

INNOVATION STRATEGY AND ITS IMPACT ON THE COMPANY'S COMPETITIVE POSITION

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Introduction/background: The creation of a knowledge-based economy determines the growth of interest in innovations and the possibility of using them as a tool for building a competitive advantage. This requires companies to develop an appropriate innovation strategy. Its choice is determined by the environment and the company's own capabilities. On the other hand, the effectiveness of strategic decisions in the area of innovation contributes to building a company's competitive advantage.

Aim of the article: The aim of the article is to present the cause-effect relations between the choice of innovation strategy and the competitive position of the enterprise.

Materials and methods: The methods of critical analysis and synthesis, the method of generalization and logical methods as well as the desk research method were used in the research process.

Result and conclusions: As a result of the work, a concept has been developed and direct and indirect consequences of innovation activity have been classified.

The choice of innovation strategy usually is based on the direct financial results. But the indirect results are important for creating innovative potential of company and give a multiplier effects. These effects should be taken into account in the process of creating and strategy of innovation. The author presents a diagram of creating a innovative strategy, the direct and indirect effects of innovative activity and the cause and effect relations between the results of innovative activity and the creation of a strong competitive position of the company.

The article is aimed at enterprise managers, decision makers of state institutions and scientists dealing with innovation problems.

Keywords: innovation strategy, competitiveness, enterprise.

1. Introduction

Creating a knowledge-based economy determines the growth of interest in innovations and the possibility of using them as a tool for building a competitive advantage. Nowadays it is the fact the innovation is a fundamental factor in creating the added value and ensuring a lasting market advantage (Setiawanta, and Purwanto, 2019; Rowley et al., 2011). However, the innovative activity requires more and more effort from enterprises. The costs of innovation

are rising, the life cycle of innovative products is being reduced and the level of competition is growing. Under these conditions, it is necessary to develop an appropriate innovation strategy.

When perceiving the strategy as a system of long-term goals and visions, it is worth considering the cause-effect relationships that exist between the innovative capacity of the company and the results of its innovative activity.

The effectiveness of innovation is verified by the market. However, apart from the direct results of the innovative activity, attention should be paid to its indirect results, such as accumulating new knowledge, improving the skills and qualifications of employees, creating intellectual capital and innovative corporate culture.

The study of these aspects of the innovative activity allows determining the possibilities of using innovation to achieve long-term market advantage.

2. Innovations as a factor of increasing competitiveness

Globalization of the economy and the development of information technology have changed the economic development model. Theories based on knowledge development are becoming increasingly important as against the concepts of development based on the assumptions of the resource theory. The importance of innovation as a factor in the economic development is constantly growing. According to many experts, 2/3 of the economic growth of the developed countries should be associated with the introduction of innovations (Pysiak, 2006).

Assessments of the size and structure of the national income are the basic group of measures of the competitive position of economies. They allow estimating the level of development of a given economy, as well as the stage of its competitiveness development. According to M. Porter, "the only meaningful concept of competitiveness at the national level is productivity" (Porter, 1990). This thought of M. Porter remains relevant today. According to K. Schwab, "the only sensible concept of competitiveness at the national level is productivity" (Schwab, 2013). In line with this assumption, the basic measures of competitive position include: Gross Domestic Product (GDP) and Gross National Product (GNP) (Mróz, 2016). Figure 1 presents a comparison of GDP per capita and the total SII innovation index of the EU countries. The presented data lead to the conclusion that there is a fairly close relationship between these indicators. This is also confirmed by the correlation coefficient of 0.685.

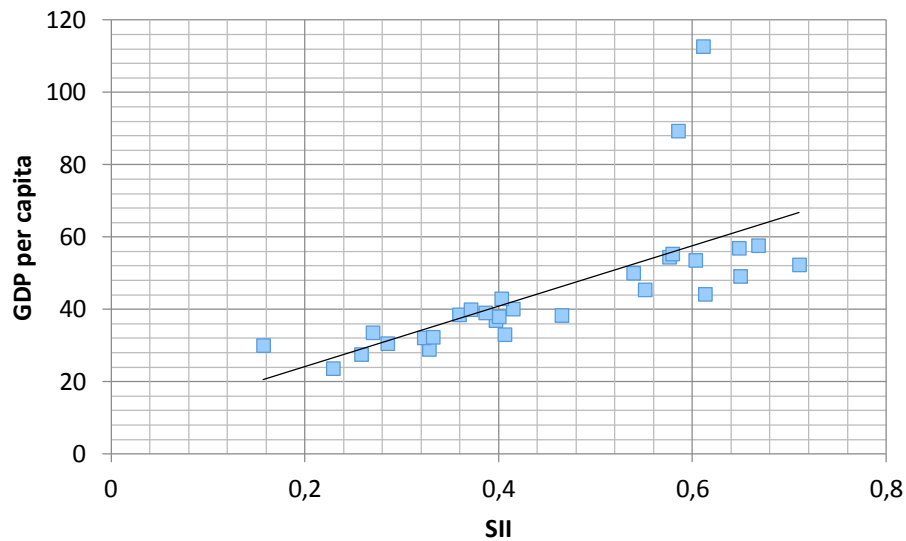


Figure 1. GDP per capita and the total innovation index (SII) of the EU countries in 2018. Source: own study based on data (EIS, 2020).

The competitiveness of an enterprise is perceived as "the ability of a company to preempt the competitors in the same market and continue to be market leader" (Tam, and Fernando, 2018), "and its measure is market share and profit level" (Buckley et al., 1988). Higher profits and market share growth are primarily the result of innovation because product, technological and organizational innovations ensure lower average costs and higher production quality while product and marketing innovations – higher sales.

Enterprise managerial staff understands the importance of innovation as a factor in increasing competitiveness. According to a survey conducted by McKinsey, "more than 70 percent of senior executives say innovation will be at least one of the three main drivers of their companies' growth in the next three to five years" (Barsh et al., 2008). This determines the intensification of the innovative activity, which depends on:

- structure of the economy,
- competitive intensities,
- no alternative to innovative problem solving,
- pro-innovative attitudes of company managers – beneficiaries of innovative products,
- business conditions (innovations, mainly technological ones, are associated with time-consuming investments, whose implementation requires a sustainable and friendly investment climate) (Oksanych, 2020).

In the high and medium-high technology sectors and high competitive intensity, development based on the growth of innovation is often a non-alternative strategy of enterprises operating in them. The higher the performance of competitors in the same industry, the more likely each company will rely on innovation as a competitive tool, and the stronger the sustainability of the innovation will be (Aghion, 2005). According to the concept by M. Porter, a company achieves a competitive advantage using a cost leadership strategy, a differentiation

strategy and a concentration strategy, which means cost leadership in the selected markets and leadership in differentiation in the selected markets (Porter, 1980).

However, innovations do not always lead to increased productivity and competitiveness, although they have a large impact on them (Atkinson, 2013). The success of an innovation largely depends on the selection of the appropriate innovation strategy.

3. Innovation strategy as a tool for implementing innovation-based development

Occasional innovations, which are often implemented by the company under pressure from the environment and are often the only way to survive on the market, cannot be the basis for the growth of competitiveness for the following reasons.

1. Such innovations usually result from the transfer of innovative products – purchase of technologies, licenses, software, etc., also available to competitors. This means that competitors can also take advantage of these innovations (if they no longer use them or more advanced innovative products are in place).
2. Such innovations relate to the selected areas of the company's activity and translate into creating the foundations of its innovative culture.
3. Occasional innovation means no innovation potential. Otherwise, the innovative activity of the company would be consistently consistent.

Building a competitive advantage based on innovation requires the development of an appropriate innovation strategy "as a pattern of decisions in an organization which formulates goals, objectives and purposes and produces principle policies and plans to achieve those goals and defines the economic and non-economic contribution it is going to make to its stakeholders"(Andrews, 1980).

The reviewed research publications supports the conclusion that a company intending to make innovation its key asset in ensuring a competitive advantage should perceive innovation strategies and business strategies as an integrated whole. "An organization's capacity for innovation stems from an innovation system: a coherent set of interdependent processes and structures that dictates how the company searches for novel problems and solutions, synthesizes ideas into a business concept and product designs, and selects which projects get funded" (Pisano, 2015).

However, the problem with many companies is that they "rarely develop strategies to align their innovations with business strategies. The company's innovation strategy should define how different types of innovation fit into the business strategy and the resources that should be allocated to each of them" (Pisano, 2015).

Also D.J. Teece draws attention to the need to link innovative activities with business strategy, because technological innovation does not guarantee business success e new product development efforts should be coupled with a business model defining their 'go to market' and 'capturing value' strategies (Teece, 2010).

The innovation strategy is determined by the external environment, own resources and the management system (which can be defined as part of the company's resources).

The various types of enterprise resources are closely related to each other. Financial resources are strongly correlated with the size of human capital, because on the one hand, large profits are determined by the competitive advantages of a company that is a derivative of the innovative activity, on the other hand – high profits allow significantly increasing investment in human capital and the level of innovation of the company.

Innovations by increasing sales and profits allow increase of the investments in human capital and generation of new innovations. The market success of innovations means qualitatively greater opportunities for future innovative activities of the company.

A large market share means great opportunities to use the economies of scale. According to the results of research carried out by the Boston Consulting Group and the Institute of Strategic Planning in Cambridge/Mass, the effect of using the scale (experience) is a significant reduction in the average production costs (Niestrój, 1998). Each doubling of the sales volume reduces the average cost of processing and selling a product by 20-30% of its previous volume (Becker, 1988). Table 1 shows a simulation of the effect of economies of scale on the amount of profits. In the initial calculations, the average total cost was set at € 9, and the price per unit of goods was set at €10. The simulation presents three variants of the cost structure. The first variant provides for the share of processing and sales costs (APC) in the average total costs (ATC) at the level of 50%, the second option – at the level of 66%, and the third – at the level of 80%.

Table 1.
Scale effects

| Sales, € M | Profits, € M, by APC = 50% | Profits, € M, by APC = 66% | Profits, € M, by APC = 80% |
|------------|----------------------------|----------------------------|----------------------------|
| 1M | 1 | 1 | 1 |
| 2M | 4,7 | 5,6 | 6,32 |
| 4M | 8,22 | 9,96 | 11,37 |
| 8M | 12,08 | 14,76 | 16,92 |

Source: author's own elaboration.

The data presented in the table shows that with a two-fold increase in the quantity of sales – from 1 million to 2 million items of the product, profits increase from €1 million to €4.7-6.32 million (i.e. 4.7-6.32 times) depending on the cost structure. With an 8-fold increase in sales, the company's profits will increase by 12.08-16.92 times. The growth rate of profit in 1.5-2 times exceeds the growth rate of sales. Therefore, enterprises classified as market leaders with the largest market share (usually large enterprises) have significantly greater financial opportunities to conduct innovative activities and create human capital.

The effectiveness of innovative activity and its role in creating a strong competitive position depends on the extent to which the enterprise management system is open to innovation. "The pursuit of innovation in management goes far beyond the original intention of managing innovation in a limited area. Management soon sees the benefits of creating an environment where everyone in the company can contribute, and creating an innovative corporate culture is becoming a top priority in the senior management and board of directors program" (Vilia, 2011).

An effective management system allows making and implementing rational decisions proactively responding to changes in the environment. Its effectiveness should be seen as the results of consistent intellectual potential creation. Among the factors determining the scope, nature and effectiveness of the innovative activities, its intellectual capital reflects the company's resources on the one hand, and the management system on the other.

Human capital, as a certain type of resource, represents the potential of knowledge, skills and qualifications of personnel, the ability to effectively innovate at each stage of the innovation cycle – from generating an idea to commercializing the innovation.

The management system can be interpreted as the integration of formal knowledge (e.g., formalized processes of preparation and decision-making, organizing, motivating and controlling etc.) and informal (soft) knowledge, which is also based on human capital. Formal knowledge is the result of the prior intellectual effort of employees, presented in the form of reports, algorithms, programs, databases, standards, norms and regulations.

Changes in the environment determine the nature of the company's reaction. Favorable changes mean opportunities and encourage enterprises to apply offensive development strategies. In the innovation area, these are primarily product and marketing innovations basically targeted to influence consumers of the products and services offered by the company.

Threats from the market force an enterprise to take defensive actions, which requires the development and implementation of an appropriate strategy.

The innovation strategy provides for a choice not only between the defensive and offensive nature of innovation goals, but also between transferring innovation and its generating on its own. The two innovative strategies of opening to the outside (open innovation model) and the exploitation of internal expertise have been considered (Chesbrough, 2003). These dilemmas are to a large extent related, because in the event of choosing a defensive strategy, the company must react quickly and with minimal risk to pressures from the market environment, which makes the choice of innovation transfer a priority solution.

In practice, the innovations transferred mean the purchase of innovative products (software, techniques, technological systems and their components). Their impact on the level of competitiveness is short-term, as the competitive advantage is limited by the time that the competition needs to implement the same or better innovative product. The impact of such innovations on the intellectual capital of the enterprise is limited to receiving limited new knowledge and skills related to the transferred innovation.

In the case of innovation transfer, the company receives formal knowledge in the form of instructions, regulations, standards, algorithms, etc., and informal knowledge in the form of the upgraded skills and qualifications of staff as a result of training, internship, which is usually included in the package of services provided by the seller of the transferred innovative product.

In the case of proprietary innovations, this type of knowledge is created as a result of own R&D works. The benefits of an innovation strategy over an imitation strategy become stronger as market demand is increasingly uncertain, technology changes rapidly, and competition intensifies (Zhou, 2006).

The knowledge achieved as a result of the company's involvement in the cooperation network in innovative activities should be particularly distinguished. Participation in the cooperation networks, application of the open innovation strategy not only translates into the creation of intellectual capital, but is also an opportunity for SMEs.

Own innovations usually arise as a result of consistent long-term activities – from the creation of an idea, R&D works up to product commercialization. As a result of this work, "by-products", "innovative semi-finished products" are created, which are often "frozen projects" due to the existence of certain barriers. These barriers include:

- no cash,
- no demand (innovation "overtakes" demand),
- technological limitations.

Such "side effects" of the innovative activity become one of the elements of intellectual capital and may become a serious asset of the company, as soon as there are conditions favorable for their use. Creating human capital, strong and soft knowledge are the most important intermediate result of own innovation.

The simplified scheme of creating an enterprise's innovation strategy presented in Fig. 2 assumes that the process starts with the assessment of the company's own innovation potential, the analysis of the macro-environment and the market environment.

The assessment of the innovative potential should include the assessment of resources (intellectual capital, knowledge resources, financial resources), processes (procedures, algorithms, standards, norms) and the motivation system. The latter is very important due to the need to involve the entire team of employees in the innovation processes, not only those groups of staff that will directly participate in the development and implementation of the innovation strategy.

The analysis of the market environment is necessary due to the need to recognize the competition strategy, the condition and development trends of the target market and the market for innovative products and services. The result of this analysis, among other things, will be the choice of the nature of the impact on the environment through innovation – whether they will be offensive or defensive.

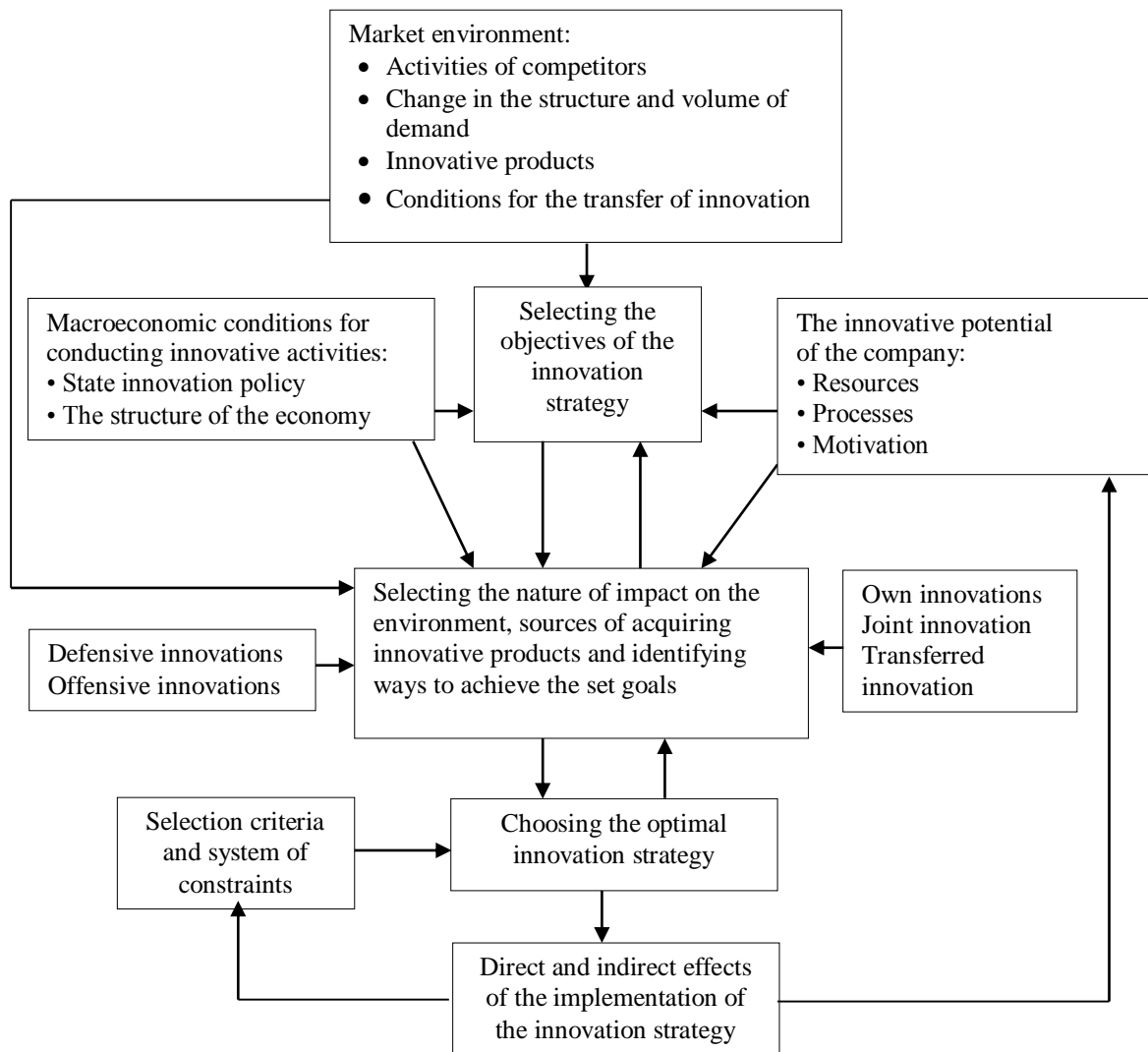


Figure 2. A simplified scheme for creating an enterprise innovation strategy. Source: Author's elaboration.

Based on the results of the environment analysis and the assessment of the company's own capacity of innovative potential, it becomes possible to set the goals of the innovation strategy. Goals should be seen as a system integrating goals at different levels of the management hierarchy, goals of different functional areas and goals of different time horizons.

One of the most responsible stages of creating an innovation strategy is the choice of the nature of the impact on the environment, sources of obtaining innovative products and identification of ways to achieve the set goals. The result of this stage will be a "bank of ideas", which consists of all possible ways, techniques and methods of achieving goals.

The next step is to choose the optimal strategy, based on certain selection criteria and a system of constraints.

The important elements of the presented scheme represent the feedback ensuring flexibility in managing creation and implementation of the innovation strategies.

These elements include:

- possibility of adjusting the strategy goals after identifying possible ways of achieving them,
- possibility to return to work on finding possible ways to achieve the goals in the event of non-compliance with their selection criteria and constraints,
- impact of the effects of the innovation strategy implementation on the innovative potential of the enterprise (mainly indirect effects).

Of course, the presented diagram reflects a general approach to the process of creating a company's innovation strategy. Depending on the specific external and internal business conditions, each of the processes and activities indicated in the drawing needs to be detailed.

4. Direct and indirect effects of innovative activities and their impact on the company's competitiveness

Most managers consider maximization of sales and profit the most important result of the innovative activity. The results of the surveys show that 69% of companies announce an increase in sales as the most important indicator of innovation. 43% of respondents believe that customer satisfaction is that measure (Staack, and Cole, 2017). However, from a strategic point of view, no less important are its other effects, which determine the nature and scope of the company's innovative capacity in the long term. Therefore, despite the direct results of the innovative activity, company managers should carefully analyze its indirect effects.

In the process of innovative activity, new knowledge is created – explicit and implicit. Its assimilation by staff means the development of the company's innovative potential, as the learning of the organization is one of the key factors of its success (Saadat, and Saadat, 2016). The implementation of each innovative project helps to verify the assumptions of the adopted innovation strategy, the correctness of the decisions made and the solutions used. This allows to obtain the effect of experience, which has a significant impact on the level of innovation of the enterprise (Daveri, and Parisy, 2015). Each innovative project should be seen as a cycle of acquiring new knowledge and gaining new experience. This allows you to optimize the formal procedures, algorithms, protocols of proceedings, information and knowledge flows, etc. in the company in the field of innovative activities, develops informal relations and forms of cooperation both within the company and in relations with its environment, but also becomes one of the key factors in creating an innovative organizational culture. The direct and indirect effects of innovative activities and their cause and effect relationships are presented in more detail in Fig. 3.

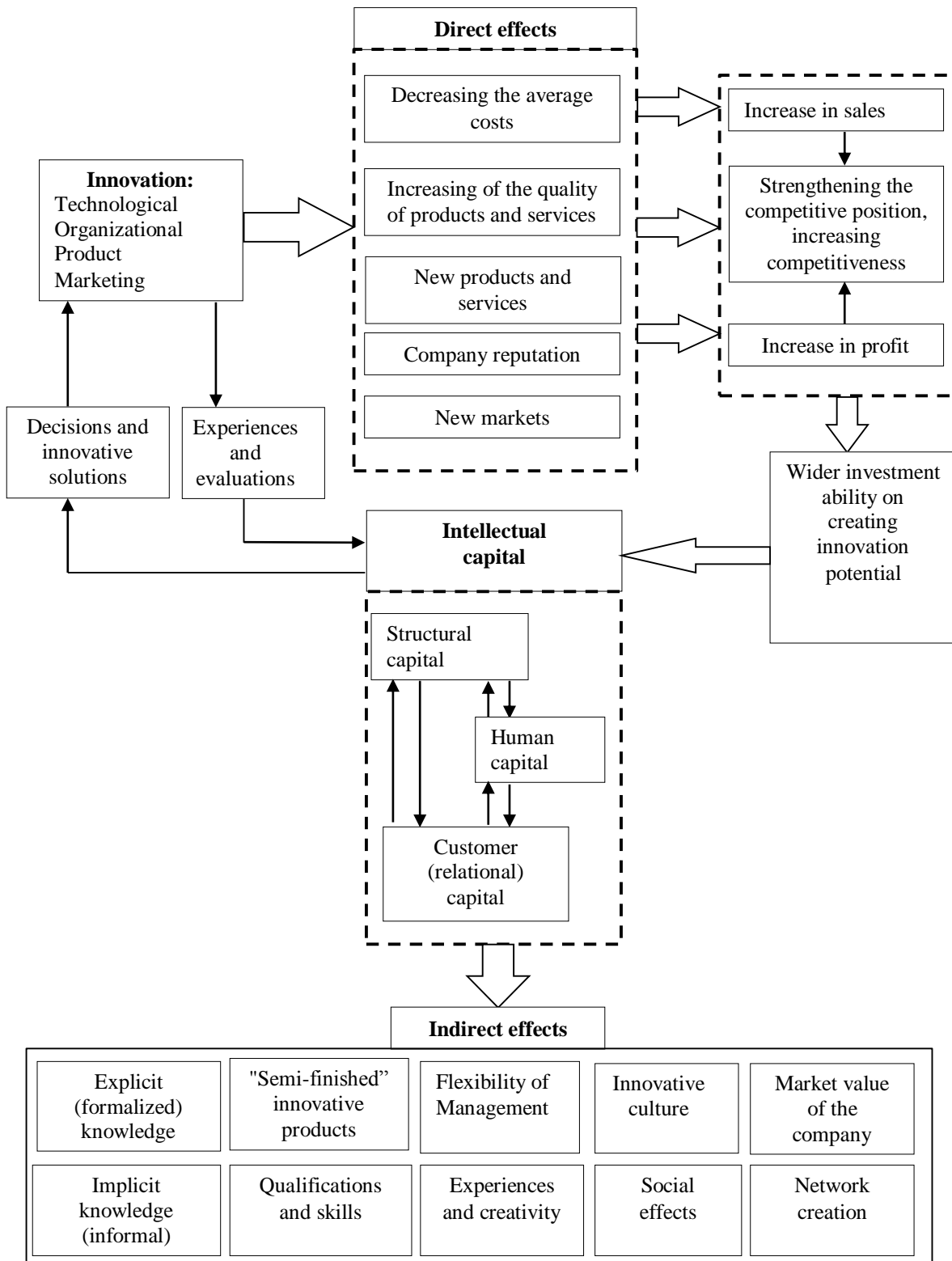


Figure 3. The direct and indirect effects of the innovative activity and their cause-effect relationships. Source: author's elaboration.

The most common direct effects of innovation are:

- lowering the average production costs resulting from the use of a new technological system, organizational and marketing innovations,
- new products and an increase in the quality of products and services resulting from technological and product innovations
- entering new markets, expectedly due to marketing and product innovations,
- improvement of the company's image, which includes the results of each type of the innovative activity.

In the final analysis, these effects ensure an increase in profits and sales volume, which prove the competitive position of the enterprise and allow funding innovative projects to a greater extent.

Generating greater profits creates wider opportunities of creating and developing the intellectual capital of the enterprise based on human capital. The closely related components of intellectual capital are the source of indirect effects of the innovative activity. These effects include:

- receiving new knowledge,
- upgrading qualifications, skills, experience of the staff and management,
- increased management flexibility,
- creating an innovative organizational culture
- social effects reflected in the creation of new jobs, growing motivation of the public to learn, strengthening the innovative culture of the economy,
- creating a database that contains information on ongoing and "frozen" innovative projects, achievements in the area of innovation, test results, expert opinions, experiments, indirect results of R&D works,
- "semi-finished products" of the innovative products are prototypes and concepts of new technologies, products, organizational and marketing models,
- increase in the market value of the company,
- creating a cooperation network in the innovation area with other enterprises, organizations and institutions.

The scope and scale of indirect effects depend on the following factors.

1. The nature of innovative activity in relation to the source of innovation. Transferred innovations translate into indirect effects to a much lesser extent than own innovations generated within the company or in cooperation with other entities. Transferred innovations affect:

- formal knowledge (in the form of instructions, regulations, norms, standards and other carriers of formalized knowledge, provided with the purchase of an innovative product),

- qualifications and skills of employees (as a result of training and apprenticeship of employees servicing the purchased innovative product).

The competitive advantage obtained through transferable innovations is short-term, as competitors also have access to these innovations.

However own innovations, in addition to the indirect effects mentioned above, cause qualitative changes in the nature of the company's innovative activity, which can be defined as creating an innovative culture.

2. The nature of the innovative activity in relation to the area of changes. The implementation of insufficiently coordinated individual innovative projects brings much smaller indirect effects in comparison with consistent innovative activity performed within the selected innovation strategy. An effective innovation strategy should not only include coordinated goals and visions of their implementation, but also provide for the involvement of all structural units in the innovative activities. Innovations to one degree or another require changes in all spheres of the company's activity. Therefore, understanding and accepting the nature of the anticipated changes, their goals and expected results create the basis for the effective implementation of not only current but also future innovative projects.
3. The nature of innovative activity in its relations with the environment. Defensive innovation is 'compulsory action', inspired by the market environment. The company should innovate otherwise it will suffer losses, reduction of its market share, loss of e-buyers' loyalty and its image. Usually, this is a transfer of innovative products, which is perceived as inevitable evil and implemented to maintain the existing market share or minimize its reduction. This type of innovation strategy does not bring visible positive indirect effects, while offensive innovations are implemented in order to increase market share and profits, enter new markets and create a new product market. Offensive innovation strategies not only provide real financial results, but also bring significant indirect effects, because in the process of implementing these investments, the company uses its entire innovative potential, which in practice means accumulating new knowledge, skills, qualifications, experience, creating and developing culture of innovation.
4. The degree of integration within the network of cooperation with others.

Most of the indirect effects to one degree or another contribute to creation of the enterprise innovative culture. In scientific publications, the innovative culture of an organization is presented as a set of certain characteristics that determine its ability to innovate.

J. Spacey (2016) defines a culture of innovation as the idea that "values, norms, symbols, mission, habits, language and history of an organization play a role in its ability to innovate". According to the definition of M. Rouse (2015), the culture of innovation

"is a working environment that leaders create to cultivate unconventional thinking and its application".

The innovative culture of an enterprise can be defined as a certain philosophy of running a business, based on creating an environment that encourages all personnel to engage in innovative activities. The core of this environment is not only the knowledge, qualifications and skills of employees, but also their motivation and attitudes towards innovative activities. Innovative culture allows combining "open" and "hidden" knowledge (Nonaka, Takeuchi, 2000, pp. 20-25), creating and effectively using the intellectual capital of an organization. Each particular success of the company in the innovation is translated into an increase in knowledge, experience and skills of employees, strengthening commitment in their capacities. It allows the managers to assess the effectiveness of human capital management methods, improve and develop personnel policy, especially focusing on behavioral and motivational aspects. Some companies make special efforts to design a highly motivating role. Toyota encourages play by giving factory workers the opportunity to come up with and test new tools and ideas on the assembly line. W.L. Gore & Associates gives people free time and resources to develop new ideas. And Southwest Airlines encourages their people to treat each customer interaction as play (McGregor, Doshi, 2015).

The indirect effects of an enterprise's innovative activity create its innovative potential and provide for building a long-term competitive advantage. Therefore, the company's success on the market largely depends on the selection of an innovation strategy that would be oriented not only to maximizing profits in the short term, but also would take into account the indirect effects of the innovative activity, its impact on creating the innovative organizational culture and effective use of human capital, which would ensure company's strong competitive position in the market and high profits in the long term.

5. Conclusions

Contemporary concepts of economic development perceive innovation as the basic factor in building a competitive advantage. Enterprises that focus on pro-innovative development are usually market leaders. However, innovation becomes a success factor in the market only if the company has the appropriate innovative potential and is able to use it effectively. This determines the scope of key contemporary innovation management problems in the company.

It is anticipated that scientists and business representatives will be increasingly interested in the behavioral aspects of managing innovation processes, issues on the methodology of creating and implementing innovation strategies, developing and using human capital

effectively. These areas are closely related to each other, which requires the managers of the company to employ a systemic approach to management and involvement in the innovative activities not of individual groups of employees, but of the entire staff of the company.

It is important that the company's development strategy and innovation strategy form an integrated whole focusing not only to high profits, but also to development of innovative potential. It is crucial not only to expect the direct results of the innovation, but also to welcome the side effects that will determine your company's competitive position in the market in the future.

The indirect effects of innovative activity contribute to the creation of an innovative corporate culture. This not only allows innovation to be a key factor in its development and market success, but also to create the external image of the company and provide opportunities to build a cooperation network. In this way, the multiplier effect of innovative activity is achieved, the essence of which is that each of its results should be perceived as an explicit or implicit investment in the future of the enterprise.

References

1. Aghion, P., Bloom, N., Blundell, R., Griffith, R., and Howitt, P. (2005). Competition and innovation an inverted U relationship. *Quarterly Journal of Economics*, vol. 120, pp. 701-28.
2. Andrews, K.R. (1980). *The concept of corporate strategy*. Dow-Jones Irwin.
3. Atkinson, R.D. (2013). *Competitiveness, Innovation and Productivity*. Washington D.C.: The Information Technology and Innovation Foundation, pp. 1-4.
4. Barsh, J., Capozzi, M., Davidson, J. (2008). Leadership and innovation. *McKinsey Quarterly*, January, <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/leadership-and-innovation>.
5. Becker, J. (1998). *Marketing-Konzeption/Grundlagen des strategischen Marketing-Managements*. Munchen: Vahlen, p. 335.
6. Buckley, P.J., Pass, C.L., Prescott, K. (1988). Measures of international competitiveness: A critical survey. *Journal of Marketing Management*, vol. 4(2), p. 180.
7. Chesbrough, H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston, MA: Harvard Business School Press.
8. Daveri, F., Parisi, M.L. (2015). Experience, Innovation, and Productivity: Empirical Evidence from Italy's Slowdown. *ILR Review*, Vol. 68, iss. 4, pp. 889-915.
9. EIS 2020. European Innovation Scoreboard 2020 (2020). <http://ec.europa.eu/docsroom/documents/42981>.

10. Leonards, A. (2019). *How to create an innovative culture*. <http://www.raconteur.net/hr/corporate-culture/create-innovative-culture>.
11. McGregor, L., Doshi, N. (2015). How Company Culture Shapes Employee Motivation. Organizational Culture. *Harvard Business Review*, November 25. <https://hbr.org/2015/11/how-company-culture-shapes-employee-motivation>.
12. Mróz, J. (2016). Determinanty i miary międzynarodowej konkurencyjności gospodarki. In: P. Urbanek, E. Walińska (Eds.), *Ekonomia i zarządzanie w teorii i praktyce*. Tom 9. Łódź: Wydawnictwo Uniwersytetu Łódzkiego, p. 21.
13. Niestrój, R. (1998). *Zarządzanie marketingem. Aspekty strategiczne*. Kraków: PWN, p. 84.
14. Oksanych, O. (2020). Innovation as an opportunity for economic development of central eastern Europe countries (Poland case study). *Economy & Business Journal, International Scientific Publications*, vol. 14(1). Bulgaria, pp. 268-281.
15. Pisano, G.P. (2015). You Need an Innovation Strategy. *Harvard Business Review*, June, pp. 44-54, <https://hbr.org/2015/06/you-need-an-innovation-strategy>, 28.03.2020.
16. Porter, M. (1990). The Competitive Advantage of Nations. *Harvard Business Review*, March, <http://hbr.org/1990/03/the-competitive-advantage-of-nations/ar/1>.
17. Porter, M.E. (1980). *The Competitive Strategy*. New York: Free Press, pp. 10-11.
18. Pysiak, B. (2006). Innowacje w regionie. In: M. Strużycki (ed.), *Innowacyjność w teorii i praktyce* (p. 189). Warszawa: Oficyna Wydawnicza SGH.
19. Rouse, M. (2015). *Innovation culture*. <https://searchcio.techtarget.com/definition/innovation-culture>.
20. Rowley, J., Baregheh, A., Sambrook, S. (2011). Towards an innovation-type mapping tool. *Manag. Decis.*, vol. 49, pp. 73-86.
21. Saadat, V., Saadat, Z. (2016). Organizational Learning as a Key Role of Organizational Success. *Procedia – Social and Behavioral Sciences*, vol. 230, p. 225.
22. Schumpeter, J. (1934). The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle. *Harvard Economic Studies*, vol. 46. Harvard University Press.
23. Schwab, K. (2013). *Global Competitiveness Report 2012-2013*. World Economic Forum, September 2012, <http://reports.weforum.org/global-competitivenessreport-2012-2013>.
24. Setiawanta, Y., Purwanto, A. (2019). Stakeholder power, sustainability reporting, and corporate governance: A case study of manufacturing industry at Indonesia's stock exchange. *Sci. Pap. Univ. Pardubice Ser. D Fac. Econ. Adm.*, vol. 46, pp. 147-158.
25. Spacey, J. (2016). *What is Innovation Culture*. <http://www.simplicable.com/new/innovation-culture>.
26. Staack, V., Cole, B. (2017). *Reinventing innovation. Five findings to guide strategy through execution*. PwC. <https://www.pwc.com/us/en/advisory-services/business-innovation/assets/2017-innovation-benchmark-findings.pdf>.

27. Tam, J.P.K., Fernando, Y. *Ecological Performance as a New Metric to Measure Green Supply Chain Practices. Encyclopedia of Information Science and Technology, Fourth Edition*, ch. 465, p. 5389.
28. Teece, D.J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, vol. 43, pp. 172-194.
29. Vila, J. (2011). Innovative Culture: Values, Principles and Practices of Senior Executives in Highly Innovative Companies. *Innovation. Perspectives for the 21st Century*. Spain: BBVA. ISBN 978-84-92441-47-1.
30. Zhou, K.Z. (2006). Innovation, imitation, and new product performance: The case of China. *Industrial Marketing Management*, vol. 35, no. 3, pp. 394-402.