees. Shared leadership is a never-ending process of recognizing formal and informal leaders among employees. The essential prerequisite for the establishment of shared leadership is based on dividing the power: in other words, a leader is ready to temporarily transfer the leading position to other employees, depending on circumstances (Babić, Stojanović-Aleksić & Erić, 2012);
- the culture of innovation - innovation is a continuous process, not an *ad hoc* activity. The internal environment of an open dialogue and mutual respect exists, employees are willing to learn and independently solve problems, thanks to the empowerment of individuals with entrepreneurial predispositions who can be given an opportunity to come forward with their ideas;
- the strategic focus on customers - the learning organization creates a new value through the never-ending reevaluation of the current and potential customer preferences;
- the organic organizational design - the organizational structure is flexible and fluid, based on teamwork, open communication channels and strategic networking with stakeholders. Employees have autonomy in decision making, thus creating a favorable internal environment for an entrepreneurial initiative. Employees demonstrate higher innovation, as well as the risk of propensity and self-confidence. The organic design is the most favorable for employees' entrepreneurial initiative. The organic organizational design, with open communication channels, has a great impact on employees' innovativeness, risk propensity, autonomy and self-confidence;
- the intensive use of information - the organization learns in order to make progress, and progress must be systematically measured. The information is collected, analyzed, disseminated and used, with a special reference to *soft* information and implicit knowledge, based on the experienced employees capable of assessing the problem and finding a potential solution. Sharing ideas among employees through informal communication channels continuously speeds up the learning process at both the individual and organizational levels.

Every type of learning implies change, but not every change results from learning. C. Argyris (1977) argues that the organization can be both successful and unsuccessful in the learning process; in other words, they may change under certain circumstances, without learning anything. In this situation, the organization does not take advantage of experience and reverts to old routines. This can occur under the pressure from

the environment, when a modified business model is implemented, but without the consequent expanding of the knowledge base. It is therefore important for the organization to engage itself in generative learning, as it leads to substantial upgrading and transformation.

THE ROLE OF CORPORATE ENTREPRENEURSHIP AND ORGANIZATIONAL LEARNING IN KNOWLEDGE CREATION AND IMPLEMENTATION

Analyzing the organization's ability to learn and innovate, during the 1960's, some authors claimed that, in the future, flexible organizational structures would be much more suitable for encouraging innovation, as opposed to the bureaucratic ones (Burns & Stalker, 1961). H. I. Ansoff (1968) stressed the need for the development of the techniques of the environmental analysis, while R. Daft (1982) emphasized the necessity of a stable knowledge base that expanded through enhanced communication. R. Rothwell (1975) noted the role of employees with entrepreneurial predispositions in the process of upgrading organizational knowledge. Recent researches indicate that organizations seeking to develop their core competencies need to reach the essence of routine activities, which are based on implicit knowledge (Nonaka, 1991). This argument was further developed by P. Trott (1993), through a model of the accumulation of internal knowledge that identifies the individual non-routine activities contributing to the generation of business opportunities.

Entrepreneurial learning is the process of obtaining, systematizing and assimilating new knowledge with the existing cognitive structures of employees. There are several assumptions entrepreneurial learning is based on. First, the market opportunities objectively exist and they are available for discovery and exploitation. They result from market imperfections, change in the social, technological, political environments, and innovation, which have a potential to generate new knowledge. Second, employees have a variety of skills and cognitive dispositions and differ by the level of their entrepreneurial alertness and willingness to act. Entrepreneurs possess

implicit knowledge that others cannot understand, not to mention imitate, which is particularly evident when it comes to rare skills or experience (Baron & Shane, 2005, 243-245). Third, individuals have a different ability to learn. In the absence of complete information, the entrepreneur relies on heuristics. Information asymmetry and differences in the processing of information affect different individual perceptions of entrepreneurial opportunities. Effects on heuristics depend on the learning context, whether it originates from personal experience, experimentally or through the external acquisition of information (Holcomb, Ireland, Holmes & Hitt, 2009). This is how the cognitive structures that consequently influence the accumulation of knowledge are created.

Although both experimental and acquisitive knowledge contribute to the enhancement of the organizational performance, experimental learning is believed to have a superior positive effect since it is built upon organizational experience. Experimental learning contributes to the development of the knowledge base and human resources, it is unique and complicated to replicate. The knowledge accumulated in this way becomes an unprecedented resource, almost completely beyond competitors' reach. However, the experimental nature of entrepreneurial initiatives indicates unpredictable outcomes, therefore provoking the management to act reactively and demonstrate resistance to risk.

The types of the knowledge derived from experimental learning as opposed to the one derived from acquisitive learning differ from one another; so, consequently, an unequal effect on organizational performances can be expected. Understanding these differences can help in deciding on the most appropriate approaches to learning from the standpoint of performances. Corporate entrepreneurship leads to the creation of three types of new knowledge (Dess *et al.*, 2003):

- Technical knowledge is essential for the implementation of a sustainable regeneration and results primarily from acquisitive learning. It contributes to the further development of the existing products and the expanding of production lines, mainly through the innovation process. However, this type of knowledge is rarely the foundation for the generation of a long-term

sustainable competitive advantage. G. S. Lynn, R. B. Skow and K. D. Abel (1999) have stated that learning facilitates the development of new products in high-tech organizations (Zhao, Hoon Lee, Bo & Chen, 2011). Technology pervades all products and business processes, but acquiring a cutting edge technology does not automatically imply that the organization possesses the competencies necessary for the development of a new product or a new process.

- Integrative knowledge is unique for each organization and is mostly implicit by its nature. It reflects on the internal ability of the organization to creatively combine its available scarce resources. There is a never-ending recombination of the knowledge inherent in the organizational memory, experience and routines aligned with the classical definition of entrepreneurship, according to J. A. Schumpeter (1934). So, integrative learning results from the joint, but indirect effects of acquisitive and experimental learning.
- Exploitative learning is accumulated through experience and the constant development of

creative approaches to the creation of a new value. Exploitative knowledge is focused on discovering new ways of the product/service commercialization that evolved from the effective implementation of technical and integrative knowledge.

In the implementation of knowledge, the focus differs, depending on the type of the knowledge gained in the process of organizational learning and the strategic approach to corporate entrepreneurship (Figure 1). The implementation of knowledge is executed through the extension of the product line, the development of a new platform or the creation of a new venture. When technical knowledge is mainly used, the focus of such an implementation is on the extension of production lines, whereas the recombination and expanding of the knowledge base result from the integrative approach to knowledge. Finally, the outcome of exploitative knowledge refers to the creation of a new value through the foundation of a new business venture.

Figure 2 shows the alternatives of corporate entrepreneurship depending on the types of presently available and new knowledge. The zero point indicates

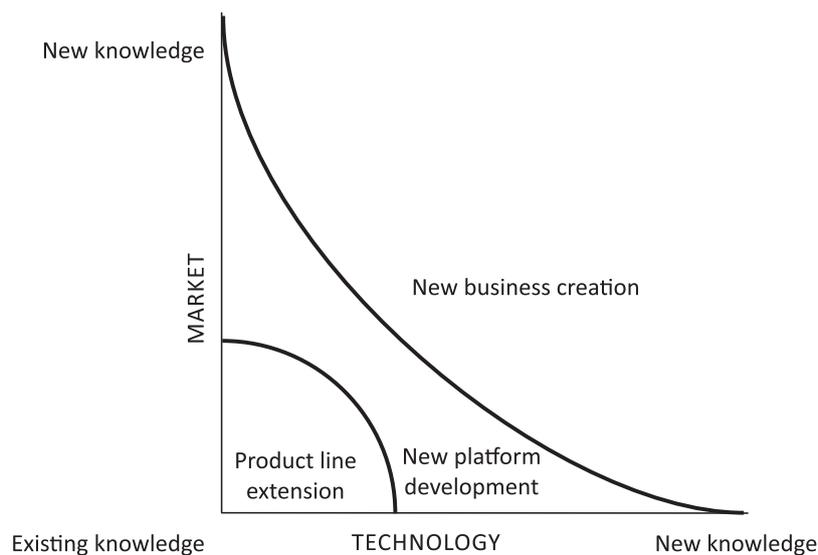


Figure 2 Corporate entrepreneurship and knowledge implementation

the level of the existing knowledge; the abscissa shows the level of the new technology based on knowledge, research and development activities, the design and production; and the ordinate shows the extent of the necessary new knowledge in the areas of management and the market.

The most common form of knowledge implementation is the extension of production lines, based on an advanced exploitation of the existing knowledge. Growing organizations tend to follow the easiest way, meaning that they use the existing products as the base for growth into the related product or market domains, through the „repetition of replication“ (Norman, 1977, 52). The organizational structure adjusts itself in the way that it allows the sharing of resources in production, marketing, research and development etc. According to some authors, the role of the management is more crucial than the resource availability (Penrose, 1959; Ansof, 1965). The development of new knowledge empowers the organization to innovatively and effectively implement it. The management has several options of designing the organization in order to enable the excessive implementation of the existing knowledge and experience in innovative ways (Kazanjian, Drazin & Glynn, 2002). The first one refers to the differentiation of tasks internally, within the existing organizational units, with managers simultaneously supervising ongoing business activities and using new knowledge to modify the existing products and processes, while applying the available technology. The second alternative is intended to increase the organizational capacity to generate knowledge through the development of a new product within the research and development function. The third option involves the creation of intra-functional project-based *ad hoc* teams.

The new platform is gradually developed, through the recombination and expansion of the existing knowledge. The platform is a set of common factors in relation to the technology or the market that enables innovation in a completely new business domain. The interaction between employees and their perception of the current state, the quest for an in-depth understanding of the changing context and experimenting with promising but unproven approaches generate new knowledge on which the

platform is based. In order for a platform to develop, the deployment of all organizational resources is required, thus creating the basis for a number of product line extensions (e.g. breakthrough development in biotechnology has led to the discovery of a number of medications in the pharmaceutical industry). In most cases, the platform is developed in separate, often even physically dislocated organizational units, in charge of new-generation products or technology, and afterwards is subsequently integrated into organizational processes. An alternative approach is mainly applied within a multifunctional matrix structure, when multifunctional teams are created, bringing together experts in specific fields related to technology, marketing, finance, product development, design etc. H. Takeushi and I. Nonaka (1986) argued in favor of this approach, whereas K. B. Clark and T. Fujimoto (1991) took one step further, arguing that these teams are the critical factor of success, reducing the cycle of product development, cutting down development costs and pioneering the advanced design.

The third option refers to the organizations that create new ventures, diversifying the position through the development of the market or undertaking technological innovation (Zahra, 1993b). Creating a new venture unrelated to the existing core competence of the organization requires the adoption of new knowledge from external sources. Starting a new venture refers to taking advantage of the identified business opportunity, which is new, implemented internally and takes the organization to unrelated business domains (Block and MacMillan, 1993; Zahra, 1991). Numerous ventures created in this way have been structured as independent business units, with managers being subordinated directly to the top management. The establishment of a relatively independent organizational unit implies the recreation of all business functions and the application of the new knowledge which is relevant for the exploitation of the identified opportunity. Some companies have created several ventures, located within the new „corporate incubators“ business unit (Hansen, Chesbrough, Nohria & Sull, 2000). The ultimate goal is that, in time, some ventures should be integrated into the organizational business portfolio.

The organizational approach to corporate entrepreneurship depends not only on the type, but also on the quality of the existing and needed knowledge. The exploitation, dissemination and creation of new knowledge are the prerequisites for the initiating of different entrepreneurial activities. Designing the organizational structure favorable for entrepreneurial endeavors positively affects the competences of the management and raises the effectiveness of the implementation of the corporate entrepreneurship strategy.

CONCLUSIONS

Knowledge is a common currency in the knowledge economy, but relatively few managers have skills necessary to take advantage of learning in order to enhance organizational performances. The management is facing the challenge of the systematic encouraging of the individual initiative and the upgrading of the competence base. It is a process that stimulates the creation of learning and knowledge, which is deemed necessary for the superior exploitation of available resources and the identification of new ways of the creation of a value. An additional difficulty the management is faced with is how to weight, on a daily basis, corporate entrepreneurship against the personal responsibility for managing ongoing operations, resulting in managers' divided attention. Consistency in the approach has positive repercussions on the current business activities in the context of the development of organizational competencies, the identification of opportunities and the improvement of organizational performances. Established routines often discourage the entrepreneurial initiative, thus undermining the competitive position in the long run. The organization has a natural tendency toward inertia, even when innovating is the paramount. To overcome the embedded pattern and raise innovativeness are the preconditions for strengthening the competitiveness and survival as well.

Based on the previous discussion, it is possible to draw a conclusion that the main research hypothesis is confirmed, i.e. that the implementation of knowledge

leads to various forms of corporate entrepreneurship: the application of technical knowledge leads to the extension of product lines; the application of integrative knowledge leads to the development of a new platform, whereas the application of exploitative knowledge leads to the creation of a new business venture. These types of knowledge result from acquisitive or experimental organizational learning, or from both, as well as from the strategic approach to corporate entrepreneurship.

The scientific contribution of the research is to shed more light on the corporate entrepreneurship phenomenon from the theoretical standpoint, to further expand the knowledge base and improve the understanding of interdependence with the concepts of organizational learning and knowledge. The expected research implications for the business practitioners refer to highlighting the significance of organizational learning and knowledge as factors that the management should particularly focus on, when building an entrepreneurial organization, as well as the fact that the type of the entrepreneurial activity directly depends on the managerial approach to knowledge management.

When manufacturing companies are concerned, it is particularly important that we should focus not only on the technical side and the acquisition of new technologies, but also on the gathering of external information relevant for different aspects of business. When companies striving to create a new business platform are in question, the management is given a recommendation that, aside from externally generated information, they should be paying greater attention to the development of the organizational creative potential by establishing the entrepreneurial organizational culture, open communication and the transformational leadership style. These conditions are favorable for the development of the new knowledge based on daily operations, as well as for encouraging employees to start new business ventures. Practical implications can be used as the guidelines for managers on how alternative approaches to knowledge management contribute to the creation of a favorable internal environment for particular types of entrepreneurial initiatives.

In the contemporary literature, there is a general agreement that corporate entrepreneurship contributes to gaining a sustainable competitive advantage in the long run, although substantial challenges still remain, especially those referring to a lack of adequate information and the development of appropriate measurement instruments that can evaluate how much it contributes to the improvement of organizational performances. Researchers cope with a series of theoretical and methodological limitations in their evaluations, reliable information is difficult to obtain, and the issue of to what extent the same are comparable is constantly present. Previous studies have not been sufficiently conceptually developed, nor have they been adequately theoretically founded; they are rather predominantly descriptive, with an insufficient empirical background. In addition to this, there is no breakthrough progress in devising fresh theoretical approaches. The noted limitations may, to some extent, weaken the conclusions and the verification of the research results, but willingness to acknowledge their existence and the necessity of overcoming the obstacles contributes to the overall scientific efforts in understanding the corporate entrepreneurship phenomenon.

The influence of organizational learning and knowledge is difficult to measure and evaluate, and if corporate entrepreneurship is incorporated in the analysis, the challenge is even greater. The implementation of corporate entrepreneurship is heavily affected by the awareness and support of the management, employees' willingness to learn, organizational policies and procedures, external pressures and other factors, with respect to which it is difficult to study the independent relationship of organizational learning, knowledge and corporate entrepreneurship, representing the main limitation of the study. Despite the objective difficulties, the results indicate that it is necessary to pursue new research avenues in the future. One of the potential directions for further research should focus on entrepreneurship as a learning process, which means that the theory of entrepreneurship needs a theory of entrepreneurial learning. As L. Dickens and K. Watkins (1999) have noted, our limited knowledge and understanding of the interaction of learning with entrepreneurial

process remains one of the most neglected areas of research and within entrepreneurship. Building entrepreneurially-oriented organizations in the twenty-first century requires flexibility and a synergy between the creative potential of entrepreneurs and the learning capacities of the organization.

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