The concept of dichotomy of the innovation process in an enterprise

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Abstract: The article presents selected, more important definitions of innovation in an enterprise, paying attention to those of them which emphasize its immaterial character. It describes models of the innovation process, concepts of the innovativeness system and models of the innovative activity of a firm. It was found out that the elements of these objects are a coherent entirety. The principle of the presented research approach is the paradigm assigned to Schumpeter of merging various activities within the innovation process. It turned out, however, that an attempt to implement such a broad programme, namely the invention and the application of innovation, often ends in failure. The reason is that we cannot recognize the tools of analysis and define the determinants of the innovation process in the comprehensive Schumpeterian approach, however, we can resolve these issues by studying each of the processes separately. The aim of the article is to present the concept of the dichotomy of the innovation process in an enterprise and indicate the way of using it in practice. Two autonomous processes, crucial for the development of innovativeness, are distinguished in this concept, namely the process of innovation invention and the process of innovation implementation.

In the strategy of an organization it is necessary to define the object and the scope of analysis, at the same time considering the level of innovation ability of an enterprise; in a creative industry they may specialize in creating ideas, designing novelties and offering innovative projects to an appropriately selected target group. Traditional firms should develop and implement these projects in practice to the benefit of customers. It should be emphasized that the choice of the subject of innovative activity determines the innovation ability of the organization, the ability to manage innovative projects and the use of modern (agile) management methods, as well as management pragmatics.

The article is of theoretical and analytical character. To achieve the aim and verify the theses, following research methods were used: literature analysis, impact factor analysis, professional conversations with experts.

Key words: innovation, models of the innovation process, innovative project management, concept of the dichotomy of the innovation process

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1. Introduction

High pace of introduction of new technologies, digitalization of business activity, use of the Internet and social net-

working sites in the relationship with customers and other stakeholders, shortening of product lifecycle, deregulation of labour markets and, what is the most important, increasing market competition may be imminent to enterprises and even whole industries.

The survival and development of enterprises in unstable environment requires unique competences of management staff and personnel, first of all in strategic effectiveness, operating effectiveness, project management and innovativeness skills. Innovativeness understood as the ability to create and implement innovations is a contemporary method of manufacturing new products in a better or changed way, method of improving processes and relationships, method of achieving the strategic goals of an organization (Figure 1).

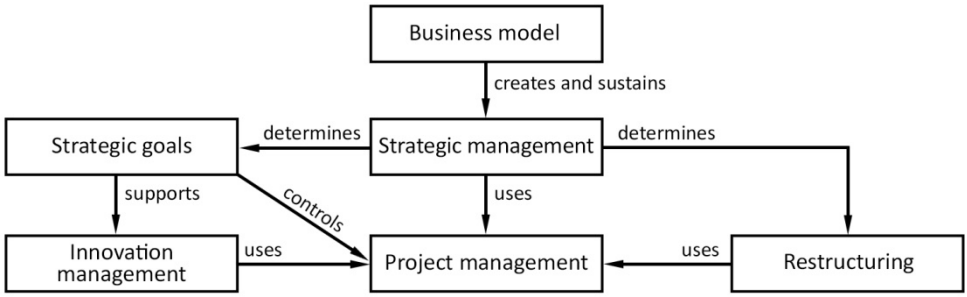

Figure 1. The structure of project and innovation management in an organization

S o u r c e: Author's own elaboration.

An innovative business model defines the catalogue of projects and goals constituting the overall strategy of an enterprise. The strategy implementation justifies undertaking restructuring and innovative activities, uses the project management method, as well as supervision and control instruments. The creation of innovation model can be used in the organization's business activities for the development of knowledge and innovation as well as raising its competitiveness.

The aim of the article is to present the concept of the dichotomy of the innovation process in an enterprise and show the ways of using it in practice. The study has been created as an attempt to show the author's concept of creating and implementing innovations.

The following theses were adopted in the presented concept: innovation process, regardless of the type of innovation, can be approached twofold, namely as the process of invention of innovation and the process of implementation of innovation. The determinants of both processes and research instruments are totally different, nevertheless, in numerous innovation models it constituted a coherent whole: from invention to innovation and to imitation of innovation, which remarkably complicates practical implementation of this pattern.

In its strategy an enterprise can define the scope of innovative activity according to the possessed innovation ability, as well as project abilities to dynamize and steer innovation activity.

As a thesis it was also assumed that the method of evaluating innovation ability of an enterprise is an effective instrument of identification of competences and the level of knowledge of the management staff and employees with regard to innovativeness. The analysis of the level of knowledge, therefore the awareness and motivation of employees within the mentioned scope, influences the effectiveness of innovation process.

The article is of theoretical and analytical character. To achieve the aim and verify the theses, the following research methods were used: literature analysis, impact factor analysis, professional conversations with experts, conversations with managers regarding pragmatics of innovation management in an enterprise.

Around the term of innovation in an organization

Innovation, in its essence, is variously understood and defined. In already numerous and broad literature there are a lot of different definitions and interpretations of the term 'innovation'. In majority of them the balance point of analyzing this issue is basically put on the identification of various types of innovations, determinants of this phenomenon, both material and immaterial ones, its designates and dimensions, positive and negative effects calculated in a long and short term. The term is associated with modernization, improvement, novelty or an original solution, an idea, a new conception, an invention, a design.

Numerous authors draw attention to the problem with defining the phenomenon of innovativeness. They emphasize that the precise definition of terms related to innovation, such as type of innovation, innovation process, innovation system, innovative activity, innovation management, influences the substantive and methodological aspects of investigating this phenomenon, including the subject and the scope of the study, the way of conducting the analysis, interpretation of the results, and finally the innovativeness and effectiveness of enterprises.

In the literature we can find various approaches to investigating the innovation process in an enterprise. Referring to a well-known concept of the innovation process attributed to Joseph Schumpeter, expressing three elements of this process as 'Invention—Innovation—Imitation', some authors who deal with this issue indicate the key meaning of a selected element of the system, others emphasize the unity of the process thus divided. Some researchers treat invention as the whole innovation process, whereas others refer innovation to the practical application of a new idea, its market diffusion, they expose the process of the imitation of innovation (Howells, 2005, p. 1).

Practitioners having a lot of knowledge about innovation management in an enterprise highlight the meaning of the context of innovation commercialization. Many of them understand and treat innovation as a process of offering new products, processes and experiences to customers on the one hand, and measurable benefits to the firm on the other hand.[1]

[1] For example, Jeffrey Baumgartner believes that innovation is the 'implementation of creative ideas in order to generate value, usually through increased revenues, reduced costs or both'. On the other hand, Mike Shipulski claims that it is a 'work that delivers new goodness to new customers in new markets, and does it in a way that radically improves the profitability equation'. Kevin McFarthing defines innovation as the 'introduction of new products and services that add value to the organization'. Gijs van Wulfen defines innovation as a 'feasible relevant offering such as product, service, process

The most numerous group is made of authors who understand innovation as activities related to the creation of an idea and its commercialization, in other words—they include in their research both the process of invention, innovation and the process of implementation of invention, they indicate its material and immaterial character. In this stream there are definitions of innovation developed by well-known authors, such as: Joseph Schumpeter, Peter F. Drucker, Michael E. Porter, Philip Kotler, Ricky W. Griffin or *Oslo Manual*.[2]

A considerably smaller number of researchers emphasize that innovation in its essence is immaterial, it constitutes its new element, object, project based on knowledge and creativity. Such a point of view is represented by, among others: Simon Kuznets, Percy Whitfield, Robert E. Lucas, Everett M. Rogers.[3]

In the content of the definitions given we can distinguish at least three approaches to the description of the essence of innovation. The article adopts two approaches: the narrow and the broad one.

In the narrow approach innovation is a cognitive process of creating and developing ideas, concepts, projects—basing on knowledge and creativity—which are called novelty, a new element by the creator or recipient, the target group. Innovation (creativity) in this approach can be identified through the evaluation of the expected results, or the evaluation of the quality of innovative projects. Creativity is understood here as the quality of an object (concept, project) and not the trait of the man, the creator. In this sense, innovation refers to every object which takes the immaterial form, e.g. an idea, a new method, an innovative design (Bartol and Martin, 1991).

In the broad, so-called Schumpeter's approach, innovation is any, in principle beneficial, creative and original change in various areas of an organization's activity, bringing novelty and progress in comparison with the existing state assessed positively in the light of the effectiveness criteria of a given organization (Kozioł, Wojtowicz and Karaś, 2017).

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or experience with a viable business model that is perceived as new and is adopted by customers' (all definitions see: Skillicorn, 2016).

[2] According to J. Schumpeter, innovation is the establishment of new products, new methods or semi-finished goods (Schumpeter, 1939, p. 84). P. F. Drucker regards innovation a special tool in entrepreneurs' hands, which is interpreted as an ability to launch new business activity or to offer a different package of services to customers (Drucker, 1992, pp. 40–45). In M. E. Porter's view, innovation is a technological improvement related to more effective and efficient fulfilment of goals (with the use of marketing and management knowledge) (Porter, 1990, p. 45). On the other hand, R. W. Griffin claims that it is every organizational effort whose aim is to launch new goods to the market (Griffin, 2004, p. 424). In *Oslo Manual* it is assumed that innovation means the invention and then the implementation of a new method, process, product, instrument, or other business activity of a market character, organization of work or a relation with external environment (*Oslo Manual*, 2008). In P. Kotler's opinion, an innovative project—whether it will be new products, services, processes or business models—upon implementation will give specific, both positive and negative results (Kotler, 2013, p. XVI).

[3] S. Kuznets believes that innovation is the application of new knowledge towards an invention (Kuznets, 1959, p. 30). According to P. Whitfield, innovation is knowledge and creativity building a new element (Whitfield, 1979, pp. 14–15). R. Lucas ascertains that innovation is the accumulation of human capital translated into economic growth (Lucas, 1988, pp. 5–7). In E. M. Rogers's view, innovation includes all areas which through subjective feelings are recorded and assessed as a novelty, regardless of a real level of novelty of the said object or thought (Rogers, 2003, p. 12).

2. The unity of the divided process

The presented definitions have been developed and expanded in numerous models of the innovation process, concepts of innovativeness system presented in literature or in developed models of the innovative activity of enterprises. Examples of selected solutions concerning innovativeness of enterprises are presented in subsequent Figures 2–5.

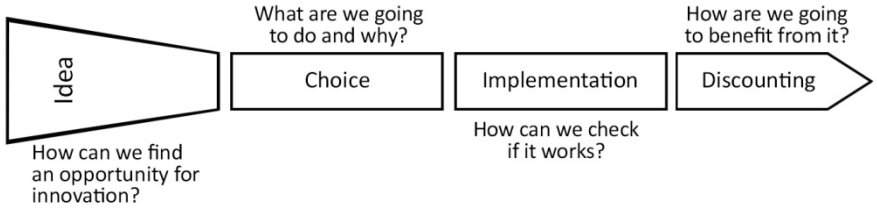

Figure 2. The progression of innovation process

S o u r c e: Author's own elaboration based on: Tidd and Bessant, 2013, p. 89.

The model of progression of innovation process is the development and expansion of Schumpeter's innovation process system, particularly in the diffusion (dissemination) part of innovation. The components of this part (stages of the process) as a result of mutual influences are a coherent wholeness. However, a complex, difficult stage of the process of invention of innovation which was called 'an idea' was presented very briefly, without an attempt of its operationalization. What is more, the stage (sub-stage) of the evaluation of the innovative project in the pre-diffusion stage is also missing.

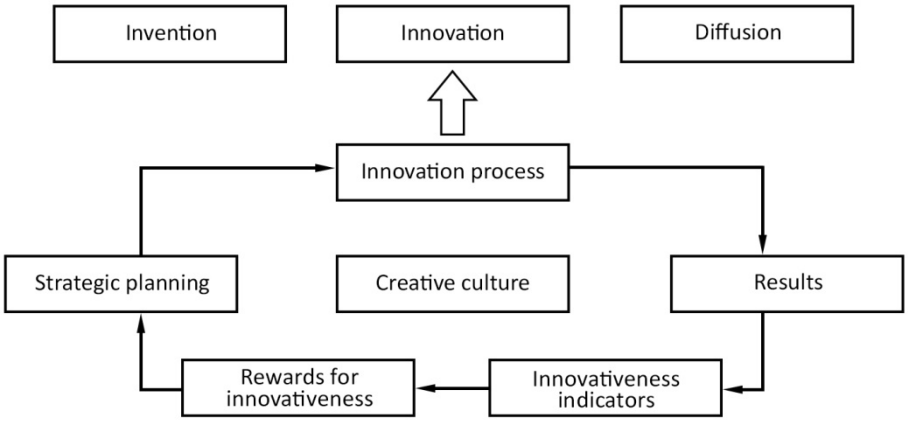

Figure 3. Complete innovativeness process

S o u r c e: Author's own elaboration based on: Trías de Bes and Kotler, 2013, pp. XV–XVII.

Presented above innovativeness system includes two subsystems: innovation process in the traditional, classical approach and the innovation management process. It emphasizes the significance of strategy and strategic planning, monitoring and operating control, motivation for innovative activities and organizational culture constituting the context of the system (Figure 3). Inclusion of innovative activity in the implementation of strategic goals of an organization is really justified, however, innovativeness with regard to operating effectiveness, important from the point of view of productivity and competitiveness of an organization, should not be limited.

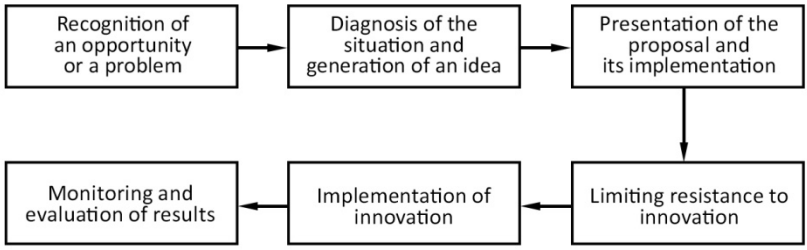

Figure 4. Innovation process—the six-step model

S o u r c e: Bartol and Martin, 1991, pp. 235–236.

According to the authors of the innovation process model comprising six types of integrated activities (steps), the reason for limiting innovativeness, already at the beginning of the process, is the type of managers' activities. They mainly concentrate on solving current problems, they attach less importance to finding opportunities for its development, especially ideas, innovative projects increasing competitiveness. Presentation of the proposals of an innovative solution with the provision of the plan of its implementation decreases the resistance of various groups of interest to innovation and improves its completion. Detailed proposals included in the model aim at improving the innovation process as a whole (Figure 4).

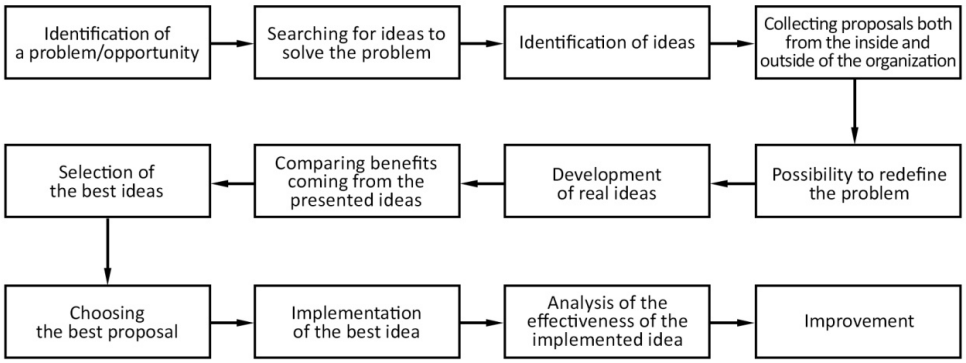

Figure 5. Innovation process according to Pauric McGowan

S o u r c e: Based on McGowan, 1997, p. 583.

The extension of the innovation process which goes further is presented by Pauric McGowan. Twelve stages of this process create the algorithm of the procedure similar to the decision making process model, more broadly to solving problems in an organization. The proposed procedure may also turn out to be useful in the innovation management process in an organization (Figure 5).

The quoted definitions of innovation and other notions and terms with respect to the innovativeness of an organization according to their authors are understood as systems, objects, whose components, as a result of mutual influences, constitute a coherent wholeness. A general principle for the presented research attitude is the paradigm of uniting various activities (stages) within the innovation process and establishing the evaluation of an innovative project at the stage of its choice and commercialization.

3. Dichotomy of the innovation process—an outline of the concept

The innovation process, regardless of the character and type of innovation and the way of its emergence, includes two stages, two autonomous processes:

1. The process of innovation invention, consisting of the stage of creating the first concept, a draft concept (an innovative project concept emerges)[4], the stage of materializing the idea (parametrization of the innovativeness process), and of the stage of idea evaluation (the evaluation of innovative project in pre-diffusion stage). The ex-ante evaluation of innovative project is performed, among others, in the context of the project feasibility, and then its functionality and effectiveness.
2. The process of innovation implementation, comprising the stage of the concept selection, namely the innovative project and implementation method, that is the control over the implementation of the innovative project function and the stage of discounting value from the implemented idea, namely the interception of value from the innovative project (see Figure 6).

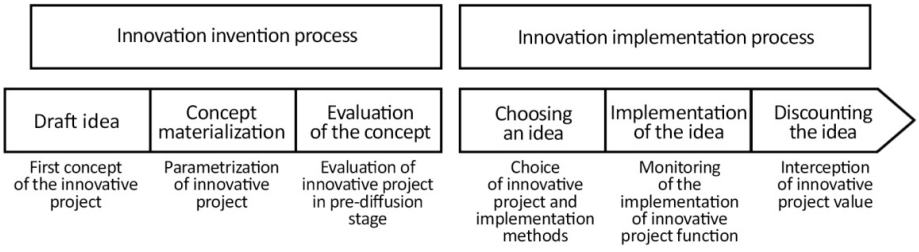

Figure 6. Two-dimensional progression of innovation process

S o u r c e: Author's own elaboration.

[4] A significant element of the analysis is the use of project management idea in innovative activity—constituting a value for an enterprise. The notion differs from traditional ventures in terms of the dynamics of progression and the rate of the benefits achieved. According to some researchers, an innovative project is not precisely defined in literature, it can be defined as invention of innovation, an idea, a draft of something. A project is also an intended plan of action, a concept, an initial schedule, a programme. Its uniqueness concerns not only the way of implementation, but also products or benefits which may arise in its effect (Duncan, 1995, p. 4).

An innovative project in the stage of the process of innovation implementation differs significantly from the project emerged in the stage of innovation imitation. In particular, they differ in identification of problems and defining goals, the approach to creating and using ideas (innovation), the level of use of the possessed resources and designing technologies, competences of designers, the level of risk, time and budget for implementation, or the project business value.

Innovation invention projects have vaguely defined goals and the ways of their implementation. It sometimes happens that they are implemented according to the principle that the solution is known but the goal and the application of the project are not defined precisely. The budget is not specified and the time of the project is not defined, and the predicted benefits are uncertain. This type of projects occur unexpectedly and they are an opportunity for an enterprise (Kelley and Littman, 2009, p. 3), they are an innovation that takes on an intangible form (see the definition of innovation in a narrow sense).

On the other hand, the goals of innovation implementation projects most often arise from the strategy of an enterprise. Their financial budget, the time of implementation and, which is the most important, the business value are defined relatively precisely. In their essence, projects of implementation (commercialization) of innovation are similar to the class of agile projects (Agile Project Management), which are in the range between standard, and extreme projects are implemented according to the plan (Wysocki, 2013, p. 390; Kozioł and Ćwiertniak, 2018, p. 186). They usually take on a material form, less often intangible (see the definition of innovations in a broad sense). In short, in the innovation inventiveness process unique skills of the creators and motivation of the researcher's learning and achievements are indispensable, while in the process of innovation implementation these requirements relate to managerial abilities and skills, material motivation and promotion.

The differentiation between both types of projects also concerns the competences of designers. In an innovation invention project creativity and talent as well as divergent thinking are of key significance, whereas in an implementation of innovation project these are entrepreneurship and competences with regard to innovative project management or convergent thinking.

The basic components of creativity include, according to Teresa Amabile (1983, pp. 67–77, after: Bartol and Martin, 1991, p. 282):

- The knowledge of the area being the field of analysis, e.g. technical skills, artistic abilities, talent in a given area, as well as specialist knowledge, expertness.
- Creative thinking skills. They concern (the ability of) cognitive style and methods of thinking focused on the explorations of new directions, scientific approaches which may be applied to generate new ones and the style of working which leads to the development of creative ideas. Creative style of working includes the ability to concentrate effort and attention in the long term, an ability to resign from ineffective ways of acting, stamina and high level of engagement.
- Motivation of achievements. A significant premise of creativity, invention is the internal motivation of achievements, learning (internal motives).

A person followed by a strong motivation of achievements or learning (*internal motives*) is distinguished by greater creativity, invention that an individual is interested in external

stimuli, for example a financial reward (*external motives*). Observations indicate that external rewards may contribute to the suppression of creativity process. For example, a scientist who participates in research into a new medicine to obtain a reward in the form of a monetary gratification is not as creative as a scientist for whom learning, scientific achievements are more important.

The creativity process includes several stages. Most often four stages are distinguished: preparation, incubation, illumination, verification (Haefele, 1962, after: Bartol and Martin, 1991, p. 285).

The preparation stage boils down mainly to the identification of a problem or a task whose solving requires creative thinking, unconventional approach to formulating proposals (variants) of solving the problem. It requires the concentration of attention and in-depth research, thinking over aspects of the problem, e.g. social issues. Solving the mentioned issues depends on the creativity of the individual and the time—months, or even years.

The incubation stage is mainly based on the use of subconsciousness and divergent thinking in the search for and exploration of unusual solutions (ideas). It is the impact of subconsciousness which enables to find new solutions. Where a high level of creativity is required, understood as a qualitative feature of product, subconsciousness and intuition may turn out to be the instrument more effective that an aware logical action.

The illumination stage is a new level of a researcher's mind, which allows to cross the barrier, reach a new, innovative solution, the state of mind called 'eureka'.

In the verification stage there is testing an idea determined by the researcher's assessment. In this process, convergent, logical thinking is indispensable for the proper assessment of a solution (idea). If it turns out that the solution is not feasible, it is necessary to return to the earlier stage or initiate the process of creating thinking anew.

On the other hand, the process of imitation of innovation is the manifestation of entrepreneurship and it is related to the necessity to develop and implement a new innovative business model, therefore, to undertake business activity anew, take increased responsibility for the related risk. In such an approach entrepreneurship is understood as recognition, evaluation, refining and use of an innovative project.

As it was mentioned, in this stage it is necessary to perform the evaluation of the innovative project with particular consideration to the limitation of the project feasibility, the situation of the organization, the level of its functionality and effectiveness in the short and long term.[5]

The commercialization of an innovative project requires competences in project management, the use of modern (agile) management methods so that one could implement subsequent stages of this process described more broadly and presented in Figures 4 and 5.

Among numerous attributes of a creative idea (innovative project) preferred by managers and entrepreneurs the following are mentioned: the achievement of competitive advantage, the inception of value from innovation, the adjustment to the existing business model, as well as originality and flexibility, namely the possibility to refine and develop the idea (Gruber,

[5] A helpful tool for evaluating an innovative project is the NASA (National Aeronautics and Space Administration) preparedness method. With this method, you can define and evaluate an idea from the conceptualization phase of a solution to the stage of its maturity, in which the idea takes the form of a solution that can be applied in practice (Mankins, 1995, p. 5).

Kim and Brinckmann, 2015, pp. 205–225). M. Holmes, T. R. Holcomb, P. G. Klein, R. D. Ireland presented the sequential model of judgments made by entrepreneurs, which considers four criteria (Holmes, Holcomb, Klein and Ireland, 2013): ideation, profitability, desirability and activity. The model explains how an entrepreneur evaluates the project, starting with evaluation of a creative idea and ending in evaluation of the venture implementation.

As it can be observed, the determinants of both the processes and research instruments are considerably different. Also the competences of the designers and the products of their work are dissimilar. In the process of invention of innovation it is a unique idea communicated to the firm in which it emerged or the environment of the organization. Implemented in the process of the implementation of innovation, it creates value for the project buyer, it becomes his intellectual property. In fact, at least two innovative projects are being created (two innovations) that can be implemented in a different place and time.

Scientific and research institutes, universities, authors of software, planning and design companies, advertizing agencies, or R&D units functioning in corporations, and even single positions of authors constitute the creative industry with high dynamics of creating (producing) innovative projects. Offered within the industry or outside it they bring benefits to project authors. Innovation ability of enterprises of the creative base refers to the creation and application of the act of creativity of new ideas, inventions, innovative projects. Innovation ability is determined by a lot of factors of immaterial character at the same time. This ability is relatively coherent, homogeneous, universal, particularly in the sector of creative, innovative enterprises (Kozioł, Wojtowicz and Karaś, 2017).

In its innovation strategy an enterprise can choose a broad range of innovative activity, including both the process of invention of innovation and the process of the imitation of innovation. However, it requires the extension of innovation potential and ability[6], necessary for implementation of both processes. High costs and high risk of the venture are the reason for which only few organizations can afford it due to financial reasons, material resources, competences and others.

The majority of enterprises, especially those which belong to small and medium-sized enterprises, assume in their strategy the development of innovation ability in the area of implementation of innovation. An innovative organization of this type has the capability of identifying and taking over innovative projects, ideas from its environment, adjusting and developing a project, commercializing and incepting value from innovation. It has resources and capabilities to discover and make use of opportunities to develop new products and processes in order to meet market needs (Hogan, Soutar, McColl-Kenned and Sweeney, 2011).

Some enterprises implementing innovation also attempt to get involved in the process of creating innovation, especially those which function in the innovative environment. They

[6] The effectiveness of an enterprise with regard to creating innovation is determined by resources developed in the past (innovative potential), as well as appropriate skills and capabilities of their current use. Innovation, which should be emphasized, must be coherent with the strategy of the organization and originate from it. In this way the organization expresses its readiness to introduce innovation and defines the methods of implementing innovation. In other words, innovation ability is the ability to apply the act of creativity of new ideas, inventions, which results in innovation whose diffusion brings benefits to the enterprise (Kozioł, Wojtowicz and Karaś, 2017).

create alliances of knowledge, networks of inventions (Tödtling, Lehner and Kaufman, 2009), bases of knowledge, various forms of knowledge exchange, for example 'Edu-Time', undertake cooperation in innovation creation (co-innovation) (Boney, 2012). The last of the mentioned activities, co-innovation, consists in joined creation of innovation to build common values and increase the level of competitiveness. The basis, the creative determinant of co-innovation is the use of IT instruments, particularly e-learning. They can take on other organizational forms, for example they can be a set of independent, in the legal sense, business units, implementing various projects and projects coordinated by a company—an integrator which has distinctive, unique competences.

In this process, the so-called management pragmatics is particularly useful. According to interviewees—i.e. managers—Polish enterprises are developing innovative activities, introducing beneficial changes within the stage (stages) of the innovation process, using for this purpose external sources of knowledge, experience of international enterprises in particular.

4. Conclusions

The main conclusion that can be drawn from the conducted analysis is that from the perspective of time some of J. A. Schumpeter's views have become obsolete. The presented theory of innovation and the so-called innovation triad as the description of the process from invention through innovation to imitation—the process presented at a high level of generality, homogeneity, low disjunctiveness, treated as a field of analysis, the subject of the research of numerous authors. It appeared, however, that an attempt to invent and apply innovation often ends in failure since we still cannot explain what premises, cultural and economic stimuli, the way of implementation of innovative projects, reactions of the markets generate changes conditioning the diffusion of a new product or service.

We cannot recognize the tools of analysis and define the determinants of innovation process in the comprehensive Schumpeterian approach, but we can resolve it by studying each of these processes separately. Management pragmatics is a factor supporting innovation process. Organizations lacking sufficient resources did not invest in the sphere of research and development (basic, applied development works), but instead they tried to use external sources of knowledge, where the costs of innovative projects and the risk of failure are much smaller than in the case of conducting own research.

It is in the strategy of an organization that the object and the scope of the analysis must be defined, considering the level of innovation ability of an enterprise, in the creative industry they can specialize in creating ideas, designing novelties and offering innovative projects to properly selected target group. Traditional firms should develop these projects and implement them in practice with benefits for their customers.

As we can observe, the choice of the object and the scope of innovative activity determine innovation ability of an organization, the ability to manage innovative projects and the use of modern (agile) management methods, as well as innovation policy supported by management pragmatics.

References

Amabile, T. (1983). *The social psychology of creativity*. New York: Springer Verlag. ISBN 3540908307.

Bartol, K. M., Martin, D. C. (1991). *Management*. New York: McGraw-Hill. ISBN 0070039267.

Bonney, L. B. (2012). *Insights into 'mysterious processes': Incentivising co-innovation in agrifood value chains*. PhD thesis. University of Tasmania.

Drucker, P. F (1992). *Innowacja i przedsiębiorczość. Praktyka i zasady*. Transl. by A. Ehrlich. Warszawa: Państwowe Wydawnictwo Ekonomiczne. ISBN 8320808707.

Duncan, W. R. (1995). *A Guide to the project management body of knowledge*. Upper Darby, PA: Project Management Institute. ISBN 1880410133.

Griffin, R. (2004). *Podstawy zarządzania organizacjami*. Transl. by M. Rusiński. Warszawa: Wydawnictwo Naukowe PWN. ISBN 8301140186.

Gruber, M., Kim, S. M., Brinckmann, J. (2015). What is an attractive business opportunity? An empirical study of opportunity evaluation decisions by technologists, managers, and entrepreneurs. *Strategic Entrepreneurship Journal*, *9* (3), 205–225.

Haefele, J. W. (1962). *Creativity and innovation*. New York: Reinhold Publishing Corporation.

Hogan, S. J., Soutar, G. N., McColl-Kennedy, J. R., Sweeney, J. C. (2011). Reconceptualizing professional service firm innovation capability. Scale Development. *Industrial Marketing Management*, *40* (8), 1264–1273.

Holmes, M., Holcomb, T. R., Klein, P. G., Ireland, R. D. (2013). *The role of judgment and decisions in new--venture formation: Toward a behavioral model.* Paper presented at the Strategic Management Society Conference, Atlanta.

Howells, J. (2005). *The management of technological innovation: The shaping of technology and institutions of the market economy*. London: Sage. ISBN 9781446229842.

Kelley, T., Littman, J. (2009). *Sztuka innowacji*. Transl. by G. Łuczkiewicz. Warszawa: MT Biznes. ISBN 9788361040859.

Kozioł, L., Ćwiertniak, R. (2018). Kształtowanie portfela projektów w zarządzaniu innowacjami. In: P. Cabała (ed.). *Zarządzanie portfelem projektów w organizacji. Koncepcje i kierunki badań* (pp. 183–203). Kraków: Mfiles.pl. ISBN 9788394140847.

Kozioł, L., Wojtowicz, A., Karaś, A. (2017). The concept of the innovative tourism enterprises evaluation capability. In: V. Katsoni, A. Upadhya, A. Stratigea (eds.). *Tourism culture and heritage in a smart economy* (pp. 159–172). Springer Proceedings in Business and Economics. Cham: Springer. ISBN 9783319477312.

Kuznets, S. (1959). *Six lectures on economic growth*. Glencoe, Il: Free Press of Glencoe.

Lucas, R. E. Jr. (1988). On the mechanism of economics development. *Journal of Monetary Economics*, *22* (1), 3–42.

Mankins, J. C. (1995). *Technology readiness levels*. A White Paper. Washington: NASA. Advance Concepts Office, Office of Space Access and Technology.

McGowan, P. (1997). Innowacja i przedsiębiorczość wewnętrzna. In: D. M. Steward (ed.). *Praktyka kierowania* (pp. 579–600). Transl. by A. Ehrlich. Warszawa: Polskie Wydawnictwo Ekonomiczne. ISBN 8320810256

Podręcznik Oslo. (2008). *Zasady gromadzenia i interpretacji danych dotyczących innowacji*. Warszawa: European Commission, OECD, Ministry of Science and Higher Education. ISBN 9788361100133.

Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: Free Press. ISBN 0029253616.

Rogers, E. M. (2003). *Diffusion of innovation*. New York: Free Press. ISBN 0743222091.

Schumpeter, J. A. (1939). *Business cycles. A theoretical, historical and statistical analysis of the capitalist process*. New York: McGrow-Hill Book Company.

Skillicorn, N. (2016). What is innovation? 15 experts share their innovation definition. In: *Idea to value* [online, accessed: 2017-11-15]. Retrieved from: https://www.ideatovalue.com/inno/nickskillicorn/2016/03/innovation-15-experts-share-innovation-definition/.

Tidd, J., Bessant, J. (2013). *Zarządzanie innowacjami. Integracja zmian technologicznych, rynkowych i organizacyjnych*. Transl. by J. Szostak. Warszawa: Oficyna a Wolters Kluwer business. ISBN 9788326431500.

Tödtling, F., Lehner, P., Kaufman, A. (2009). Do different types of innovation rely on specific kinds of knowledge interactions? *Technovation*, *29* (1), 59–71.

Trías de Bes, F., Kotler, P. (2013). *Innowacyjność przepis na sukces. Model „od A do F”*. Transl. by M. Zawiślak and J. Środa. Poznań: Wydawnictwo Rebis. ISBN 9788375108132.
Whitfield, P. (1979). *Innowacje w przemyśle*. Transl. by T. Mroczkowski. Warszawa: Państwowe Wydawnictwo Ekonomiczne.
Wysocki, R. (2013). *Efektywne zarządzanie projektami: tradycyjne, zwinne, ekstremalne*. Gliwice: Helion. ISBN 9788324639069.

Koncepcja dychotomii procesu innowacji w przedsiębiorstwie

Abstrakt: W artykule przedstawiono wybrane, ważniejsze definicje innowacji w przedsiębiorstwie, ze zwróceniem uwagi na te z nich, które podkreślają jej niematerialny charakter. Opisano modele procesu innowacji, koncepcje systemu innowacyjności oraz modele działalności innowacyjnej przedsiębiorstwa. Stwierdzono, że elementy tych obiektów stanowią spójną całość. Zasadą prezentowanego podejścia badawczego jest przypisywany Schumpeterowi paradygmat zespolenia różnych działań w ramach procesu innowacji. Okazało się jednak, że próba realizacji tak szerokiego programu, tj. inwencji i aplikacji innowacji często kończy się niepowodzeniem. Nie potrafimy bowiem rozpoznać narzędzi analizy i określić determinanty procesu innowacji w całościowym Schumpeterowskim ujęciu, możemy natomiast kwestie te rozstrzygnąć, badając każdy z tych procesów z osobna.

Celem artykułu jest przedstawienie koncepcji dychotomii procesu innowacji w przedsiębiorstwie oraz wskazanie sposobu jej wykorzystania w praktyce. W koncepcji tej wyróżniono dwa kluczowe dla rozwoju innowacyjności autonomiczne procesy, tj. proces inwencji innowacji oraz proces wdrażania innowacji.

W strategii organizacji należy określić przedmiot i zakres analizy, uwzględniając przy tym poziom zdolności innowacyjnej przedsiębiorstwa, w branży kreatywnej mogą one specjalizować się w kreowaniu pomysłów, projektowaniu nowości oraz oferowaniu projektów innowacyjnych odpowiednio dobranej grupie docelowej. Firmy tradycyjne powinny projekty te rozwijać i realizować w praktyce z korzyścią dla klientów. Należy podkreślić, że wybór przedmiotu działalności innowacyjnej determinuje zdolność innowacyjną organizacji, umiejętność zarządzania projektami innowacyjnymi oraz wykorzystanie nowoczesnych (zwinnych) metod zarządzania, jak również pragmatykę zarządzania.

Artykuł ma charakter teoretyczno-analityczny. Dla osiągnięcia celu i weryfikacji tez zastosowano metody badawcze takie jak: analiza literatury, analiza czynników wpływu, rozmowy z ekspertami.

Słowa kluczowe: innowacja, modele procesu innowacji, zarządzanie projektami innowacyjnymi, koncepcja dychotomii procesu innowacji