

EVALUATION OF THE INNOVATION EFFECTS IMPLEMENTATION FOR FIRMS' COMPETITIVENESS IN THE SECTOR OF SMALL AND MEDIUM ENTERPRISES IN POLAND ON THE EXAMPLE OF THE MAŁOPOLSKA PROVINCE

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Abstract: One of the sources of low competitiveness of small and medium-sized enterprises (SMEs) is the relatively small ability to generate innovations. In view of the depletion of such sources of competitiveness in Poland as labour costs or the adaptation of external technologies, the low level of enterprise innovation is becoming a challenge. The system of supporting competitiveness and innovativeness in the SME sector must take into account the problem of insufficient capital for innovative activity - therefore, direct support should remain a key policy tool in the area of supporting innovation. The aim of the article is to assess the effects of innovation implementation by enterprises from the SME sector on the example of the Małopolska province. The authors focused mainly on the innovation activities planned by enterprises and on the sources of their financing, including subsidies for this purpose. The first stage, i.e. the selection of enterprises, was carried out in a targeted manner based on belonging to a separate SME sector. Then, in a random way, 262 enterprises were chosen from the database using the systematic selection. In order to obtain information, a method of in-depth interview using a questionnaire was used. This task was carried out using a categorized set of questions. The interview questionnaire allowed to gather information and numerical data in the following range: planning of the implementation of innovations, use of innovations in the company's development and sources of financing for the implementation of product, process or non-technological innovations.

Keywords: innovation, competitiveness, small and medium enterprises.

Introduction

Sources of economic growth and development as well as the indication of factors increasing the economic potential are one of the most important issues in modern economy. As early as in the thirties of the 20th century, J. Schumpeter pointed out to the role of creative activity of companies, which determined socio-economic development. In this context, the problem of competitiveness and innovativeness, which are the subject of interest to states, both on the national and international level, is not without significance. From the perspective of socio-economic development, innovations influence not only the productivity of production factors, but also the effectiveness of their use.

Study objective

The purpose of this article was to evaluate the effects of implementing innovations by enterprises from the SME sector on the basis of Małopolska Region. The main focus is on innovative actions planned by enterprises and on the sources of their financing, including subsidies for this purpose.

In order to obtain data, the method of in-depth interviews using a questionnaire was applied. This task was performed using a categorised set of questions. The questionnaire used for the interview enabled the collection of information and numerical data from the following thematic categories:

1. How many and what types of innovations were implemented by the surveyed small and medium enterprises from Małopolska Region? How much time did they need to implement them?
2. To what extent did the manner of using innovations contribute to the development of the company?
3. Did entrepreneurs have to face difficulties during the implementation of specific innovations? If yes, of what type?
4. Were the funds obtained for the implementation of the innovation sufficient for the company to implement this innovation?
5. What were the sources of financing these innovations?

Methodology

The questionnaire contained closed and open questions, which enabled obtaining more precise answers. The first stage – the selection of enterprises – was carried out in a purposeful manner, based on their belonging to a determined sector. Then, on a random basis, 262¹ companies were selected in systematic selection from a base constituting the survey frame. The survey frame was the list of SME in Małopolska Region. In total, 386 small and medium enterprises were randomly selected, from which a lower number of entities proceeded to participate in the survey. The remaining entrepreneurs refused to participate in the survey for unknown reasons.

The compared partial and synthetic results present primarily assessments with regard to the level of acceptance of entrepreneurs participating in the survey in relation to the issues of the survey. As a rule, positive replies usually have the character of quality features. The χ^2 (chi-squared) test was used as a verification tool to evaluate the results obtained in this manner. Irrespective of this, the interview questionnaire prepared for this survey enabled giving the character of quality features to its results.

Study results

Innovativeness versus competitiveness of companies

In the source literature, one can encounter many definitions of innovation. More and more frequently innovations are defined as the creation and application of new know-how in order to obtain competitive advantage. Innovations may concern technological, economic, social or cultural aspects (Nowicka-Skowron, Pachura, 2009). Innovation is determined by the capacity to create and use know-how in production to further create new know-how and apply it in an effective way in innovative processes.

The notion of innovation comes from the Latin word *innovare*, which means renewal (Weir, 1994). The term 'innovation' – often appearing in specialist literature from the field of economy – requires the formulation of a precise definition, which is extremely difficult. Among limitations affecting the correct perception of innovation by scientists, we can distinguish (Tidd, 2006):

¹ This is the minimum population of the test, which was calculated for the survey at the significance level of $p = 0.05$ and the error rate of 6% according to the following formula: $n_b = \frac{N}{1 + \frac{4d^2(N-1)}{Z^2}}$.

- attributing an excessive importance to managers and entrepreneurs, which results in limiting the research perspective, because innovations are a complex processes, which in turn are affected by legal regulations, political systems and social trends;
- focussing of research attention on specific products and technologies as opposed to the analysis of the method of their creation;
- assuming that innovations appear only in consequence of technological opportunities and market demand.

The interpretation of 'innovation' is subject to ever growing marginalization, which is the result of evolution of the theory of innovation. The genesis of this phenomenon was seen in the operation of diverse factors, among others, technological or demand stimuli. Currently, innovations are perceived as the appearance of demand and supply impulses with the concurrent use of marketing tools in an environment characterized by the presence of network interconnections (Terziovski, 2002).

For the economy to remain competitive, it not only must be characterized by high productivity or effectiveness, but it should also bear such features as flexibility, entrepreneurship and innovativeness (Bossak, 2006), because innovations are the consequence of scientific and technological development. This kind of activities are also connected with entrepreneurial actions, however their implementation is encumbered with a high-level risk.

Innovations play an important role in the functioning of enterprises, because they contribute to increasing their competitiveness with regard to other entities, which at the same time may enable strengthening their competitive position on the global market.

Economic development and its potential negative consequences have an impact on various aspects of the socio-economic life, forcing changes in previously used practices and the development of new, innovative solutions, which enable economic entities to operate better (Zuzek, Mickiewicz, 2016).

The classic approach to innovation constituted the starting point for further considerations concerning the meaning of innovation in the economy. Together with the changing structure and role of the industry, the concept of innovation has evolved. Analysing innovation from the perspective of marketing, Ph. Kotler defined it as a good, service or an idea perceived by someone as new. The very idea might have existed for a long time, but it constituted an innovation to the person perceiving it as a new one (Kotler, 1994). A similarly broad approach was represented by P. Drucker, who admitted perceiving each novelty as an innovation. According to him, "innovation does not need to be of technical nature, it does not even have to be material" (Drucker, 1995).

R.W. Griffin defined innovation as a guided effort of an organization to achieve new products or services or new applications of products or services already existing on the market (Griffin, 1996). In turn, M.E. Porter (1990) expands the notion of innovation with technological improvements, better methods and manners of executing a given thing. It also includes changes in a product or process, new approach to marketing, new forms of distribution (Szymańska,

2012). In the source literature, many ways of classification of innovation can be found based on different criteria, e.g., the criterion of the source of origin of innovation, its originality and scope or the scale of changes. Therefore, innovations refer to something new and different than current solutions, and for this reason enterprises that want to be innovative must create an environment capable of distributing these novelties, which entails a fast process of their implementation.

The concept developed by J. Schumpeter, recognised as the classic approach, considers innovations to be a complementary process; they dominate the economy in a gradual, jumpy or wave-like way (Stawasz, 1999). One of the most important factors deciding about the increase of company competitiveness, including of small and medium enterprises, is knowledge and innovation.

According to the approach presented by P. Drucker (1992), innovations consist in a "purposeful and organized search for changes and systematic analysis of opportunities for social or economic innovation that such a change could make possible." Systematic analysis of change areas creates entrepreneurial opportunities, and this is why it is necessary to consistently and constantly look for changes that are perceived as sources of innovation.

Other approaches are related to variables in the surrounding of enterprises, resulting from the following changes: in demography, in moods or values or in the level of knowledge. Innovations introduced due to a changing environment are a necessary condition for the company development on the market (Poznańska, 2006). This is supported by literature (Kay, 1996; Hamel, Prahalad, 1999; Simon, 1999; Drocker, 1992). Innovations may be interpreted in a wide or narrow sense. In the first case, each change in production, consisting in acquiring the obtained knowledge, is determined. However, innovation in the strict sense of the word is a change in the methods of manufacturing and in products, based on know-how that is new or that has not been used until now. A.J. Harman (1971) defined innovations in a similar way, believing that it is a process of introducing new products or processes to the economy or the existence of improved products or processes. The object of innovation is limited here to a product or process. E. Hagen (1962) saw this problem in a similar way. For him, innovations consist in organising production based on new ideas serving the purposes of innovators better than the old ones. They consist of two stages:

- discovery of new know-how enabling the growth of the supply of goods and services per one work unit, capitals and materials used for production,
- implementation of this know-how into production processes.

For J. Parker (1974) innovation is a process encompassing all actions putting a new product or production method into practical use. The practical application of innovation is strongly emphasized in this approach. One must also agree with P.R. Whitfield (1979), who defines innovation as a string of complicated actions consisting in solving problems. In consequence, a complex and completely developed novelty is created. Many economists understood innovation in a narrower sense. S. Kuznets (1959) defined innovation as new application of an

old or new knowledge in the production process initiating the use of an invention. Ch. Freeman (Poznański, 1979) understands innovations as the first commercial application of a new product, process, system or device.

A similar approach is represented by E. Mansfield (1968), who regarded innovation to be the first use of an invention. This author does not distinguish between invention and innovation, contrary to Schumpeter (1960), who believed that the creation of know-how, i.e., the invention, is something completely different than innovation, i.e., the application of know-how in production. He also thought that it is not the invention itself but readiness to implement a change in production that decides whether innovations are accepted or not. Ph. Kotler (1994) approached the essence of innovation from the point of view of his field of competence, i.e. marketing. He related innovation to any good, service and idea perceived by someone as new. The idea might have existed for a long time, but it constituted innovation for the person perceiving it as new. Another economist of modern times, R.W. Griffin (1996), considered innovation to be a guided effort of an organization to dominate new products or services or new applications of already existing products and services. In turn, M.E. Porter (1990) includes in the notion of innovation also technological improvements, better methods or ways of doing something. It may be visible in changes of a product or process, new approaches to marketing and new forms of distribution.

Many definitions of innovations appeared also in the Polish literature. In the era of centrally managed economy, this problem was considered primarily from the technical point of view, due to the lack of authentic market mechanisms inducing market behaviour of enterprises. Studies of innovative processes started to develop intensively at the end of the sixties of the 20th century.

The definition proposed by K. Wandelt (1972) is based on the classic approach to this subject and determines it as utilization of a discovery and invention, being the expression of innovation, for specific production purposes. In turn, inventiveness is a search and exploration focussed on the development and verification of cognition. It is a conscious and planned effort focussing on solving technical and organizational as well as economic and financial problems. J. Czupiał (1988) based the notion of innovation on J. Schumpeter's definition writing that innovation consists in creating and marketing, thus introducing into use, of a new product or in economic application of a new process of obtaining already known products. Therefore, innovation is the first economic use of an invention or idea. The word 'first' does not mean the first specimen or series of new products, but relates to the entire production planned within a given undertaking.

Innovation is interpreted equally broadly by B. Fiedor (1979), who considers innovation to be each change in specific properties of the function of production. The definition by S. Kasprzyk (1980) contains the notion of a need, and he considers innovation to be a new, unknown manner of satisfying new needs or any manner of satisfying new needs. Innovations

as the synonym of new methods of fulfilling certain needs can be referred to all aspects of human activities, thus, we can distinguish between technical and economic innovations.

L. Białoń (1976) sees innovations as the effect of the first implementation in different spheres of human activity, and also in the field of science and technology, consisting in introducing new products into production, launching new technological process and organizational systems with the aim to achieve higher management efficiency. Another definition of innovation was provided by Z. Pietrasiński (1971), who considers innovations to be changes purposefully introduced by humans, which consist in replacing states of affairs with new ones, evaluated positively in the light of determined criteria constituting progress. However, not every change deserves to be called innovation. Innovation is only the change that contributes to creating progress in a given field of human activity. In turn, only those changes in technology that are beneficial to human being, i.e., increase work efficiency and its safety and do not have a negative impact on the natural environment, can be considered to be technical progress. Thus, technical progress not only has technical dimension, but also socio-economic dimension (Szatkowski 2001).

Innovations can also be related to the technical sphere of human activity, where novelty is considered equivalent to something innovative on a global scale (Spruch 1976). Such a novelty was a feature of technical solutions unknown to the humanity up to that time. He named the technical innovation a technical undertaking applied in industrial practice and the stages of work connected directly with its implementation. The definitions of innovations by Polish and foreign authors define it as a certain change, novelty, progress, yet always in a positive sense. A different approach to this phenomenon was presented by Z. Madej (1970), who considers innovations to be something new, i.e., changes with regard to the current state of affairs, but they can be changes of progressive, neutral or regressive nature. It is an isolated theory, because all the remaining authors associate innovations with positive economic effects.

After 1989 the Polish economy started to undergo changes, both in terms of the structure and functioning of the entire economy and its separate fields. The transfer to the free-market economy and its profound transformation caused changes in the approach to innovation and innovativeness (Marciniak, 2000). L. Pasieczny and J. Więckowski (1981) defined innovations as discoveries being the effects of human inventions and causing progressive changes in determined states of affairs. It is a broad view, not limiting innovations to changes only in production methods and products. S. Marciniak (1997) considers innovations to be creative changes in the social system, economic structure, technology and nature, thus, those solutions to problems that concern the current state of affairs, introducing novelties and being of a creative nature. I.K. Hajduk and W.M. Grudzewski (2000) perceive innovation as each thought, behaviour or thing that is new and that is different in quality from already existing forms. Innovation can be defined as creating a novelty or introducing changes.

A. Pomykalski (2001) regards innovation to be an organization's dependence on constant search, implementation and improvement of new products, processes or changes. S. Gomułka (1998) sees innovation both as the act of qualitative change in the economy, when the production of a new product (application of a new process) starts, and as the product (process) itself. He distinguishes between innovation and invention, similarly to J. Schumpeter. Invention is a new product or process, but it will never be used by the producer. Otherwise, we are dealing with innovation.

Summarizing the variety of ways in which innovation is perceived, two approaches can be singled out. The first approach emphasises the material character of innovation and applies to products and services provided and the organization of the production process based on know-how that is new or has not been used to date, accepted and implemented by the entity. This type of functional positive and progressive novelty is called innovation in the material sense. In the second approach, the action-related meaning of innovation is emphasised, which encompasses the entire process from creating and designing to implementation and acceptance of innovation. In a broader sense, it is an innovative process covering the whole research and development activity, development of the idea of a new product or method, which ends with the first implementation of innovation (Janasz, 1999). According to the presented considerations, in spite of considerable and growing importance of the problem of innovativeness in the recent years, this notion is still being discussed. Table 1 contains examples of different definitions of innovation to facilitate the analysis of the problem in question.

Table 1.

Selected definitions of innovation according to selected authors

Author	Specification
J. Schumpeter	Introducing new products, production methods, finding new markets, obtaining new sources of raw materials and introducing a new organization.
J. Czupiał	Creating and introducing into sale, including into use, of a new product, economic application of a new process of obtaining already known products.
Z. Pietrański	Purposeful actions carried out by a human being or designed by cybernetic systems that consist in replacing the current states of affairs with another ones assessed positively in the light of specific criteria constituting progress.
P.F. Drucker	A specific entrepreneurial tool – an action that endows resources with new possibilities and the creation of wealth. Systematic innovation is a purposeful and organised search for changes and systematic analysis of an opportunity related to a social or economic innovation that such a change could make possible.
Ph. Kotler	Innovation relates to any good that is perceived by someone as new.
R. W. Griffin	The entrepreneur's effort related to dominating new products and services or new applications of already existing products or services.
K. Hajduk W.M. Grudzewski	Behaviour or thought that is new, i.e., qualitatively different from existing forms. It may be defined as creating a novelty or introducing changes. A specific form of entrepreneurship that is distinguished by a constant search for and application of new creative factors for the achievement and multiplication of capital, mainly profit.
E.M. Rogers	An idea, practice or object perceived by the accepting entity as new, however, for human behaviour it is not important whether a given idea is objectively new, i.e., recently discovered or created, but whether it is treated by human beings as new.

Cont. table 1.

L. Giermakowski	A change concerning means of production, objects, methods and conditions of manufacturing, introduced by a human being to obtain specific economic and/or social benefits.
W. Marczyk	A cultural value (material – for example a tool, or non-material – for example a work method) that in certain time and spatial conditions is treated by human beings as new.
A. Kukliński	The capacity to create and absorb innovations is the biggest challenge for the Polish society and economy at the turn of the 21 st century.
S. Kasprzyk	A new and unknown manner of satisfying new methods of fulfilling certain needs. Innovation as a synonym of new methods of fulfilling certain needs may be referred to all aspects of the human activity, and in such a case we are talking about technical, economic innovations, etc.
D. Castenow	Searching for good ideas and introducing them into the market. Intuition – the essential core of each innovation – plays an important role in this respect.
T. Sztucki	An idea of conduct or an object that is new, because it is qualitatively different from the current ideas or objects. Transformation of innovation into products and actions is starting something completely new, undertaking of complicated activity with high level of risk and uncertainty.

Source: own work on the basis of: E. M. Rogers, 2003, *Diffusion of innovations*, Free Press, New York; L. Giermakowski, 1984, *Innowacje w przemyśle obronnym. Materiały i studia* Nr 108. WAP Warszawa; W. Marczyk, 1971, *Kierunki badań nad procesami przyswajania i dyfuzji innowacji*. Wyd. UW, Wrocław; D. Castenow, 1996, *Nowy marketing w praktyce*, Wyd. PWE, Warszawa; T. Sztucki, 1998, *Encyklopedia marketingu*, Agencja Wydawnicza Placet, Warszawa; A. Kukliński, 2001, *Gospodarka oparta na wiedzy, jako wyzwanie dla Polski XXI wieku*, Wyd. KBN, Warszawa; J. Czupiał, 1988, *Zarys metodologii planowania i oceny przedsięwzięć badawczo-innowacyjnych*, Wyd. PWN, Warszawa; P. F. Drucker, 1992, *Innowacja i przedsiębiorczość. Praktyka i zasady*, Wyd. PWE, Warszawa; R.W. Griffin, 1996, *Podstawy zarządzania organizacjami*, Wyd. Naukowe PWN, Warszawa; W.M. Grudzewski, I. K. Hajduk, 2000, *Przedsiębiorstwo przyszłości*, Wyd. Difin, Warszawa; Ph. Kotler, 1994, *Marketing. Analiza, planowanie, wdrażanie i kontrola*, Wyd. Gebethner i Ska, Warszawa; Z. Pietrański, 1971, *Ogólne i psychologiczne zagadnienia innowacji*, Wyd. Naukowe PWN, Warszawa; J. A. Schumpeter, 1962, *Teoria rozwoju gospodarczego*, Wyd. Naukowe PWN, Warszawa; S. Kasprzyk, 1980, *Innowacje. Od koncepcji do produkcji*, Wyd. IW CRZZ, Warszawa.

Each innovation, in particular in the period of economic fluctuations, is related to enormous uncertainty as to the actual results of its implementation. It requires from entrepreneurs the engagement of appropriate financial means, employment of qualified staff and skills. Supply innovations are a result of basic research and knowledge at the disposal of the society, they are focussed on search for new products and technologies and are connected with very high risk. Demand innovations are a result of individual entrepreneurial efforts and conclusions from analysis of changes of demand on the market. During economic crisis or regression, a more effective strategy of growth in enterprise value is the application of supply innovation development strategies, which are focussed on the process of creating value for the customer, on satisfying his needs. The basis of demand innovations are close relations between the customer and the entrepreneur. These strategies combine innovations to form a stream in which values for the customer are added, forming part of a system fulfilling his needs in a more and more comprehensive way. Demand innovations are connected with lower risk and lower implementation costs, which in the conditions of economic fluctuations may enable enterprises development and retention of customers (Dobiegała-Korona, 2009).

Positive effects of correctly understood innovation are very broad. They may also be divided into quantifiable and non-quantifiable benefits. In particular, they lead to: growth in the volume

and quality of production, reduction of materials and energy consumption for production, lowering of direct and indirect production costs, lowering of investment costs, launch of new production, reduction or avoidance of losses, improvement of public health, increase of occupational health and safety, increase of environmental protection, adjustment of products to individual customers, creation of value in accordance with the needs of individual customers, shaping the environment of experience enabling cooperation between customers and the company's employees, generation and use of new know-how, increase in the organization's competitiveness, possibility of adjusting one's interior to changing external conditions, etc.

All these actions should lead in the direction of supporting the activities of innovative entrepreneurs, which is related to introduction and use of appropriate instruments, among others (Pastusiak, 2009):

- direct subsidies for companies,
- preferential loans for entrepreneurs,
- industrial and technological parks,
- business incubators,
- cooperation between enterprises and research centres (e.g. universities),
- support for young enterprises or entities wishing to start a business activity,
- increasing the quality of human resources in enterprises.

An obstacle to innovative development of enterprises are not only system weaknesses, connected among others with a defective flow of information or insufficient cooperation of enterprises with each other and with other entities, but also the lack of financial means preventing entrepreneurs from undertaking innovative actions. The theory of economy provides us with a number of arguments for the state interventions, however, it does not specify any guidelines in their planning so as to reduce the risk of the lack of efficiency. In particular, it does not decide about the efficiency of different instruments to support competitiveness and innovation. It depends mostly on the socio-economic context of the intervention, the manner of its execution, the range of engaged financial factors and the general quality of public institutions.

The willingness of an enterprise to undertake innovative actions sets the directions of actions to implement investments, which are the effect of its experience, the level of risk it must assume and the style of management. Thus, the willingness to innovate results from interest in changes and understanding of the essence and the necessity of changes, which result from the need to introduce them.

Recently, the definition of innovation has been extended with the element of success. This is reflected in such expressions as: effective, cost-effective, profitable, satisfying customer. It is probably because of the intensified competitive fight between enterprises and the development of focus on the customer (Cumming, 1998). Business innovation is the creation

of a substantial new value for the customer and the company by creative change of one or several elements of the business system, which means that:

- it concerns a new value and not new products,
- it may happen on any level of the company's activity,
- in the process of its creation, all levels of the company's activity should be taken into account (Sawhney et al., 2006),
- it generates positive effects.

When analysing innovation, one may find certain common features, which are emphasized by scientists regardless of the adopted research approach. One of the features is the novelty that characterises innovations. They are unknown solutions which were adapted by the company to achieve benefits. Additionally, innovations are characterised by an element of dynamics, because they are a change tool of the organization or an answer to changes in the surrounding or anticipatory actions affecting the surrounding (Damanpour, 1996). Innovations also bear features of success (e.g., "the first successful application of a product or process") (Cumming, 1998). They are actions the effect of which is to be the achievement of goals set by the company. It is also important that innovations are not values themselves, but they affect the process of providing a new value for the company (Paap, and Katz, 2004). They are a tool used to achieve a better competitive advantage by the company and better market results in comparison with competitors.

Implementation of innovative actions in the SME sector – survey results

Based on the survey, it was shown that entrepreneurs strive to conduct innovative activities, among which the most frequent ones were product innovations. They constituted 80% of all innovations. The implementation of product innovations was planned by 211 entrepreneurs who obtained additional financial means.

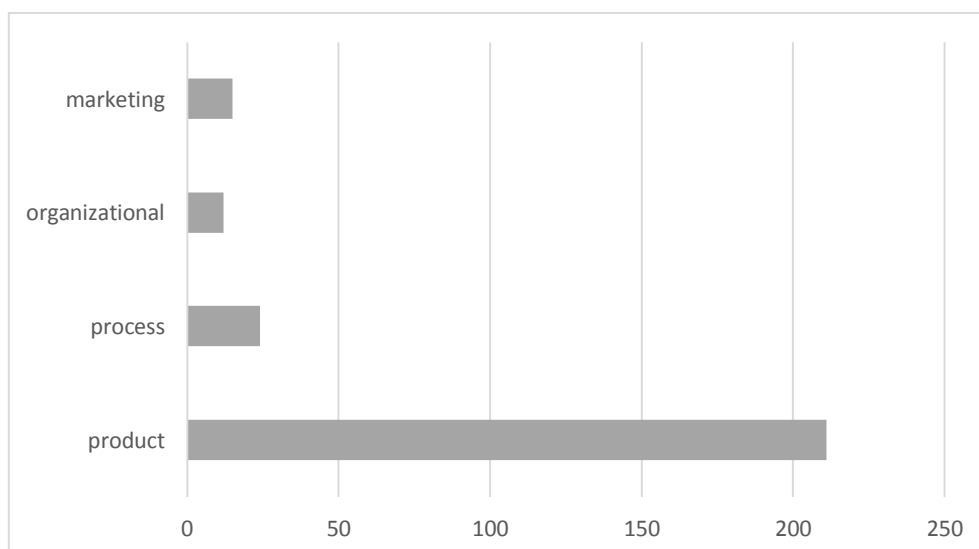


Figure 1. The number of innovations planned for implementation in enterprises taking into account the type of innovations [%]. Source: Author's own study.

Due to the fact that the surveyed enterprises belonged to the SME sector and to a large degree implemented innovative actions using their own means, practically they did not possess their own research and development departments.

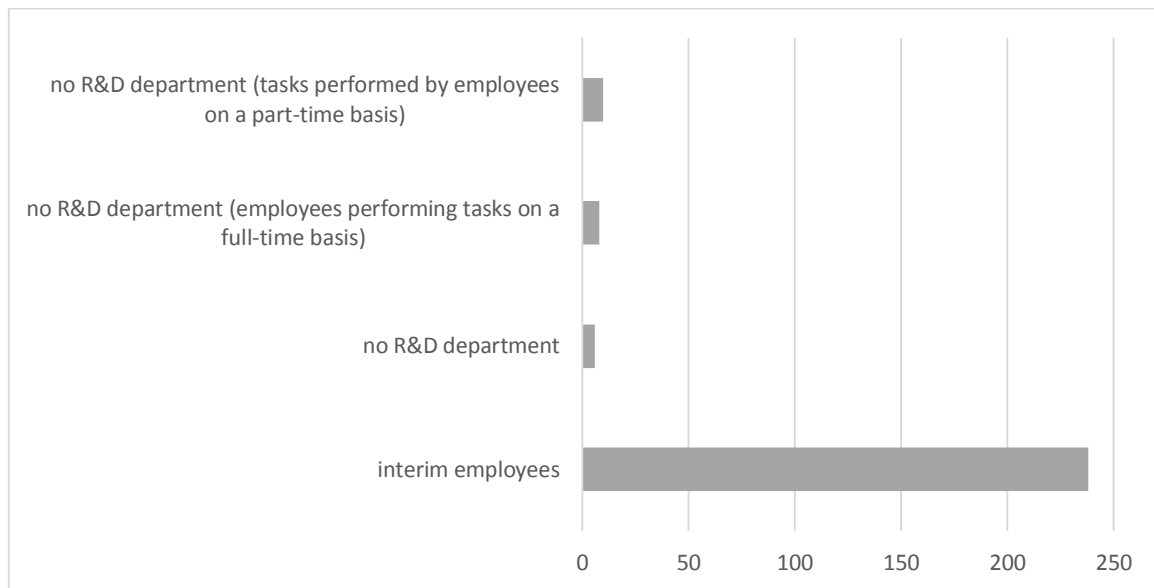


Figure 2. Entities implementing research projects in the company [%]. Source: Author's own study.

Most of the surveyed companies organized works connected with obtaining funds for innovations when needed (238 companies). Only in 10 of them employees handled tasks connected with innovations on a part-time basis, and in 8 companies there were employees handling tasks connected with innovations on a full-time basis. There were R&D departments in 6 of the surveyed respondents, among which medium-size enterprises dominated, i.e., those with over 49 employees. However, it was connected with a considerable load both in terms of human resources and organization.

Entrepreneurs participating in the survey declared that the implementation of an innovation using their own financial means for innovations was completed in the company (52 companies), including 25 micro-enterprises. Entrepreneurs indicating the implementation of a new product or service in the company cooperated with research centres. It is interesting that not all respondents pointed to improvement of the company situation in consequence of implementing an innovation – 25 respondents said that the situation had improved, while 43 entrepreneurs declared that the situation in the company had not changed. Full implementation of a planned innovation took 2 to 4 months on average, while in 20 companies it lasted longer. The beneficiaries implemented improvements in a relatively short time, however, as they themselves stressed, they had started preparing themselves for this process much earlier, and only obtaining financial means (e.g., in the form of a voucher for innovations) constituted a stimulus to undertake actions in this respect.

In the case of entrepreneurs who declared partial implementation, their total number amounted to 112, out of which 105 declared that they had already been planning full implementation. Partial implementation of the planned innovations most frequently took up to

half a year (95 enterprises). In 10 companies, the implementation of innovations took 6-8 months and 7 respondents declared that they dedicated maximum 3 months for partial implementation. Entrepreneurs whom partial implementation of an improvement took over half a year declared however that they would continue the implementation of the improvement. The surveyed entrepreneurs who are not planning further implementation of innovations justified their decision with the fact that the implementation turned out to be too expensive for them, certain organizational problems in the company had appeared or the company policy had changed.

The survey results also permitted to single out entrepreneurs who did not implement any innovations (98 companies). They were both micro-enterprises, small enterprises and medium enterprises, where most of them (82) commenced research and development activities in the end. Regarding the reasons for not using innovations in practice, similarly as in the case of partial implementation, financial problems were the cause. Entrepreneurs indicated that they tried to gain subsidies for implementation of innovations, however, they were unable to obtain them, and the financing of implementation using their own means was impossible.

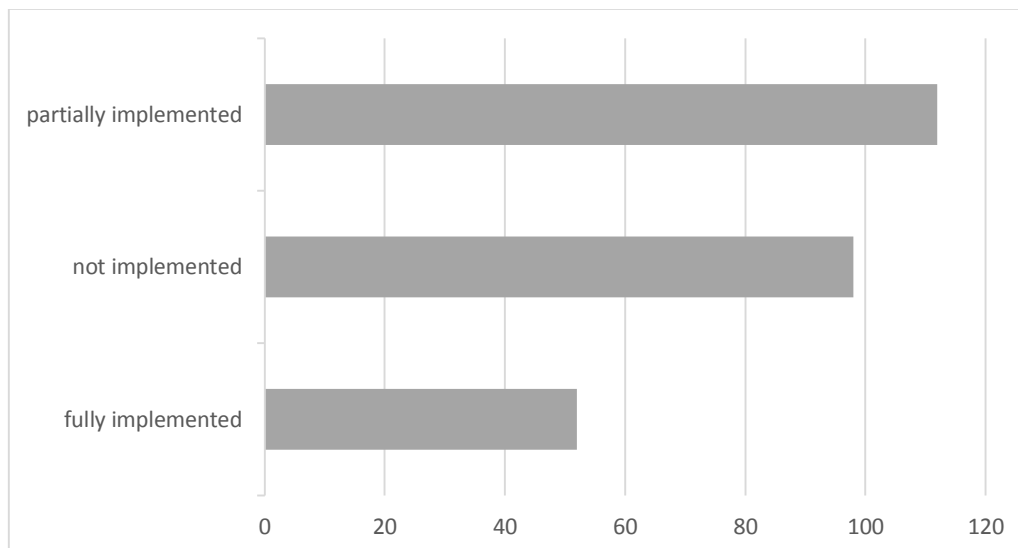
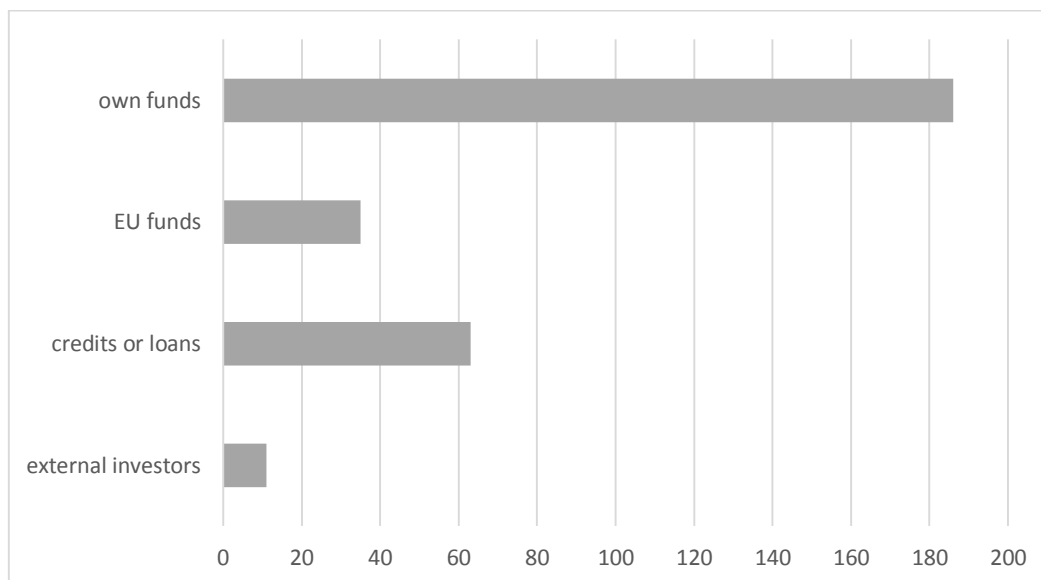


Figure 3. Stages of innovation implementation in the surveyed enterprises [%]. Source: Author's own study.

An important element of the survey was the assessment of the impact of execution of the innovative actions undertaken on the situation of the surveyed entrepreneurs. Analysing the answers, the situations have improved significantly, and opinions pointing to improvement were more numerous than opinions that the situation of enterprises had not changed, however, it is important to note that – in spite of this – 47% of the beneficiaries did not notice any improvement. A reason for such a situation was most of all the fact of failing to implement innovations in the companies. Based on the collected survey material, a conclusive assessment of the impact of the subsidy received for the development of enterprises from Małopolska Region is quite problematic. On the one hand, entrepreneurs evaluate positively the implemented innovative actions, have not diagnosed any deterioration of the company situation

and notice their importance. On the other hand however, as they themselves emphasise, it is difficult to notice a direct effect on their functioning. It results to a large degree from the lack of complete implementation of developed innovations, caused mostly due to the lack of own means.

A big problem when undertaking innovative actions by entrepreneurs is obtaining funds for this type of activities. In the survey, the share of entrepreneurs for whom the amount of the financial support was insufficient equalled 28%. This may be due to the fact that entrepreneurs often indicated that funds for implementation of innovations were insufficient or that they had not implemented innovations yet because the obtained subsidy did not include the implementation, but only the development. It is worth noting that the surveyed entrepreneurs pointed out to the need of comprehensive support for entrepreneurs that would enable both undertaking cooperation with a scientific and research centre developing innovative solutions and obtaining funds for the implementation of planned solutions.



*More than one answer could be selected.

Figure 4. Sources of financing of implemented innovation*. Source: Author's own study.

The majority of the surveyed respondents (186 enterprises) financed the implementation of innovations using their own funds. In the case of 35 entrepreneurs, apart from their own funds, also EU funds were used, 63 entrepreneurs used a credit and only 11 used financing obtained from external sources. It should however be noted that entrepreneurs using funds for example from the Regional Protection Programmes (RPP) financed the implementation of innovations also from their own funds, because the financial aid for entrepreneurs within the RPP does not cover 100% of costs and own contribution from companies is a prerequisite for obtaining the funds.

Entrepreneurs who decided to obtain funds to implement innovations could use subsidies within Regional Operational Programmes (ROP) for the years 2014-2020 addressed to entrepreneurs from Małopolska Region. To date, the call for applications has been completed

and lists of beneficiaries in three competitions in indicated sub-measures have been published. Entrepreneurs could finance the implementation of R&D works developed within vouchers, own works or financed within other ROP measures or other programmes. In the case of sub-measures 3.4.3 and 3.4.4, micro-enterprises and small enterprises could obtain financing on the level of 55%, while medium enterprises were entitled to financial aid amounting to 45% of eligible expenditure (Ocena przebiegu... 2018).

Most of the surveyed entrepreneurs see the need to implement innovations in companies. This was confirmed by 228 entrepreneurs from Małopolska Region participating in the survey. Only 20 respondents considered innovations to be of minor importance, which may result from discouragement caused by the lack of possibilities of implementing a developed innovation in the company.

Conclusions

Enterprises, especially from the SME sector, that want to survive on the market should concentrate on finding new, more advanced and effective solutions. Achieving competitive advantage is possible only by adapting to changes taking place in the company and its surrounding. However, one must bear in mind that implementing innovations in any company requires time and financial resources. Innovativeness is possible with concurrent sustainable financial development of the enterprise, thanks to which the company will have at its disposal appropriate financial means allocated to the implementation of new, necessary investments. Enterprises should realize that innovative actions and constant improvement of the enterprise are currently the key to win over the competition.

The impulse to take actions aimed at obtaining financial means was primarily the willingness to obtain additional funds for the execution of development plans connected with implementation of innovations. The surveyed entrepreneurs usually pointed out that they were interested in changes related to innovative actions focussing on products, services or processes, however, they did not have sufficient means to implement such solutions.

The survey showed that 47% of entrepreneurs does not see any improvement of the situation of their company on the market as a result of implementing a specific type of innovations. This was the opinion of entrepreneurs who have not yet succeeded in implementing a developed innovation. Respondents who did not implement any innovation claimed that it was due to the lack of sufficient own financial means.

The surveyed entrepreneurs perceive the need to implement innovations in their companies. Only under 8% of the surveyed respondents claimed that innovations were of minor importance, which might be caused by discouragement due to the lack of possibilities of execution of an assumed plan of innovation.

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