

The role of human capital in creating competitive advantage based on technology¹

by

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ABSTRACT

The article presents the main findings from research, which included companies that have the ability to create a competitive advantage based on technology. Successful implementation of innovations is based on a combination of two elements. One is the vision, derived from the R&D department, which is a change that builds new value. The second is the involvement of employees, who are implementing the developed solutions. This approach increases the chances of success of implemented innovations and allows to combine two factors - the efficiency and creativity.

Keywords:

competitive advantage, innovation, employee involvement

INTRODUCTION

In science and practice of strategic management, competitive advantage plays an important role because of the need to identify its sources and define the possibilities of its maintenance. Crucial to the success of enterprises is not only the end result, but also the entire process of creating a competitive advantage. That is why it is so important to look for a reciprocal link between growth and development, innovation, technology, success of businesses and having a competitive advantage. Innovations are considered as one of the primary sources. Their skillful implementation provides better-than-average profits for the company and guarantees a multi-dimensional success. However, for the advantage achieved through innovation to be sustainable, it is necessary to ensure effective implementation of the developed innovative strategies, taking into account participation of the employees in the work at various stages of the process. This allows to create and implement the strategy in accordance with the

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objectives and with the use of available resources, while ensuring a commitment from its direct contractors.

The purpose of this paper is to present results of a study on the achievement by the target company a competitive advantage based on technology and innovation, and to analyze the tasks and the role played by the employees in the implementation of such strategies.

COMPETITIVE ADVANTAGE

In the science and practice of strategic management, competitive advantage plays an important role because of the need to identify sources of competitive advantage and opportunities to sustain it. What is important for the success of enterprises is not only the end result, but also the entire process of creating a competitive advantage. For that reason it is important to search for a reciprocal link between growth and development, innovation, technology, successful businesses and having a competitive advantage.

For many years, management practitioners and theorists have wondered about the reasons for gaining and maintaining competitive advantage. In the literature, there are presented different approaches:

1. The approach which is a classic competition analysis emphasizes the importance of the company's market position and the specificity of the sector. This approach exposes the importance of external conditions (Porter 1980);
2. Resource approach, in which the greatest importance is attributed to the unique internal company resources, both tangible and intangible assets, core competencies of the organization, and quickly changing opportunities in the rapidly changing market (Prahalad and Hamel 1990);
3. The theory of creative destruction, which involves determining the importance of innovation and time against "being static" (Schumpeter 1934, 1950);
4. Learning organization theory emphasizes the importance of knowledge, assuming support for the permanent development of knowledge and skills (Senge 1991).

M. Porter pointed out three approaches to obtaining a sustainable competitive advantage: cost leadership, differentiation, niche market.² Subsequent studies focused on the search for internal conditions which favour the obtaining and maintaining long-term competitive

² M.E. Porter, "Przewaga konkurencyjna. Osiągnięcie i utrzymywanie lepszych wyników", Wyd. HELLION, Gliwice, 2006, pp. 38.

advantage.³ The most recent works are devoted to analyzing the links between internal conditions in the company and opportunities posed by the market and the determinants of competitive advantage.

All approaches emphasize the need to link competencies, skills and strategies with environmental requirements, in particular with the key factors for success. Companies that understand the needs of the market, but do not have the necessary internal resources (e.g. a distinctive technology) can have a good diagnosis of the market, but cannot satisfy market needs. Even companies with strong internal resources, but without a market orientation may have a basis for creating a competitive advantage, which, however, will not match the market's needs.⁴

Competitive advantage refers to the situation when the company dominates the competition, being able to offer its customers additional value, quality or level of service.⁵ Having a competitive edge means standing out from competitors by having something or doing something.⁶ Competitive advantage, also referred to as strategic, can be defined as the achievement of⁷:

- higher value than competitors;
- better results than competitors.

Competitive advantage is a group of factors that distinguish the organization against its competitors by building in the eyes of customers a unique image of the company in terms of offered value and customer service.⁸

For the advantage to qualify as competitive, it must be: reasonable, supportable, and linked to a recognizable benefit for customers.⁹ Some other features are also attributed to competitive advantage; a strategic advantage should be: permanent, visible and difficult to duplicate.¹⁰

³ J. Barney, "Firm resources and sustained competitive advantage", *Journal of Management*, 1991, Vol. 17, No 1.

⁴ M. Ghingold, B. Johnson, "Intrafirm technical knowledge and competitive advantage: a framework for superior market driven performance", *Journal of Business&Industrial Marketing*, 1998, Vol. 13, No. 1.

⁵ J. Sutherland, D. Canwell, „Klucz do zarządzania strategicznego”, Wyd. Naukowe PWN, Warszawa 2007, pp. 177 (in) M.E. Porter, "Competitive advantage: creating and sustaining superior performance", London, Simon&Schuster, 1988.

⁶ J. Rokita, „Zarządzanie strategiczne. Tworzenie i utrzymywanie przewagi konkurencyjnej”, PWE, Warszawa 2005, pp. 57.

⁷ J. Rokita, „Zarządzanie strategiczne. Tworzenie i utrzymywanie przewagi konkurencyjnej”, PWE, Warszawa 2005, pp. 58.

⁸ Hao Ma, "Creation and preemption form competitive advantage", *Management Decision* 1999, 37/3.

⁹ J. Rokita, „Zarządzanie strategiczne. Tworzenie i utrzymywanie przewagi konkurencyjnej”, PWE, Warszawa 2005, pp. 61.

¹⁰ M. Romanowska, „Planowanie strategiczne w przedsiębiorstwie”, PWE, Warszawa 2004, pp. 262.

The biggest question may raise durability of the advantage, which is rather an optimal condition which the company should pursue.

Sources of competitive advantage may arise in the implementation of the strategy and through luck, or both simultaneously. Potential sources of competitive advantage can be many:¹¹

- unique resources,
- innovation,
- the impact of the market,
- efficiency.

Among the factors that define the short-and long-term competitive advantage are the following ones: product quality, price, promotion, distribution, performance, rate of technological progress, technical service, financial services.¹² Tangible and intangible resources have a decisive impact on competitive advantage. Not all resources may turn out to be important. For this to happen, they must meet four conditions, i.e. to be rare, valuable, impossible to copy, and difficult to replace with substitutes.¹³ These resources can be used to build part of a strategy of competitive advantage.¹⁴

The next classification points to three sources of competitive advantage based on¹⁵:

- ownership (possession) of property or factors, such as a strong market position, unique resources, reputation, knowledge, access;
- acquaintances, that is opportunities and rights to gain special access to the means of production and markets, such as special relationships with suppliers or customers;
- access to special knowledge, skills, opportunities used to manage the company.

The new approach to the sources of competitive advantage emphasizes the need to acquire skills of regeneration of the resources, development of key skills and competencies, the ability to learn in the organization (individual learning), and the organization itself

¹¹L.S. Foon, "Capabilities differentials as sources of sustainable competitive advantage", *International Journal of Business & Society*, 2009, Dec, Vol. 10, Iss.2.

¹²Ch. Beard, Ch. Easingwood, "Sources of Competitive Advantage in the Marketing of Technology-intensive products and processes", *European Journal of Marketing*, 1992, Vol. 26, No 12.; M.W. Lawless, R.J. Fisher, "Sources of durable competitive advantage in new products", *Journal of Product Innovation Management*, 1990, Vol. 7.

¹³J. Barney, "Firm resources and sustained competitive advantage", *Journal of Management*, 1991, Vol. 17, No 1.

¹⁴A. Toppinen, R. Toivonen, A. Mutanen, V. Goltsev., N. Tatti, "Sources of competitive advantage in woodworking firms of Northwest Russia", *International Journal of Emerging Markets*, 2007, Vol. 2, No 4.

¹⁵Hao Ma, "Creation and preemption for competitive advantage", *Management Decision*, 1999, 37/3.

(organizational learning)¹⁶. Currently, it is also important to note the reaction rate as a source of competitive advantage.¹⁷ To remain competitive, it is necessary to invest in the area of R&D and innovation, which in turn cause an increase in productivity.¹⁸

In the literature, there are many classifications of competitive advantages. Advantage can be divided into¹⁹:

- offensive advantage, which includes cost advantage, the advantage of provided benefits;
- defensive advantage associated with the privileged position in the market.

Another classification proposes a division into a lasting and temporary competitive advantage.²⁰ M. Porter, on the other hand, introduced the distinction between competitive advantage of low cost and high quality.

Global crisis has caused organizations to invest their capital more wisely, first of all spending it on human capital and R&D. Such a defence against the crisis will affect the competitive advantage in the future.²¹

Technology as a source of competitive advantage

In the 21st century, referred to as the age of technology, winning in the competitive struggle involves the use of innovation and technology as key factors for success²². Success today depends on the competitiveness which companies are able to expand by selecting the appropriate competitive strategies, using existing resources, using adaptability by following the market opportunities. In particular, companies operating in the international market should build a competitive advantage based on the R&D and innovative products and

¹⁶ S.V. Lopez, "Competitive advantage and strategy formulation. The key role of dynamic capabilities", *Management Decision*, 2005, Vol. 43, No 5.

¹⁷ ed. by M. Moszkowicz, „Zarządzanie strategiczne. Systemowa koncepcja biznesu”, PWE, 2005, pp. 108.

¹⁸ S. Roper, S. Arvanitis, "From knowledge to added value: A comparative, panel-data analysis of the innovation value chain in Irish and Swiss manufacturing firms", *Research Policy*, 2012, Vol. 41, Iss. 6.

¹⁹ ed. by M. Moszkowicz, „Zarządzanie strategiczne. Systemowa koncepcja biznesu”, PWE, 2005, pp. 118.

²⁰ T. O'Shannassy, "Sustainable competitive advantage or temporary competitive advantage: Improving understanding of an important strategy construct", *Journal of Strategy and Management*, 2008, Vol. 1, Iss.2.

²¹ M. Sheehan, "Investing in management development in turbulent Times and perceived organisational performance: a study of UK MNCs and their subsidiaries", *International Journal of Human Resource Management*, 2012 Jun, Vol. 23, Iss. 12.

²² M.E. Porter, "Technology and competitive advantage", *Journal of Business Strategy* 1985, Vol. 5, Iss. 3; A. Ahad, M. Osman-Gani, "International technology transfer for competitive advantage: a conceptual analysis of the role of HRD", *Competitiveness Review: An International Business Journal Incorporating Journal of Global Competitiveness* 1999, Vol. 9, Iss. 1.

production, assuming that the use of technology is the most important factor for global expansion.²³

Technological changes are a major factor affecting the competitive position of companies and the rules of competition²⁴:

- technology functions as an "equalizer", because the use or ignorance of it alter the competitive position of enterprises;
- technology initiates the development of new industries and determines the structural changes in existing industries.

Technology is of strategic importance because it is used to: reduce costs, correct quality, quick introduction of new products, and using new processes and technologies, and ultimately to establish successful competition. The common point of these considerations is the assumption that knowledge is the basis of technology and innovation.²⁵ Knowledge, in particular related to technology, is important for competitive advantage when the advantage is building, with a simultaneous change in the industry structure. Technology is correlated with a competitive advantage, since the possibility of gaining a competitive advantage is dependent on the ability to offer customers a distinctive proposal.

Not every change in technology may result in gaining sustainable competitive advantage. For this to happen, a change in technology should²⁶:

- result in lower costs and influence the variation;
- result in better distribution of costs and enhance the degree of differentiation;
- enable the position of a pioneer (leader) of the new technology.

There is a strong connection between technology and competitive advantage based on effective management of technology. The key issue is to create a comprehensive innovation strategy that will contribute not only to achieve, but above all to maintain long-term competitive advantage.

CREATING AND IMPLEMENTING THE INNOVATION STRATEGY

²³C. Tung-Lung, "Cultivating global experience curve advantage on technology and marketing", *Journal of Marketing Practice: Applied Marketing Science*, 1997, Vol. 3, No. 4.

²⁴ M.E. Porter, "Przewaga konkurencyjna. Osiągnięcie i utrzymywanie lepszych wyników", Wyd. HELLION, Gliwice, 2006, pp. 211.

²⁵ J. Rokita, „Zarządzanie strategiczne. Tworzenie i utrzymywanie przewagi konkurencyjnej”, PWE, Warszawa 2005, pp. 216.

²⁶ M.E. Porter, „Przewaga konkurencyjna. Osiągnięcie i utrzymywanie lepszych wyników”, Wyd. HELLION, Gliwice, 2006, pp. 219.

Literature offers many definitions and ways to approach the term innovation. Some of them focus on aspects related to technology, others emphasize the innovative nature and unknown properties of the product or service. The authors of this paper find the following definition most appropriate: "innovation is a permanent change that builds new value, e.g. it allows to serve customers more efficiently and reduce costs. It is often identified with the area of research and development, but an innovator may as well as be the person who makes changes in the processes of sales, marketing and logistics. Sometimes, innovation means creating something new, and sometimes merely eliminating an unnecessary element."²⁷

Successful implementation of innovations is contingent upon a combination of two elements - a vision which comes mainly from the department of research and development, and the opinions and experiences of employees, which implement the developed solutions. Thanks to this, there are made ongoing changes as well as grassroots initiatives, and this approach increases the chances of success. Organizational culture focused on innovation, and the creation of a value system within it, accepted by the employee, is of considerable importance in that case. It seems that the notions of efficiency and creativity complement each other, and the objective system which builds confidence also encourages innovation. It is favoured by a flat and flexible culture, promoting the ideas generated at the lower levels of the organization²⁸. It is worth mentioning that "knowledge and inspiration coming from the market is just one of the factors determining the success of even the most innovative ideas. Effective implementation of innovations are the result of continuous research and joint efforts of all employees."²⁹

It seems that it is appropriate, therefore, to recommend to organizations the introduction of a global and uniform approach to the process of creating ideas, their evaluation and use. Creation of such a careful program, which takes into account the participation of employees, turns out to be more effective than the automatic duplication of individual practices on innovation applied in other companies. It stems from the fact that challenges related to the implementation of innovations vary depending on a specific organization, and therefore there is no one universal solution, the application of which would

²⁷ T. Klekowski, in: „Skuteczne innowacje: doświadczenia polskich liderów”, Harvard Business Review Polska, July-August 2011, pp.64.

²⁸ „Skuteczne innowacje: doświadczenia polskich liderów”, Harvard Business Review Polska, July-August 2011, pp. 68.

²⁹ A. Jacaszek, in: „Skuteczne innowacje: doświadczenia polskich liderów”, Harvard Business Review Polska, lipiec-sierpień 2011, pp. 66.

ensure maximum profits for the company. It is therefore necessary to diagnose the organization, focusing on the possibility of creating ideas within the company, as well as a potential supplement of existing resources by external influences. The next step should focus on conversion, that is appropriate selection and skilful transformation into concrete programs, decisions and projects, including the direct participation of the executives. Equally important is the final step, which is their distribution and, therefore, communication and promotion of the adopted solutions in order to decrease the potential resistance to change, and gain support for the revised, financed and developed projects.³⁰

In the literature, one can find many definitions of innovation strategies, which slightly differ in some aspects. And so, according to some authors, innovation strategy allows one to specify areas of such use of resources as to achieve the objectives related to the implementation of innovation, thus achieving a previously competitive advantage.³¹ According to others, this strategy is defined as the sum of the strategic choices related to innovation activities, where the aspect associated with setting strategic objectives is overlooked, and the ways and means necessary for its implementation are stressed. It should be emphasized that it is sometimes regarded as a kind of meta-strategy which covers all functions of the company.³²

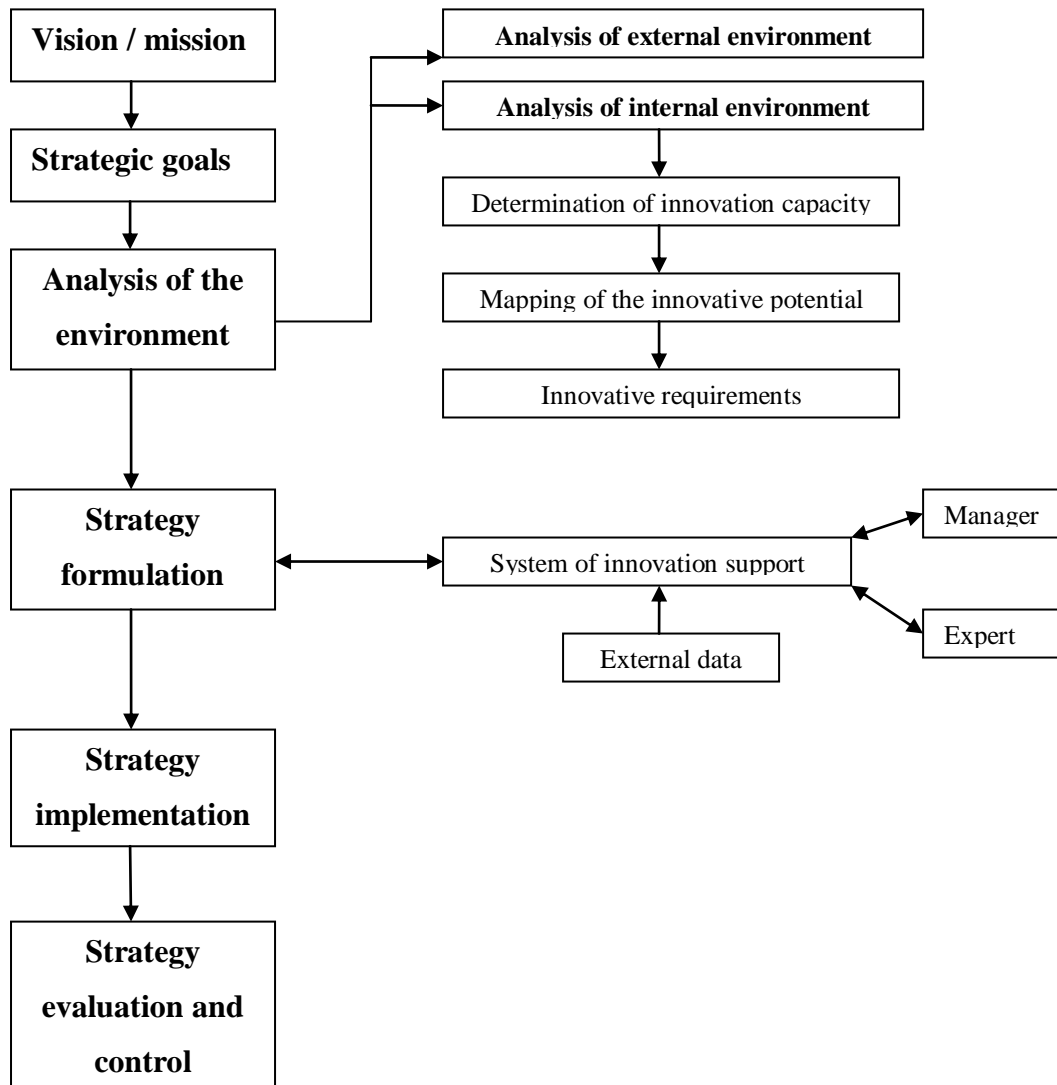
To fully analyze the innovation strategy, it is worth quoting the model of its development and implementation, which is based on the classic strategic management process, adding, however, aspects related directly to the areas of innovation. It is illustrated by the following chart.

³⁰ M. Hansen, J. Birkinshaw, „Łańcuch wartości innowacji”, *Harvard Business Review Polska*, październik 2011, pp. 116-122.

³¹ M. Dogdson, D. Gann, A. Saltera, "The management of technological innovation: strategy and practice", Oxford University Press, New York, 2008.

³² N. Strecker, "Innovation Strategy and Firm Performance: An Empirical Study of Publicly Listed Firms", Gabler Verlag, Wiesbaden, 2009.

Figure 1. Model of creation and implementation of innovation strategy.



Source: based on V. Lendel, M. Varmus, "Creation and implementation of the innovation strategy in the enterprise", Economics and Management, No. 16/2011, pp. 822.

It is worth noting that the proposed model largely emphasizes the innovative aspects at the stage of strategic analysis and strategy formulation. These two pieces of the development and implementation of strategies seem to simultaneously and to the greatest degree emphasize the need to engage employees. They are, after all, a source of information regarding the potential of the organization as well as the possibilities and the extent of innovations, and they provide the necessary knowledge related to the diagnosis of the organization's environment. In addition, they offer support during the process of formulating the content of the strategy, clarification of its individual areas, as well as consultation - acting as experts in the various functional areas within the company.

Lack of involvement of employees in the development and implementation of innovation strategy is the most common omission on the part of managers, which in turn may lead to low efficiency of the strategy. Lack of information and communication deficiencies translate into lack of organizational climate which would foster innovation and creativity, and thus the situation contributes to the low support from the staff. This applies to any transposed strategy; however, effective implementation of innovations, due to its specific nature, seems to be uniquely associated with the support of the direct contractors.³³

An interesting, yet comprehensive concept regarding the effective development and commercialization of innovative ideas is the concept of innovative management based on the so-called innovation diamond, which includes:

- a) *a strategy* which defines corporate goals for innovation and for those areas around which it wants to build a competitive advantage,
- b) *organizational culture* which allows for free exchange of ideas and promoting innovators, while stimulating creativity at all organizational levels,
- c) *resources*, or, more accurately, rational resource management policies, dedicated to the implementation of innovative projects, which are often subject to significant risks and thus excite temperate enthusiasm,
- d) *implementation*, that is systematizing the process of development of new products and services through its division into several stages, and then monitoring the progress of the assumed stages of implementation and making decisions about further directions of implementation.³⁴

The interaction of all three components and to ensuring their correct functioning is a prerequisite for successful implementation of new products or services. Additionally, it is important to skillfully construct incentive systems, an environment conducive to "intellectual ferment", that is creativity, but also the ability of the employee to assess the merits of the ideas they propose and their impact on future growth of the company. Research proves that the most effective implementation of innovations is characterized by the companies that support any grassroots initiative of their employees, while establishing framework for

³³ P. V. Lendel, M. Varmus, "Creation and implementation of the innovation strategy in the enterprise", *Economics and Management*, No. 16/2011, pp. 824-825.

³⁴ „Wyzwalanie innowacyjności. Jak budować zdolność firmy do tworzenia i wdrażania nowych idei”, *Harvard Business Review Polska*, Luty 2012, pp. 134.

innovation strategy, understood as the objectives of the innovation process and the principles and rules for their implementation (including those related to the motivation system).³⁵

As already mentioned, the literature does not lack studies on the relationship between adaptation strategies oriented towards innovation, and integrated approach to human resource management, which would focus on the liberation of high performance and commitment. They include elements such as appropriate training and skills development, enabling employees to work on strategy and delegation of authority, a high level of autonomy, and remuneration system linked to performance and recognition.³⁶ Such an approach will achieve greater commitment and trigger the desire to become involved in strategic projects, which in turn will translate into greater creativity, and thereby increase the efficiency and productivity throughout the organization.³⁷

Many international studies show a relationship between the results achieved by firms classified as innovative (although innovations include not only products but also services and markets), and its practice of human resource management and participation in various elements of the development and implementation strategies. Roles that they play cover many aspects, ranging from advisory and consultative bodies, by providing ideas and inspiration, to delegation of decision-making powers and freedom in achieving the innovation policy goals.³⁸ There is therefore no doubt that the employees are then associated with a key asset of organizations and their participation seems a natural part of the activities conducted by the organization.

The results presented in this article also indicate that the existing link between creating a competitive advantage based on innovation and technology, and the inclusion of employees in the work during various stages of the strategic management process, as well as communication of the issues related to the implementation of developed strategies.

³⁵ B. Stokalski w: „Wyzwalanie innowacyjności. Jak budować zdolność firmy do tworzenia i wdrażania nowych idei”, *Harvard Business Review Polska*, Luty 2012, pp. 134 – 135.

³⁶ J. Guthrie, C. Spell, R. Nyamori, „Correlates and consequences of high involvement work practices: The role of competitive strategy.”, *International Journal of Human Resources Management*, No 13/2002, pp. 184.

³⁷ F. Cooke, „The important role of maintenance workforce in technological change – a much neglected aspect”, *Human Relations*, No 55/2002, pp. 965.

³⁸ F. Cooke, D. Saini, „(How) does the HR strategy support an innovation oriented business strategy? An investigation of institutional context and organizational practices in Indian firms”, *Human Resource Management*, No. 3/2010, pp. 380.

RESEARCH RESULTS

The following results and interpretations are part of a broader research on strategic management practices during the development of businesses, and they were carried out in 2011-2012 on a sample of 150 randomly selected companies (50 small, 50 medium and 50 large ones), which are joint stock companies or which are listed in the Warsaw Stock Exchange.

Out of the 150 studied subjects, there were selected for further study those companies which base their competitive advantage on innovation. This means that they replied in the affirmative ("rather yes" or "definitely yes") to the two issues presented to them, which read:

1) We are setting new standards in the industry (technological, product-related, organizational, etc.).

2) The main competitive advantage of our company is based on innovation and technology. This way, 77 subjects were selected, which then became objects of further research. What followed was an analysis of the replies to the blocs of questions that focused on:

- 1) Level of the expansiveness
- 2) The competitive advantage
- 3) The interaction
- 4) The financing of development
- 5) Knowledge of strategies
- 6) Responsibility for implementation of the strategy.

The selection of these questions helped to formulate the basic conclusions concerning the role played by employees in the process of implementing a strategy based on technological superiority, and also to clarify the elements of the strategy itself. A synthetic summary of the research results is presented in the table.

Table 1. Results of the study.

Amount	Q22	Q32	Q38	Q40	Q73	Q74	Q75	Q76	Q77	Q81	Q82	Q83	Q84
I don't know	0	2	1	1	0	4	2	11	1	0	0	1	1
Definitely not	1	0	2	7	2	3	3	3	5	23	10	5	11
Probably not	2	2	3	13	7	15	10	4	14	21	18	9	19
Yes and no	8	10	12	10	13	7	8	12	10	15	12	6	22
Probably yes	29	26	27	18	23	23	21	22	20	14	24	29	15
Definitely yes	37	37	32	28	32	25	33	25	27	4	13	27	9
Total	77	77	77	77	77	77	77	77	77	77	77	77	77
% of the amount													
I don't know	0%	3%	1%	1%	0%	5%	3%	14%	1%	0%	0%	1%	1%

Definitely not	1%	0%	3%	9%	3%	4%	4%	4%	6%	30%	13%	6%	14%
Probably not	3%	3%	4%	17%	9%	19%	13%	5%	18%	27%	23%	12%	25%
Yes and no	10%	13%	16%	13%	17%	9%	10%	16%	13%	19%	16%	8%	29%
Probably yes	38%	34%	35%	23%	30%	30%	27%	29%	26%	18%	31%	38%	19%
Definitely yes	48%	48%	42%	36%	42%	32%	43%	32%	35%	5%	17%	35%	12%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Descriptive statistics													
Average	4,3	4,2	4,1	3,6	4,0	3,5	3,8	3,4	3,6	2,4	3,2	3,8	2,9
Median	4	4	4	4	4	4	4	4	4	2	3	4	3
Dominant	5	5	5	5	5	5	5	5	5	1	4	4	3
Standard deviation	0,9	1,1	1,1	1,4	1,1	1,5	1,3	1,7	1,4	1,2	1,3	1,3	1,3

Source: own research.

The goal of the questions was to investigate the importance of: growth as a strategic priority, flexibility and speed as a source of competitive advantage, seeking new fields of action in collaboration with partners, finances as barriers of development, knowledge of strategies and objectives of the staff, and knowledge of actions to achieve the strategic objectives.

The companies were asked to indicate whether:

- rapid growth is a strategic priority;
- flexibility and responsiveness are key competitive advantages;
- they cooperate with partners from other industries to find new fields of action;
- access to sources of funding is not a barrier for development;
- great importance is given to the knowledge of the strategy by the employees;
- all employees know the company's strategic goals;
- all employees know what they must do to reach the company's strategic objectives;

Question 22. Dynamic growth is our strategic priority.

Among the surveyed companies, 86% said the recognition of dynamic growth as a strategic priority (48% responded 'definitely yes', 38% 'rather yes'). The opposite response ('definitely not') was given by 1% of companies, 'probably not' was chosen by 3%, and 10% were uncertain ('yes and no').

Most of the surveyed companies set themselves a bold goal of dynamic growth. Implementation of this objective is meant to strengthen the company's position in market, it allows to make positive changes in the company, and it responds to the increasingly stronger competition. The increase, although it is not identical with the development, is correlated with it - the company has to develop as it grows, which largely determines the possibility of survival and competition. The fact that most companies show interest in planning their future

should be viewed positively. However, the most important issue is the possibility of achieving this goal.

Question 32. Flexibility and the reaction rate are the most important competitive advantages for our company.

In the next question, the companies were expected to indicate whether their flexibility and responsiveness are key competitive advantages. Most of the surveyed companies, 82%, utilize flexibility and responsiveness as their distinguishing factor. Only 6% of the companies do not consider operational flexibility and responsiveness as a source of competitive advantage (3% of companies replied 'I don't know', another 3% responded 'probably not').

Most participants involved in the study build a competitive advantage based on factors that enable them to leverage market opportunities and compete effectively. Selection of competitive advantage focused on speed and flexibility can translate into having an upper hand in the competition, while adapting to the market requirements. Time and individualized offers are now among the most important factors in distinguishing a company in the eyes of customers. It is important to note, however, the subjectivity of assessment of the sources of competitive advantage against competitors.

Question 38. We cooperate with partners from other industries to find new fields of action.

The next question served to gain knowledge about the cooperation with partners from other industries to find new fields of action. 42% of companies declares cooperation with partners from other industries in search of new fields of action, 35% is likely to cooperate in this manner. Only 7% of companies (3% responded 'definitely not' and 4%, 'rather do not') is not involved in this type of cooperation. 1% of the surveyed companies do not have discernment, and 16% are not able to specify the activity or level of cooperation. For the surveyed companies, this specific cooperation strategy is important, because only 8% of the companies lacks this kind of initiative.

The strategy of cooperation with partners from other industries, focused on finding new possibilities for action, includes long-term initiatives with partners with whom the company does not directly compete. Acting individually, companies will always be more at risk from competition. Therefore, cooperation allows for diversification of risk, achieving synergies, gaining new experiences and knowledge, in particular with regard to new projects. This kind

of cooperation can help achieve leadership in important areas, hence the sense of creating strategic alliances. In this way, companies are increasing their chances of survival, growth and success in the competitive struggle. Such initiatives should be deemed as something positive, since they prove that the company is actively shaping its future. Those companies that pursue a strategy of cooperation, going beyond the domain of their activities, are aware that cooperation can bring benefits in terms of utilization of development opportunities in the future. The results indicate no tendency to isolate themselves, and willingness to cooperate with other entities in relation to the dominant number of companies participating in the study.

Question 40. Access to sources of funding is not a barrier for our development.

With regard to the surveyed companies, there was an exceptional situation of 59% of the companies, whose growth is not hampered by a lack of access to sources of funding. 26% of businesses indicated the restrictions on the choice of development strategy through a capital or access to external capital (17% responded 'probably not' and 9% 'definitely not'). Only 1% have no knowledge on this subject.

With great emphasis, majority of companies indicated that access to sources of funding is not a barrier to their development. This is an unusual financial situation assessment, as Polish entrepreneurs signal enormous difficulties in raising capital due to its high price and difficulty in meeting the requirements, or their own lack of knowledge. Participants in the survey are in a privileged position because of the possibility of obtaining financial grants, or because of their own stable situation. In the long run, lack of support with the outside capital may significantly reduce the chances of companies to develop dynamically. In turn, building a competitive advantage requires large financial investments and innovations. However, in the opinion of the surveyed companies, lack of capital will not adversely limit their strategic choices.

Referring to the previous questions, it can be assumed that the implementation of bold assumptions for building competitive advantage based on speed and flexibility, and cooperation in entering new markets, will be possible due to access to sources of funding.

Question 73. It is important for us to ensure that all employees know the strategy of our company.

Another question was used in assessing the significance of knowledge strategy by the employees. Majority of the participants of the survey (72% responded 'yes' and 'probably yes') attach importance to the dissemination of the strategy among the employees. 17% of the

companies declares no clear view on the matter, and for 12% this issue does not matter, or probably doesn't matter.

The involvement of companies in the dissemination strategy of the workforce can be positively assessed. Knowledge of strategies among employees should help integrate them with the company and facilitate the implementation of the strategy. In addition, routine work performed by employees for the company has been given a deeper meaning. Implementation of a participatory approach is consistent with a modern style of management, where decisions are discussed with the company's employees. However, in this case we do not know whether the employees were actively involved in creating the strategy, therefore it is difficult to clearly determine whether the manner of informing them about the strategy is sufficient.

Question 74. All staff know the company's strategic goals.

The next question analyzed the knowledge of the strategic objectives of the company among employees. In most companies (62%) employees know the company's strategic objectives. Only 23% of businesses did not spread information about the objectives among their employees. A relatively large group of companies (5%) did not know whether strategic objectives are known to employees.

Even if employees did not participate in the development of the strategy, effective communication should facilitate the dissemination of goals. The competitive advantage of companies will largely depend on the objectives and the skills of their implementation. Due to the lack of knowledge about the goals, employees do not know the long-term objectives which they should fulfil in their daily duties. Such management may lead to sole focus on operational activities, and it does not build long-term relationships with the company, thus separating the top management from the employees.

Question 75. All employees know what to do so that the company achieves its strategic goals.

Up to 70% of the companies said that the employees know about their own activities pertaining to achieving the strategic objectives. Lack of such knowledge applies to employees of 17% of companies. 3% of companies do not have knowledge in this area, and 10% are unable to clearly assess the situation.

Companies that do not ensure that the employees know their contribution to achieving the strategic objectives do not utilize knowledge of modern management. Nowadays, more and more often it is noted that success depends not only on developing a good strategy, but on its

rapid and effective implementation. To achieve this, the company should at least familiarize the employees with their contribution to the implementation of the strategic objectives.

Question 76. All employees accept the strategy.

In a large part (61%) of surveyed companies most employees accept the strategy. Of course, it should be verified by in-depth study involving employees from different organizational levels, but such a large number of responses suggests that in these companies much importance is attributed to the system of communication strategies. The number of responses may suggest that communication activities are conducted with some regularity, and that adequate funding and necessary amount of time is devoted to them. It should be noted that the tried and tested traditional methods of communicating decisions between tiers of the organizational hierarchy and information campaigns are not an effective way to ensure business efficiency and effectiveness. The most serious omission of the managers, leading to long-term negative consequences for the further development of the company, include, amongst others, lack of consultation with specialists from other departments as well as single-handed strategic decision-making, not taking into account when creating strategic plans the analyses of the market, competition and customers created by employees of different cells, or the lack of verification of policies and lack of conducting periodic reports summarizing the results of the implementation. Recommended preventive measures which aim to eliminate these errors, relate to, among others, conducting regular meetings involving people from different departments, training of all employees (including managers) in creative thinking, managing change and effective implementation of innovation. It seems, therefore, that the subjects in question were able to successfully combine the above-mentioned solutions, and thus they made the knowledge of the strategy by the employees one of the essential elements of the implementation of innovation strategy.

Question 77. We inform all employees about the current progress in implementing the strategy.

The same number of positive answers was given to the next question diagnosing transmission to all employees current information on progress in implementing the strategy. Again, this indicates a high strategic awareness of the surveyed companies, which, after analyzing the resources, capabilities, or characteristics of an organization, developed the most efficient variant of the action, contributing to an effective process for communicating the progress of implementation. This is especially important in the context of the introduced innovations,

when the time plays a key role in their implementation process, just like the employees' awareness of the achieved results. An important role is played by informal leaders as channels of communicating strategic findings and demonstrating their beneficial effects on the activities of the organization. Thanks to this, it is possible to react quickly to the observed deviations, and thus to show more flexibility which, as a result, helps to achieve a competitive advantage based on innovation.

Question 81. The responsibility for implementing the strategy belongs solely to the board.

Other questions concerned the responsibility for implementation, and the obtained responses lead to interesting conclusions. The first question in the thematic block included the issue of sole responsibility for implementation, resting on the board/owner. More than half of the surveyed companies (57%) explicitly denied such a statement. Only 5% responded "definitely yes", which clearly demonstrates the conscious sharing of responsibilities between different levels of management.

Question 82. All employees are responsible for implementing the strategy.

Next, respondents were asked whether all employees are responsible for implementing the strategy - here the number of affirmative responses was slightly lower at 48%. This means, therefore, that the implementation of the strategy does not involve the whole group of employees, but only some part of it. This may prove a strategic awareness of the surveyed entities in which managers are convinced that this is a laborious undertaking, impossible to cope with the participation of a narrow group of performers. There are therefore assigned responsible persons who assume leadership roles in implementation projects, and who ensure the proper implementation of the strategy. In the case of innovative projects, which are often realized by maintaining a separate budget and a range of resources, there are established autonomous teams responsible for monitoring progress in achieving the objectives and their associated metrics.

Question 83. To facilitate the implementation of the strategy we assign the leaders at various organizational levels

The next question verifies the above-mentioned issues, 73% of companies assign leaders at various organizational levels. Their task is to control the implementation of the strategy, and thus their role includes cascading the strategy from the level of abstraction to the level of

specific tasks and measures of their performance. They also inform a wide range of co-workers about the connection of their operational tasks with the ultimate strategic effect. It is meant to create awareness of participation in implementation programs, as well as excite enthusiasm and active involvement in it, broadening the role of the employees not only as performers, but also as leaders. This is crucial in implementing the innovation strategy, which is often associated with the occurrence of resistance to change. Showing the connection between the current tasks and operational decisions, and implementation of a farsighted strategy, is definitely required for its success.

Question 84. The employees have the opportunity to decide how to implement the strategy.

The final question in this area concerned the area of freedom of employees to decide how to implement the strategy. Here, relatively few, because only 31% of companies admitted that their employees possess decision-making powers in this respect. This means that in these companies, the employees may themselves establish gauges linked to strategic objectives, or propose strategic initiatives, understood as any programs and projects beyond the operational activities of the organization, and undertaken with a view to facilitating the achievement of performance targets. Admittedly, this is a relatively small percentage of the surveyed population of enterprises; however, as seen in the graph, another 29% indirectly responded "yes and no," which may prove the existence of both, some powers of the employees in this field, as well as top-down management control. Employees may thus serve as a consultative function, while providing information on current progress of a project, as well as on expected deviations or lack thereof. Of course, these diagnoses may be subject to error arising from insufficient strategic awareness or knowledge; however, it seems that even then they can be an excellent base material, which subsequently will be subject to review by management. In that case, employees possess an auxiliary function, which may also play a considerable role in the implementation of the strategy.

CONCLUSION

The company's advantage may raise due to various reasons, therefore there are numerous factors that contribute to the existence or extension of the differences between companies and their market position. The research results pertained to the companies declaring the building of a competitive position based on innovation and technology. They are leading companies in

the market, mainly due to setting new standards in the industry in which they compete. They may be considered as a specific model in the ways and tools for building and implementing innovative strategies. Model business strategy stands against its competitors by focusing on dynamic growth, flexibility and responsiveness to changes observed in the environment. Another finding of the study can be confirmation of the results of previous studies which proved that company size is not a barrier to innovation. Moreover, vast majority of companies actively works with partners from other sectors to explore new fields of action, which proves their creativity, flexibility, planning, development, and innovative nature.³⁹ It should be emphasized that a large percentage of enterprises attaches great importance to the participation of employees in the work involving the development and implementation of strategies. The key is not only knowledge of the employees about of the strategic plan, but also acceptance and ability to influence the stages of its implementation. Thus, it appears that the results of the studies confirm the link between effective implementation of strategies based on innovation, and engagement of the team of employees in each of its areas.

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