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THE IMPORTANCE OF MANAGING INNOVATION IN MODERN ENTERPRISES³

Abstract

In the conditions of a dynamic business environment and a constant struggle for survival in the market, innovation becomes the basic factor of the growth and development of an enterprise. Namely, it always leads to new solutions, new ideas, and new ways of doing business. The basic competitive advantage of each modern enterprise is reflected in its ability to innovate its own business. Generally, an innovation of an enterprise results in an advantage over the competition, while the resulting competitive advantage results in an increase in profit, which is the main goal of every modern enterprise. A key precondition for the survival of each enterprise is the continuous improvement of competitiveness, that is, the investment in innovation of products and services. The aim of the paper is to point out the importance of innovations in the business of modern organizations. Innovation-based operations play a key role in fostering prosperity, creating and sustaining competitive advantage. A key aspect of an effective and efficient organization is the active participation of each organizational unit in the innovation process. Innovations are not just the responsibility of research and development, marketing and production units, but involve simultaneous engagement of all functional areas within the enterprise.

Keywords: *innovation, competitiveness, innovative projects, innovation management*

JEL classification: *L25, O31*

ЗНАЧАЈ УПРАВЉАЊА ИНОВАЦИЈАМА У САВРЕМЕНИМ ПРЕДУЗЕЋИМА

У условима динамичног пословног окружења и непрекидне борбе за опстанак на тржишту, иновација постаје основни фактор раста и развоја предузећа. Наиме, она увек води новим решењима, новим идејама и новим начинима пословања. Основна конкурентска предност савременог предузећа, огледа се у његовој способности да иновира сопствено пословање. Уопштено, иновација

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предузећа резултира предношћу над конкуренцијом, а тако стечена конкурентска предност доводи до повећања профита, што је главни циљ сваког модерног предузећа. Кључни предуслов сваког предузећа је стално побољшање конкурентске предности, односно стално инвестирање у иновације производа и услуга. Циљ рада је да укаже на значај иновација у пословању савремених организација. Пословни модел утемељен на иновацијама има кључну улогу у подстицању просперитета, креирању и одржавању конкурентске предности. Кључни аспект сваке ефективне и ефикасне организације јесте учествовање сваког организационог дела у процесу иновација. Иновације нису само одговорност истраживања и развоја, већ подразумевају симултано залагање свих функционалних области унутар предузећа.

***Кључне речи:** иновација, конкурентност, иновативни пројекти, иновациони менаџмент.*

Introduction

In the contemporary business environment, alongside with the pertinent process of globalization, technological obsolescence, increased sophistication of consumers, and discontinuity, the emphasis is also placed on the turbulence in the external environment of an enterprise, where that turbulence, in some future conditions, can also be internally generated by the enterprise itself, primarily through innovations. According to the intellectual capital theory, which has been especially developed over the last two decades, the management of intellectual capital involves three phases: knowledge management, innovation management and intellectual property management (Krstić, 2014; Krstić & Rađenović, 2018). Innovation, as one of the phases of intellectual capital management, also represents a basic element of the new infrastructure necessary for prosperity in the “new economy” – the knowledge economy.

An innovative approach to the successful business of a modern organization is imposed as an imperative in global market conditions, as well as, a crucial element of entrepreneurship. Innovativeness is one of the most important factor for survival, growth, and development of enterprises and economies. Competitiveness of the economy on the global scale increasingly depends on the ability of the economies of certain countries to be the leaders in the creation and implementation of specific innovations. Innovation-based operations play a key role in creating and sustaining competitive advantage. Namely, the advantage of an organization over the existing competitors depends on the speed and agility of managing the innovation process. The key concepts for strengthening competitive advantage are based on an increase in productivity, which leads to the cost leadership, and/or differentiated supply, precisely through investments in innovations, knowledge and new technologies.

A good business idea, continuous coordination and integration, application of modern technical and technological knowledge, skills and experience represent the basis on which innovation is implemented and on which it achieves desired market effects. An appropriate innovation strategy, which is in compliance with the enterprise’s corporate goals, gives the enterprise an opportunity to decide which type of innovation it wants to develop. Current practice shows that fast innovators, who through innovations conquer

new markets, while retaining the existing ones, have an advantage. Based on a detailed evaluation of the extent and nature of change that innovation brings, enterprises can opt to develop and implement radical and/or incremental innovation. Incremental innovations are seen as small improvements that can be illustrated as solving problems where the goal itself is clear or recognizable. In contrast, the results of radical innovations are brand new products/processes, where the direction of research is known, but the outcome is unknown (Henderson & Clark, 1990).

The new state of society, often referred to as the knowledge society, rests on the possibilities and abilities to create new knowledge and transform it into economic value and wealth through innovation of products, services, and processes. In such a society, innovations become the most important source of market success and sustainable competitive advantage.

The Importance of Innovation for the Market Success

In the era of fast technological advancement, where scientific and technological achievements pervade all aspects of human life, science, technological development and innovation play an important role in fostering economic development. Innovation activities are considered to be the main factor for a stable knowledge-based economy, which has become the basis for competitiveness and dynamic development. It is necessary for an economy to recognize that innovations are the only way for survival in the dynamic business environment, and that systematic innovation, which will find its place in the market, can be achieved only in cooperation with scientific organizations.

Innovations are the main driving force behind the development of enterprises, national economies, and society as a whole. They have a key role in the development of the knowledge-based economy. Innovativity implies the effective implementation of new ideas for the improvement of business, which is aligned with the needs of customers and changes in the market. In the present-day business, it is noticeable the emergence of a large number of innovations, and hence the competition becomes the decisive factor. The advantage of any organization lies its ability to innovate. Only those organizations that manage to bring their technology to the top, and stay there, will have the opportunity to develop further. The main features of modern organizations are application, flexibility, and quality of innovation.

If an enterprise wants to exist and develop, it must accept the characteristics of current economic development. It is necessary to constantly think, plan, organize, perform, control and improve the business process in order to satisfy the market needs as fully as possible, and continually develop new products or services. Modern enterprises are faced with serious challenges: the expansion of the global economy, the struggle for market share, a dramatic shortening of a product life cycle, a reduction in size, etc. In order to meet these challenges, enterprises must constantly increase productivity, improve product and service quality, develop new products and meet customer requirements and desires. Enterprises must be constantly innovative, because the imperative of modern business is the improvement of these components of the enterprise's structure and business.

The Role of Individuals in Innovation Management

An organization is as successful as the respectable and prosperous individuals in it are. According to Peter Ducker (2005), nowadays modern and professional workers are not simple workforce, they are capital that is productive and creates added value for their organization. As a creative and innovative part of every organization, people have a leading role in creating and maintaining its competitive advantage. They want the opportunity to demonstrate to their management that they have the skills to take responsibility for assigned tasks and to implement them by using their creativity and ability to work in a team.

The literature on innovation consistently emphasizes the importance of the role that individuals have in the process of industrial-technological innovation (Boh et al., 2014). Some studies have addressed the issue of generating and incorporating certain elements of support for knowledge and innovation in the organizational structure. Some authors believe that the presence of various expertise, continuous development of new knowledge, as well as organizational support through available resources, constitute crucial elements for creating structures in favour of knowledge and innovation (Anand et al. 2007). Froehle et al. (2000) emphasize the importance of involving people from different functions or different professions in the innovation process, and Avlonitis et al. (2001) view multifunctional participation as an important factor in innovative processes. The reason for the inclusion of people from different functions or different professions is that they bring different knowledge and skills, thus encouraging creativity, learning, and development of knowledge that is required for innovation. This is supported by research conducted by Fay et al. (2006) who found that multidisciplinary positively influences the quality of team innovation, by creating good team processes.

It is very important to involve employees in the process of new services development. The experience acquired during interaction with users can be a valuable support in the creation of innovations, especially as it relates to the information about the services that the users find valuable. De Brentani (2001) has identified employees' involvement as one of the factors that influence the success of the outcome in the inventive process. Such a strategy should contribute to creating a synergy between the innovation and user needs. However, Ramirez (2004) claims that the involvement of employees in innovative processes in many cases leads to a breakdown in the structure of institutional authority. Because of that, the involvement of employees in innovative processes can be a challenge for the organization and specificity for management, which must be ready to give up some of its formal powers. Additionally, one of the contributions to the quality of service innovation is the participation of employees from the first line of sales through their management of processes with customers, as well as, through building friendly relationships and trust.

The Management of Innovative Projects

Innovation projects increasingly represent strategic support and inevitability in the growth and development of an enterprise. Implementation of an idea is realized through an innovation process within one or more innovative projects (related to products and/

or processes). Innovation is both an innovative project and the output of the innovation process (project), thereby innovation consists of two basic elements, the generation (invention) and commercialization (exploitation) of the idea (Trott, 2005).

Nowadays there is a pronounced tendency for all innovations to be realized through projects, regardless of the area they are related to, or the size and structure of the organization. Successful management of innovation projects includes a pre-defined action plan, deadlines for implementation of tasks, so-called milestones, resource planning and etc. Organizations often encounter unexpected difficulties and problems, therefore risking the fulfilment of their goals. In order to avoid these risks, management process should be broken down into three phases: pre-project management, project development, and post-project management.

The pre-project management phase involves the selection and evaluation of the project idea and the very beginning of the project implementation. However, sometimes there is no adequate necessary information and knowledge which can lead to a poor assessment of the idea, capabilities, and capacities of an organization to realize that idea, and etc. The most effective way to avoid this risk is to develop a strategic approach to the process.

Development project management phase involves the integration of different capacities and resources. The greatest challenge in this process, especially for organizations that are still in development, is to find a competent team that can establish an appropriate approach to the management process and responds in a professional and efficient manner to the challenges of project implementation.

Post-project management phase does not relate to the development of the project itself, but to long-term sustainability and further improvement after the completion of the project. It is crucial to learn from the experience and to have good knowledge of the organization itself (Mandić et al., 2014, p. 21). Measuring the present value of innovative projects is very difficult due to uncertainty and it requires more systematic and professional efforts, and all of these indicate that a significant percentage of organizations cannot fully implement innovative projects (Keegan & Turner, 2002).

The Key Factors for the Success of Innovation

Innovation becomes the fundamental factor for the viability of the enterprise and its further development in a globalized economic environment. In times of global economic crisis, investing in innovation is the best way to overcome it. The environment is volatile and future events are every day more and more uncertain and unpredictable. Therefore, the current environment is characterized by complexity, turbulence, globalization and overall complex of new features. The discontinuity of environment prompts organizations to start with large and rapid changes, changes in their view of themselves and their environment, the way of their operations in the environment, and their everyday business.

Innovation is successful if it is possible through commercialization to refund the funds invested in its development and make a certain profit. The correct combination of strategy, structure, system, staff, and environment is required for successful innovation (Afuah, 2003). Productivity, which fosters economic progress, comes down to the economic growth, and the characteristics of a society are the key factor which drives

economic growth through innovation (Castells, 2000) Innovativeness implies building effective mechanisms for the transfer of innovations in the economy and society. Also, the time span between the introduction of innovation and achievement of its full productivity is very important. However, inventions relatively slowly become practice. In order for different inventions to be introduced and spread through the entire economy, factors involved in the production process must be subjected to changes.

A significant number of factors determine the success of innovation. Innovative products and processes are key for the survival of the enterprise and its development. Organizational structure needs to be innovative, but also to enable realization and cultivation of innovation culture, as the dominant component of organizational culture. Organization and innovation culture directly determine the success of innovation, which in turn strongly influences the success of the enterprise. An organization becomes sensitive to the demands and changes in the environment, and hence it is forced to constantly innovate both products and processes. If an organization wants to be innovative, it must learn continuously. The innovatively structured organizations enable innovative activities. They are able to mobilize and support creativity and entrepreneurship, and let their managers take an active role in this process (Quinn, 1985). In highly innovative organizations staff is organized as to support innovation. In addition to the changes in the organizational behaviour and culture, innovative organization stimulates technological innovation as a prerequisite for higher technological efficiency and improved business results. All of this implies that there is a direct link between the organizational level, i.e. the degree of organization's innovative development, and the efficiency of new technology in application. Innovative organizations have multiple positive impacts that can be classified into four groups (Saren, 1990): economic factors, social and behavioural factors, information and communication factors, and organizational and management factors. Economic factors encompass the size of the company, the degree of centralization, etc. Social and behavioural factors include the organization's value system, education of employees, organizational behaviour, etc. Information and communication factors relate to the information system, as well as, to connections or communications with scientific institutions, and in general to the knowledge in the environment. Organizational and management factors incorporate a delegation of responsibilities, motivation system, mentoring, career building (Robbins, 1987).

There is no doubt that organizational culture affects the functionality and success of the enterprise. It affects strategic decisions, including the decision to innovate. Organizational culture determines the capabilities of the enterprise to adapt to the requirements of the environment. By building innovative culture, management contributes to the continuous increase in innovation and their realization. Innovative culture in the enterprise is the one that simultaneously supports the innovative and creative thinking (Krstić, 2009).

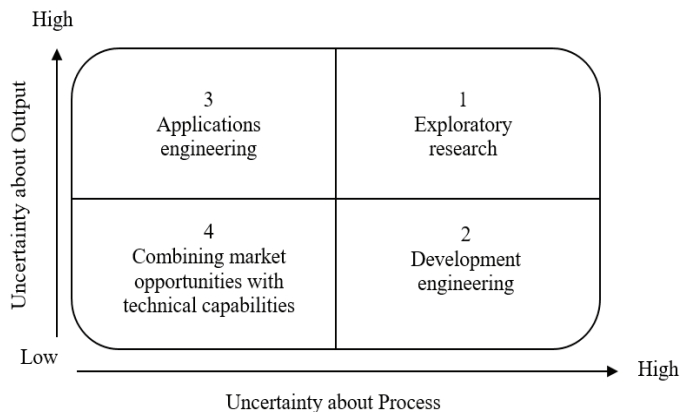
The Pearson's Map as an Important Part of Innovation

The management of the innovation process implies the attempt to develop the creative potential of a certain organization. Also, it includes finding new ideas and fostering creativity. The main characteristic of managing the innovation process is

managing uncertainty. On the one hand, uncertainty comes from the future events which do not follow the course of past events, and, on the other hand, the knowledge about the future is always incomplete. Uncertainty represents “the gap between the amount of information required to execute the task and the amount of information already possessed by the organization” (Galbraith, 1977).

Pearson’s uncertainty map is a tool for analysing and understanding uncertainty and the innovation process (Pearson, 1991). Pearson matrix presents the nature of the uncertainty and the way it changes over time. Actually, the uncertainty framework was a result of a comprehensive analysis of main technological innovations, such as Sony Walkman, 3Ms Post-It-Notes and Pilkington float glass process. The map is based on the two separate dimensions (Figure 1), where the horizontal axis represents the uncertainty about the process (how to accomplish the aim), and the vertical axis represents the uncertainty about the output (what is the eventual goal of the project or activity). Additionally, these axes are split resulting in four fields.

Figure 1. Pearson’s uncertainty map



Source: Pearson (1991, p. 22)

Quadrant 1 – involves activities with a high degree of uncertainty about the methods and results. The specifics of this quadrant lies in the fact that the final aim is not clearly defined and there is a problem with the accomplishment of this aim. It is marked as ‘blue sky’ research, because the work seems far from reality, and potential products and markets are still unknown or ‘in the clouds’. This is mostly the field of scientific organizations, which are not exposed to financial and time pressures that are present in the industry. **Quadrant 2** – implies the situation in which the ultimate target is very clearly defined, and hence the business chance may have been noticed, but the way to reach the target is still undetermined. This type of activity is common for development engineering and for enterprises which constantly revise their production process by seeking ways to reduce costs and achieve efficiency. **Quadrant 3** – relates to efforts in detecting ways how technology can be used more efficiently. There exists a huge uncertainty about the outcome. This section of activity is called applications engineering. **Quadrant**

4 – implies a high level of certainty. This field is based on innovative activities which combine market possibilities with technical abilities. Therefore, the speed of product development is key to the success.

This Pearson’s map identifies and describes a wide range of organizational characteristics regarding the management of uncertainty in the context of innovation. Hence, it conveys in the very simple way an important message about the very complicated matter of managing uncertainty. Managing the innovation of products and processes is very different. Sometimes, the nature and the type of required products and market are distinctly defined. Contrarily, very little is known about the technology that is being developed and how it can be used.

Conclusion

Contemporary market conditions are severe and do not forgive mistakes. Besides, technical and technological advances have caused a significant transformation of organizational behaviour and operations, emphasizing the importance of intellectual capital, as a precondition for successful business in a modern business environment. Thus, innovation activities have become the basis for competitiveness and dynamic development, and are considered to be the main factors for a stable knowledge-based economy.

In the conditions of globalised environment, the acquired positions of the enterprise are not permanent. Namely, the readily available and inexpensive information about competitive offers allows consumers to easily obtain required data and decide on the offer that best meets their demands. Therefore, organizations must constantly and continuously invest in innovations, in order to respond more appropriately to changes and challenges posed by the business environment. Modern business requires an innovative way of thinking, acting, operating and functioning. Hence, modern organization must be innovative. Innovation is the basis of business development. Competitive advantage is highly influenced by the degree of innovation. Therefore, innovation is the main determinant for achieving competitive advantage. One of the prerequisites for achieving competitive advantage and survival in a dynamic market is to understand the importance of innovation and product reengineering. In addition to that, an innovative strategy and the organization’s performance in this field are also important. Creating a new market or new product category is the most effective way to compete in mature markets.

An innovative organization is emerging in response to changes that are more frequent and more complex in contemporary business environment. The success of managing changes is crucial for the survival and growth of the enterprise. The strategy of constant innovation and the dynamism of change is the response to the demands posed by the market. The survival of an enterprise in a modern world is increasingly dependent on the ability of management to understand and manage changes.

A learning organisation is able to remain consistent in innovation with the goal to improve quality, customer relations and achieve profitable results. In order for an enterprise to be innovative certain conditions have to be met. Namely, this enterprise has visionary leadership which is open to changes. Also, it is using the potential of employees, thus creating an adequate climate in which it is focused on consumers. Additionally, this enterprise invests in people through training and good communication.

Hence, in order to create competence that will foster innovations, the enterprise needs to invest in upgrading the knowledge of its staff, so they can stay ahead of the competition.

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