

THE BUSINESS MODEL OF STEEL COMPANY - FOCUS ON THE INNOVATION

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Abstract

From a historical point of view, the source of competitive advantage of industrial company was a access to capital and raw materials. The restructuring process has made Polish steel industry able to compete on the international market in the field of technology. However, dynamically changing economic and legal environment still poses new challenges to steel producers. In the article the innovation as an element of competitive advantage of steel company has been shown. The business model of steel company focused on innovation has been proposed. The look at the innovation as an important clue to create modern strategies and business models in steel companies was presented. It has been focused on the structures and rules of creation these models able to innovate. In the article barriers to innovation was also identified. The most important feature of the innovation for the modern steel company should be related to the so-called "creative destruction of management" depending on creation and destruction of structures and processes that go beyond normal adaptation and price competition. It was assumed that these are basic characteristics of steel company of the future, and its basic function should be the innovative business model.

The aim of this article is to describe new business models that allow for implementation of innovations, rapid reorganization processes and flexible adjustment of the functioning of enterprises (including metallurgical) to the new conditions and changing environment.

Keywords: Business model, business processes, innovation

1. INTRODUCTION

Rapidly changing business environment, development of new technologies, the increasing intensity of competition and increasing globalization pose businesses against increasingly difficult requirements - in particular, that the complexity of the environment and its instability increase the uncertainty in decision-making [1].

Building a competitive advantage of metallurgical companies is possible due to its ability and effectiveness to introduce various types of innovation, which both own solutions and innovations applied due to their transfer or absorption. Strategic management theory covering these issues recognizes innovation issues in various configurations, areas and aspects of the research. Of particular interest is the perception of innovation as an important message of building modern strategies and related business models of companies. Important for management practices are the structures and principles of construction of modern business models capable of using innovation [2].

In June 2013 the European Commission published a policy paper, which stresses the importance of the steel industry for the development of the economies of the European Union. Polish steel industry, having a long tradition is an important element of the processing industry and the entire economy of Poland. The restructuring of Polish steel industry has made the ability to compete internationally in terms of technology, but dynamically changing economic and legal environment still poses new challenges for steel producers [3]. The high cost of energy products and raw materials for steel production and EU requirements as to reduce the impact of industry on the environment contributed to the need to implement further investments to improve the competitiveness of the steel mills. In the years 2004-2013 steelworks allocated around 10 billion zł for new

investment and the necessary upgrades. Despite the high level of technological advancement and performance indicators, domestic steel industry over the last few years struggling with the problem of unused production capacity. In 2013, the production level of almost 8 million tons of capacity utilization secured only 63 per cent. In the opinion of management personnel of the steel industry there is an urgent need to support this sector - it is necessary to create a multi-faceted policy towards the Polish iron and steel industry (including in the context of support for innovation) [4].

The problem of innovations shaping business models in the business of steel companies operating in a highly competitive environment, has become an inspiration to take up the topic of developing and deepening research related to this issue. The aim of the study is to demonstrate the validity of the construction of business model for steel company to gain a competitive advantage.

2. INNOVATION AND THEIR SIGNIFICANCE FOR ENTERPRISE

2.1. The essence of innovation

Implementation of innovation is now recognized as a key factor in the development of the company as to achieve a competitive position in domestic and international markets. The ability of enterprises to obtain and implement innovations allows their existence and development in the future. Charles Freeman claimed that "not innovate, that is to say die". This means that in order to function efficiently in a changing market environment and to compete effectively, companies should conduct innovative activities [5].

In the case of innovation (from the Latin *innovatio - renew*) in the literature you can meet many definitions. The article presents only those that specifically relate to companies. In the easiest way innovation can be defined as the introduction of new ideas to life [6]. Innovation can also be defined as an activity which was not taken in advance and includes features of news [7].

J. Schumpeter [8] defines innovation as "the introduction of a new product or products with new properties, the introduction of new production methods and new technological process. It is also the opening of a new market, gaining new sources of industry organizations and the introduction of a new organization of industry".

In contrast, P.F. Drucker [9] believes that "innovation is a special tool with which changes give rise to new business or provide new services". According to him, this tool resources gives the new opportunities to create wealth and innovation can apply all spheres of business activity [10]. The author treats innovation as systemic action, which are based on the active identification of changes in the environment and on a continuous analysis of the possibilities of their use in creating new, other innovations.

According to the Oslo Manual - international methodological textbook in the field of statistical surveys of technological innovation - through innovation it is understood as putting into practice in the company of new or significantly improved solutions regarding a product, process, marketing or organization. This definition does not limit the concept of innovation only to new absolute, i.e. on the global scale. It presents a broad approach allowing treatment as each new innovation, which is a novelty for the new user.

In a review of the definition of innovation, there are two characteristics most strongly accented, i.e. novelty and change. In case of change we can distinguish its two dimensions. The first dimension is the change in value - expresses itself through products that the company offers and the processes (processes, methods) by which they are created and delivered to customers. The second dimension of change is the degree of its novelty [10]. Innovation distinguishing aspect of change is its positive impact on competitiveness, primarily in the form of benefits and 'hard' economic performance, with some authors draws attention to the socio-economic benefits. Certainly, every innovation is a change, but not every change is the nature of innovation.

Treating changes as innovation is conditioned by the following features [11]:

- change considered by the company for innovations should be introduced consciously, deliberately and permanently,
- innovation is change that results in a more effective functioning of the company,
- innovation is changing, causing an increase in utility performance of the company,
- increase in utility performance of the product or service manifests itself through higher technical quality or utility,
- innovation is the result of changes modifying or introducing entirely new elements of the process or the operation of the company,
- more efficient operation of the company manifests itself through faster response time to external stimuli,
- change should have the ability to disseminate to other companies.

Innovation in the case of a company (including metallurgy) is the way to innovation and its important strategic orientation. It is in relation to innovation primary phenomenon closely associated with creativity and with the ability of companies to develop projects, absorption of innovation, its administration and distribution. Innovation enables a company to compete in a situation where its competitive advantage based on innovation [12]. The measure of innovation is implemented solutions and benefits (effects) from them. Such an understanding of innovation differs from innovation, because it is characteristic of a particular undertaking, expresses its ability to undertake innovation activities and results of the holder of a business. **Fig. 1** shows the effects of innovative activity of enterprises broken down by areas of innovation activity, according to the Methodology of Oslo.

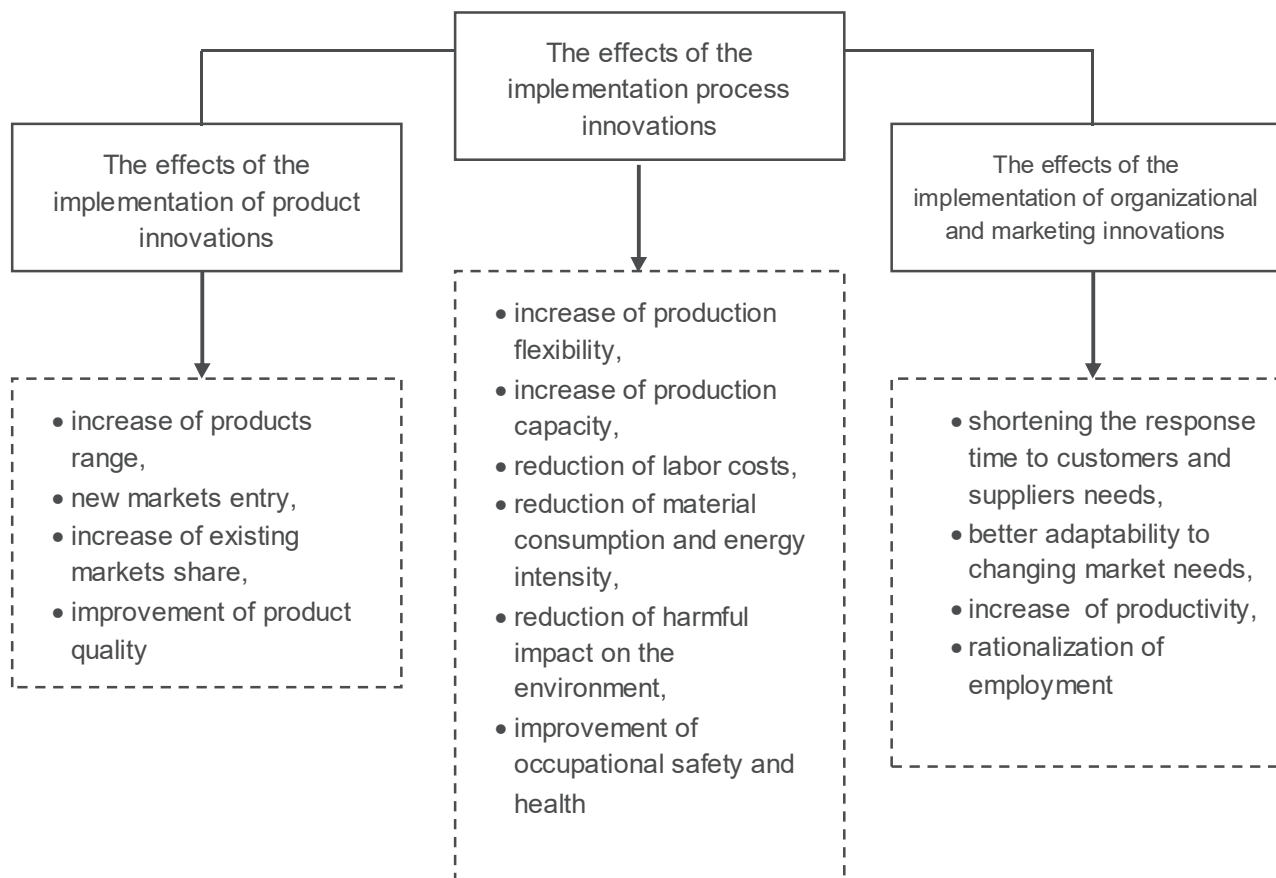


Fig. 1 Examples of innovation activity effects in industrial enterprises [5]

2.2. Innovation management in terms of building business models

The issues of innovation, wider than the process treats the concept of innovation management - such approach is of great importance for the development of business models shaping their structure and relationship with the environment. Innovation management by M. Karlik [13] is in management sciences relatively new concept. In terms of increased efficiency of the process can be described as "search, based on owned resources such types of innovations that make the innovation process becomes more efficient when confronted with the challenges posed in front of company market, competition and customer" [14].

Modern metallurgical company no longer subject to the old logic. For its survival except in terms of product innovation, management innovation is important disseminated by Hamel, who are at the top of the pyramid innovation shown in **Fig. 2**.

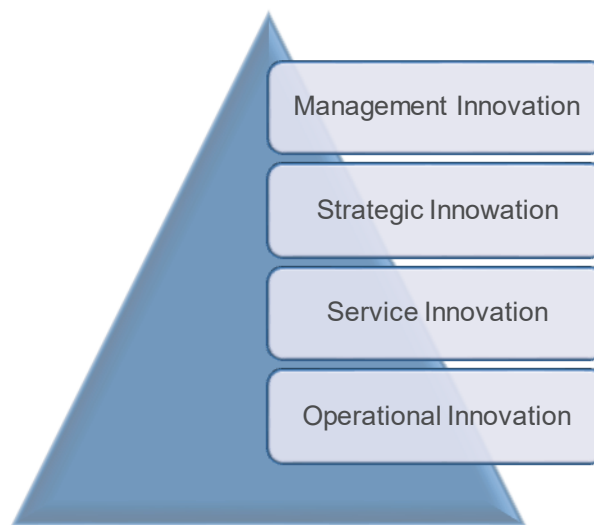


Fig. 2 Pyramid innovation [9]

Innovation management has the unique ability to generate long-term competitive advantage and shows the way we have to go to determine the future of management. The importance of management innovation due to the dynamic changes in the environment in which companies operate, which require new skills constantly to maintain success. Innovation management allows you to create a system that is difficult to copy. It implies a departure from the old management methods. In the context of this research noted a strong resemblance concepts: innovation management and innovation business model. This is due to the fact that this strategy - entering the concept of competitive advantage and strategic objectives - defines the idea of a business model capable of achieving them. In turn, the organization of enterprises, notably elements such as core processes provide a good material to compose business processes which are elements of an innovative business model.

In the context of the concept of innovation management K. Pavitt, J. Tidd and J. Bessant it can be said that one element of its effectiveness is the use of an appropriate business model capable of creating and absorption of innovation [16].

From the point of view of business modeling important is the concept of innovation management as a management model treats the (structure) processes and areas of activity [15]. These are:

- sources associated with changes caused by eg .: inventions, patents, fashion, fluctuations in demand,
- due to resource constraints (technical, organizational, financial, personnel and organizational),
- management and the accompanying opportunities organizations, research and development, processes, employees,
- competitiveness associated with the potential resulting from the will of the leadership, culture of innovation, external linkages, learning skills,

- results (including economic effects) achieved through innovative products, process, organizational, marketing.

From this model of innovation management are still significant for the transfer of innovation and business model construction guidelines and requirements:

- perception of the sources of innovation in the context of ongoing changes not only in the sphere of research and development (patents, inventions), but also on the market (demand fluctuations)
- recognition of resource constraints in terms of implementation of innovations indicating the necessity of change, development or exploration of global resources,
- the importance of the results of innovation management system, which translates into an orientation of business models on the maximize of the value. [2]

The concepts of innovation processes and innovation management find their applications in the practical management of steel companies, an example of which can be implemented innovations in marketing and operational activities, which include: shortening the response time to customers and suppliers, better adapt to the changing needs of the market, increasing productivity and work efficiency, rationalization of employment.

3. BARRIERS IN THE IMPLEMENTATION OF INNOVATION

In order to identify barriers to implementation of innovations categorized interviews with ten managers metallurgical enterprises. The surveyed companies have implemented innovations in the past five years. Companies were not limited only to improve one area of your business. Most often carried out organizational innovation (7 responses). The second most popular was the category of innovation services / customer service related (5 responses). Companies in 4 cases reorganized its approach to finances and ways of financing investment. The innovation process has been carried out 4 times. The least of indications received marketing innovation category / communication with the market.

Interviews have been directed on the understanding the demands of respondents, on areas that should be improved in order to facilitate the implementation of innovation in the company in the future. The five-point scale (from 1-poor barrier to 5-very strong barrier) can be divided into categories, which caused severe difficulties in the implementation of innovation in companies. The strongest difficulties were: the reluctance of managers, difficult market situation and the lack of involvement of employees. The primary obstacles turned out to be:

- lack of funding,
- lack of adequate infrastructure research and development,
- difficulties in finding ideas,
- a large bureaucracy associated with fundraising.

The third group of barriers characterized by a noticeable influence of impeding implementation of innovations were:

- lack of need for innovative actions resulting from the company's satisfaction with current operations,
- lack of decision to undertake innovation,
- unpreparedness companies implementing innovation.

4. CONCLUSION

The conducted observation of sector of metallurgical enterprises shows that an effective and flexible management in a changing and dynamic environment is one of the most important factors in achieving competitive advantage. In the changed business processes use various types of innovation: process, product, organizational and marketing. Improved business processes utilize and develop many elements of social and technical architecture of business model. Changing the business model of the surveyed companies was associated with enlargement of customer value and change in the nature of competitive advantage. The results

of the analysis show the scale of the challenges faced by the steel companies (localized in Poland) in the implementation and diffusion of innovation, which will be accompanied by changes in business models. Meeting these challenges will largely depend on increased supply of innovation in the markets.

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