

IDENTIFICATION OF THE MAIN PROBLEMS OF IMPLEMENTING THE INNOVATION STRATEGY IN SLOVAK BUSINESSES

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Received: October 19, 2011

Abstract

LENDEL, V., VARMUS, M.: *Identification of the main problems of implementing the innovation strategy in Slovak businesses*. Acta univ. agric. et silvic. Mendel. Brun., 2012, LX, No. 4, pp. 221–234

The aim of this paper is based on the analysis of literary sources and carried out research to identify the main difficulties of implementing an innovation strategy in Slovak business and make recommendations to minimize the occurrence of these problems. The paper brings the main results of the authors conducted research on a sample of 462 respondents to show the current situation in the Slovak enterprises in the use of innovation strategy. Conducted research and analysis provided the basis for a model development and implementation of innovation strategies in the business. In this model shows the main areas of potential problems that managers must focus on achieving a seamless work with innovation in the business. Paper contains recommendations for successful implementation of innovation strategy in the business. These recommendations should be a valuable tool for business managers for implementation of the innovation strategy. A survey used the following methods: comparative method, qualitative evaluation, method of structured and semi-structured interviews, observation methods, method of document analysis (a method of content analysis) and the questionnaire method.

innovation, innovation strategy, innovative potential, innovative management, recommendation, problem

In the current period marked by the economic crisis impacts, the innovations play an important role. Successful can only be those businesses that invest their funds into innovation and research (Soviar, 2009). It is necessary to manage innovation activities in the business. The innovative strategy is the basic tool that determines the innovation direction of the business. Innovation strategy is based on business strategy and strategic goals.

In addition to innovation are emerging new concepts as lateral marketing, lateral thinking and the blue ocean strategy that create conditions for implementation of innovation and development of innovative strategies in the business. Lateral marketing is focused on market expansion and discovery of new customer needs and new uses of the product. Its purpose is to meet new needs, in other situations for other customer groups (more Sloane, 1993). The lateral marketing is closely

related to lateral thinking, which is essential for successful implementation of innovative business strategies. It is a playful, provocative and associative thinking, which is not thematically limited, looking for original ways and procedures (de Bono, 1993).

The basis of blue ocean strategy is value innovation that generating jump increases in value (both for business and for customers). Blue oceans represent a previously untapped market space. Competition in this space has no effect because the game rules are not created and waiting for their determination.

Effective management of innovation processes in the business provides innovative management. Its aim is to continuously improve and deliver the flexibility to meet growing customer demands. The result of his efforts is to ensure competitiveness. However in the business it is necessary to create a system of innovative management for systematic

and regular innovation, developing innovative corporate culture, creativity and creative thinking of employees.

Innovation Strategy is designed especially for businesses that innovate randomly and irregularly. They haven't clearly defined goals in terms of innovation and do not prosecute respond to market changes, competition and customer demands. Innovation strategy also helps businesses find new challenges for their development and growth.

Innovation Strategy is a management concept, consisting of many internal and external activities that enhance the innovative potential of the business. It is necessary to stress the importance and role of actors affecting the formation of an innovation strategy. These are the business employees, managers, as well as customers.

MATERIAL AND METHODS

The main aim of the paper is to acquire new knowledge in the field of innovation management focusing on the area of innovation strategies and highlight the possibility of creating models for creating an innovation strategy in a business that guarantees its successful implementation. Then identify the main problems hindering the successful implementation of innovation strategy in the business and provide appropriate recommendations to minimize their occurrence. Individual recommendations are intended as a practical tool for managers of businesses in the decision-making sphere in different parts of creation and implementation of innovation strategy in the business. The aim is to give the guide for successful implementation of innovation strategies in the business.

Solution of the examined issues in the paper requires the use of several methods depending on the character of each part of the solution.

For the acquisition and collection of information were used method of analysis of documents (when analyzing current and historical data relevant to the issue), questionnaire method and the method of semi-structured interviews (data collection in empirical research), method of observation (visiting businesses).

For the information processing was used mainly method of quantitative assessment (formation of statistical averages, percentages, application of statistical tests and other statistical methods) and the comparative method (when comparing data obtained from the relevant empirical research and the collation of data from the analysis of secondary sources).

For solve of the problem were used methods of induction, deduction, synthesis (in the development of procedure of model for create innovation strategies and formulate recommendations to business managers), abstraction and modelling (for the proposal of abstract and concrete systems of objects and relations between them).

The objects of the research were businesses operating in all sectors of national economy in Slovakia. Specifically, the companies which are based on the number of employees by the Statistical Office of the Slovak Republic (SO SR) included in the medium and large businesses. The target group of research were businesses. These businesses had to meet the following selection criteria:

- scope of Slovakia,
- number of employees more than 50.

Based on these criteria, it can be concluded that target group were medium and large businesses operating in the territory of Slovakia. The final respondents were the managers at the top and middle management level of businesses.

For the sampling was chosen representative technique. Its advantage is, that when analyzing the data it was possible the found results to generalize to basic set. Specifically, it was used a sample survey on a random basis.

For calculate the sample size was used application available on the internet. The application provided also alternative scenarios for sampling error and sample size.

The size of the sample represents 348 respondents (medium and large businesses) for the desired 95% confidence interval a maximum permissible error of 5%. Because the research involved 462 respondents, then can be the sample considered as representative.

The current state of dealing with the issue

Among the professional public is currently debate about definition of innovation strategy and allocation of areas of their operation. Kováč (2007) sees innovation strategy as determining long-term fundamental business goals and determines the activities and resources for achieving these goals. Orientation of goals is focused on timely response to changes in signalling of need of innovations. The above-mentioned variability of innovation strategy highlights Zaušková (2006). Innovation strategy is often called in the scientific literature such as e.g. scientific and technical, development-innovation or research and development strategy. Horňáková and Zaušková (2008) give some attention to the fact that the scope of the adjective (in the context of innovation strategy) may be wider, respectively narrower.

There are a few definitions of an innovation strategy in the literature, but each of these cover only a section of the overall role of an innovation strategy. Tab. I summarizes the definitions of the term innovation strategy.

Based on a thorough analysis of domestic and foreign literature, we can proceed to the following definitions of innovation strategy:

Innovation strategy is innovative direction of business approach to the choice of objectives, methods and ways to fully utilize and develop the innovative potential of the business. This is the direction given of its boundary, which determines the potential of innovative strategies (Lendel, Varmus, 2011).

I: *Definitions of innovation strategy*

Author(s)	Definition
Gilbert (1994)	Innovation strategy determines to what degree and in what way a firm attempts to use innovation to execute its business strategy and improve its performance.
Katz, Preez, Schutte (2010)	An innovation strategy is: <ul style="list-style-type: none"> ● An incrementalist, functional, predetermined plan governing the allocation of resource to different types of innovations in order to achieve a business's overall corporate strategic objectives and, ● A decision framework guiding a business about when and how it should selectively abandon the past and/or change its corporate strategy and objectives in order to focus on the business of the future.
Dodgson, Gann and Salter (2008)	An innovation strategy: <ul style="list-style-type: none"> ● Helps firms decide in a, cumulative and sustainable manner, about the type of innovation that best match corporate objectives. ● Guides decisions on how resources are to be used to meet a firm's objectives for innovation and thereby deliver value and build competitive advantage.
Strecker (2009)	Innovation strategy is defined as the sum of strategic choices a firm makes regarding its innovation activity. Innovation goals (ends) are not included – only means. Innovation strategy is considered a firm wide, cross-functional meta-strategy.
Bessant, Tidd (2007)	Innovation Strategy helps to understand what, why and when to carry out innovation activities.
Kováč (2007)	Innovation strategy is the introduction products of new generations or technologies developed at intervals, which interrupt the period of relative stability. Innovations bring a jump in productivity and market share.

Source: own elaboration

Based on the analysis of domestic and foreign literature, we can also conclude that to the innovation strategy significantly affect four basic (key) elements. It can be written in the form of function with five variables that affect the implementation and actual realization of innovation strategy:

$$I_s = f(I_M, I_{PS}, L_T, P_C, O_s), \quad (1)$$

where:

I_s ... Innovation strategy
 I_M ... Innovation management,
 I_{PS} ... Innovative potential of strategy,
 L_T ... Lateral thinking,
 P_C ... Pro-innovation climate,
 O_s ... Organizational structure.

Empirical research – the situation in the Slovak businesses

We carried out research from May 2009 to end February 2011. His primary task was to obtain and interpret information about level of preparedness and the use of innovative strategies in the medium and large businesses operating in the Slovak Republic.

A substantial part of the research we focused on identifying the main problems of application of innovation strategy in businesses. The target groups were *medium and large businesses* operating in Slovakia. Research object (the final respondents) was managers of high and middle level management of these businesses.

The sample size was 348 respondents (medium and large) for the desired 95% confidence interval and maximum permissible error of 5%. Since the research involved 462 respondents (87.01% managers of middle and 12.99% of managers of large

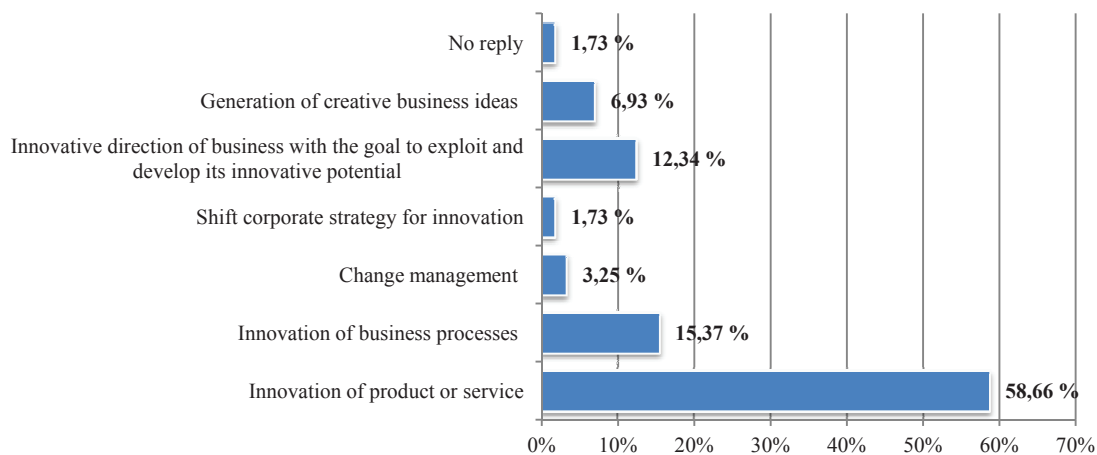
businesses in Slovakia), the sample is considered representative.

During the research were contacted businesses with different dominant business concept. Most businesses were with customer orientation (50.65%) and the least with a lateral orientation (only 3.90%).

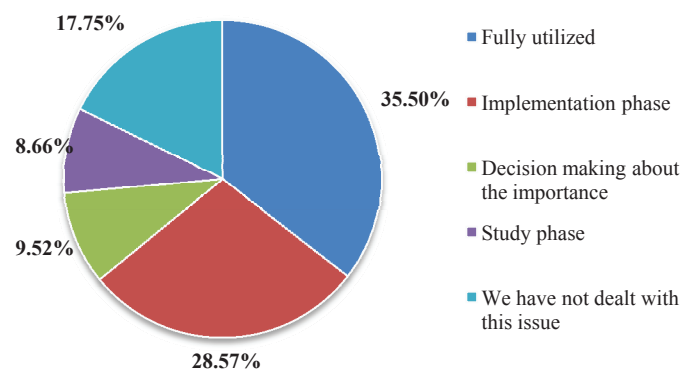
Among the innovative activities that most of the business deal is in particular the internal research and development (50.65%), obtain of modern machinery, equipment, computer hardware and software (45.24%) and training for innovative activity (38.53%). Contrast, less apply innovative activities include an external research and development (12.34%) and obtain of external knowledge (13.85%). Only 1.30% of the businesses don't do any innovative activities, what can be regarded as a positive fact.

The biggest problem is the correct understanding of the fundamental of innovation strategy (Fig. 1), which is only average. Correct understanding of the fundamental of the innovation strategy referred only 12.34% of respondents, who agrees with the opinion that this innovative direction of the business with the goal to exploit and develop its innovative potential. Up to 58.66% of respondents defined the innovation strategy as the innovation of a product or service. 15.37% of the respondents perceived innovation strategy as the innovation of the business processes. Other respondents believe that it is a generation of creative business ideas (6.93%), application change management (3.25%) or a shift of corporate strategy for innovation (1.73%).

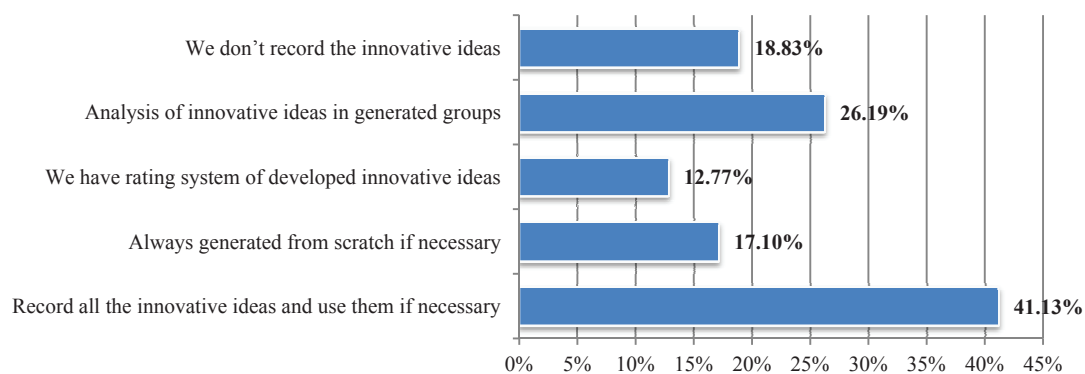
17.75% of respondents did not deal with the issue of innovation strategy (Fig. 2). In the phase of the study is 8.66% of respondents, 9.52% are in the process of deciding on the significance of such a strategy for the business and 28.57% of surveyed businesses are trying to implement an innovative



1: *Understanding the nature of innovation strategy*
Source: own research



2: *The current state of implementation of innovation strategies in the business*
Source: own research



3: *Work with innovative ideas (inventiveness)*
Source: own research

strategy to business practice. 35.5% of respondents said that the innovation strategy of their business is fully utilized, which we consider as a positive development. The experience of these businesses can make recommendations for the successful implementation of innovative strategies within the business.

32.9% of respondents regularly review the innovation strategy. The innovation strategy

is reviewed by business managers frequently depending on customer needs (18.61 %). 9.09% of respondents review the innovation strategy just in case of falling the identified indicators and 2.6% of respondents depend from competition. Only 0.43% of managers surveyed don't review the innovation strategy. Only 32.9% of respondents don't apply innovative strategy.

In Fig. 3 it is possible seen a positive fact that only 41.13% of respondents record all the innovative ideas and use them if necessary. Contrasts to 18.83% of respondents don't record the innovative ideas. 17.10% of managers surveyed stated that their innovative ideas in business are always generated from scratch if necessary. 26.19% of respondents use the analysis of innovative ideas in generated groups. Only 12.77% of respondents have rating system of developed innovative ideas, which is necessary for successful implementation of innovation strategy.

Managers of surveyed businesses were able to assign to each element of innovation strategy, importance level, respectively set priorities. As shown in Fig. 4, the highest priority the business managers have the elements of lateral thinking (7.60), pro-innovation environment (7.25) and work with innovation and knowledge in the process of innovation strategy (7.10). Conversely the lowest priorities have the innovative potential of the strategy (6.97), organizational structure (6.92), innovation management and managers (6.92).

In neither case does not exceed the performance evaluation the priorities of managers, what we consider to be unacceptable, especially when it is about innovation strategy. In all cases, we can see areas for improvement. The most notable differences are the elements of lateral thinking, innovation strategy, potential of strategy and pro-innovation environment.

As is shown in Fig. 5 up 46.97% of businesses identified as a major problem for using innovation strategy in the business the lack of necessary funds. Other problems include the low level of employee

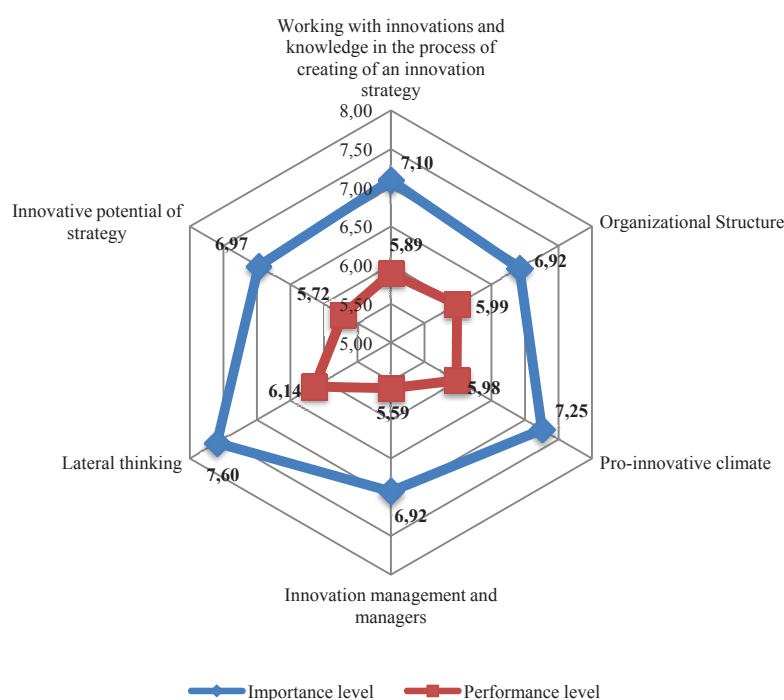
motivation (31.60 %), technical and organizational complexity (31.60 %), lack of appropriate environment conducive to development of innovation (30.52 %) and insufficient use of available resources (24.03 %). For the smallest problem the managers considered the lack of trust between management and other departments (12.77 %), lack of information about technologies and markets (9.96 %) and lack of qualified personnel (only 2.60 %).

Qualitative test of independence confirmed that there is a relationship (dependence) between the application of the dominant business concept and the degree of preparedness for medium and large businesses to use innovation strategy.

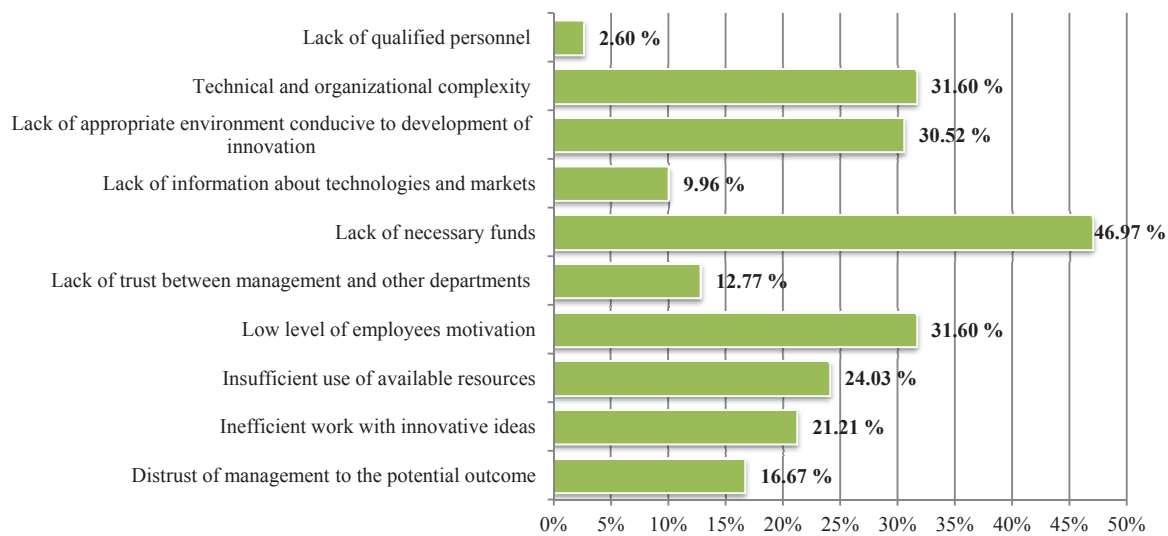
Understanding the importance of lateral thinking, pro-innovation climate and streamlining the work of innovation and knowledge in the process of innovation strategy is essential for success in turbulent markets. For a better understanding of managers' representation of innovation strategy and its assumptions was used correspondence analysis. Correspondence analysis is a special method for detection of sets of similar categories and their interrelationships.

On the Fig. 6 it can be seen that were created four groups of categories. It follows businesses that understand innovation strategy as:

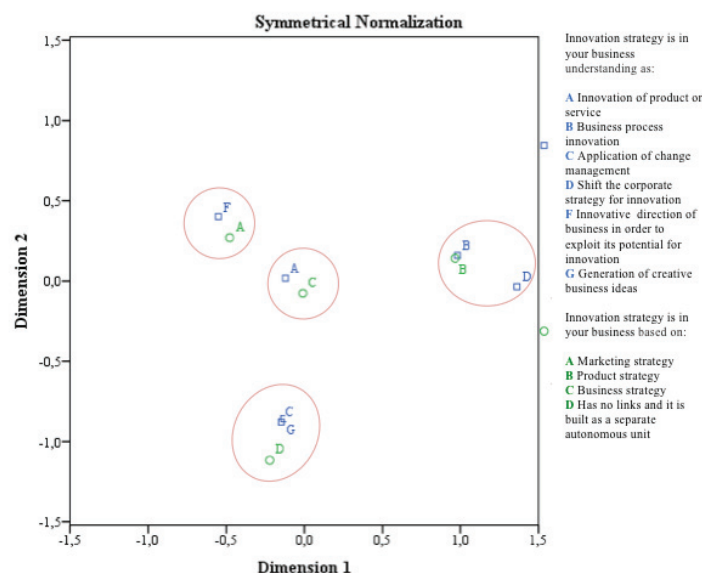
- innovative direction of business in order to exploit its potential for innovation, then their innovation strategy is based on marketing strategy,
- innovation of product or service, so their innovation strategy is based on corporate strategy,



4: Profile of performance innovation strategy in the business
Source: own research



5: The most common problems preventing the full exploitation of the innovation strategy
Source: own research



6: Correspondence map for understanding the innovation strategy and its assumptions
Source: own research

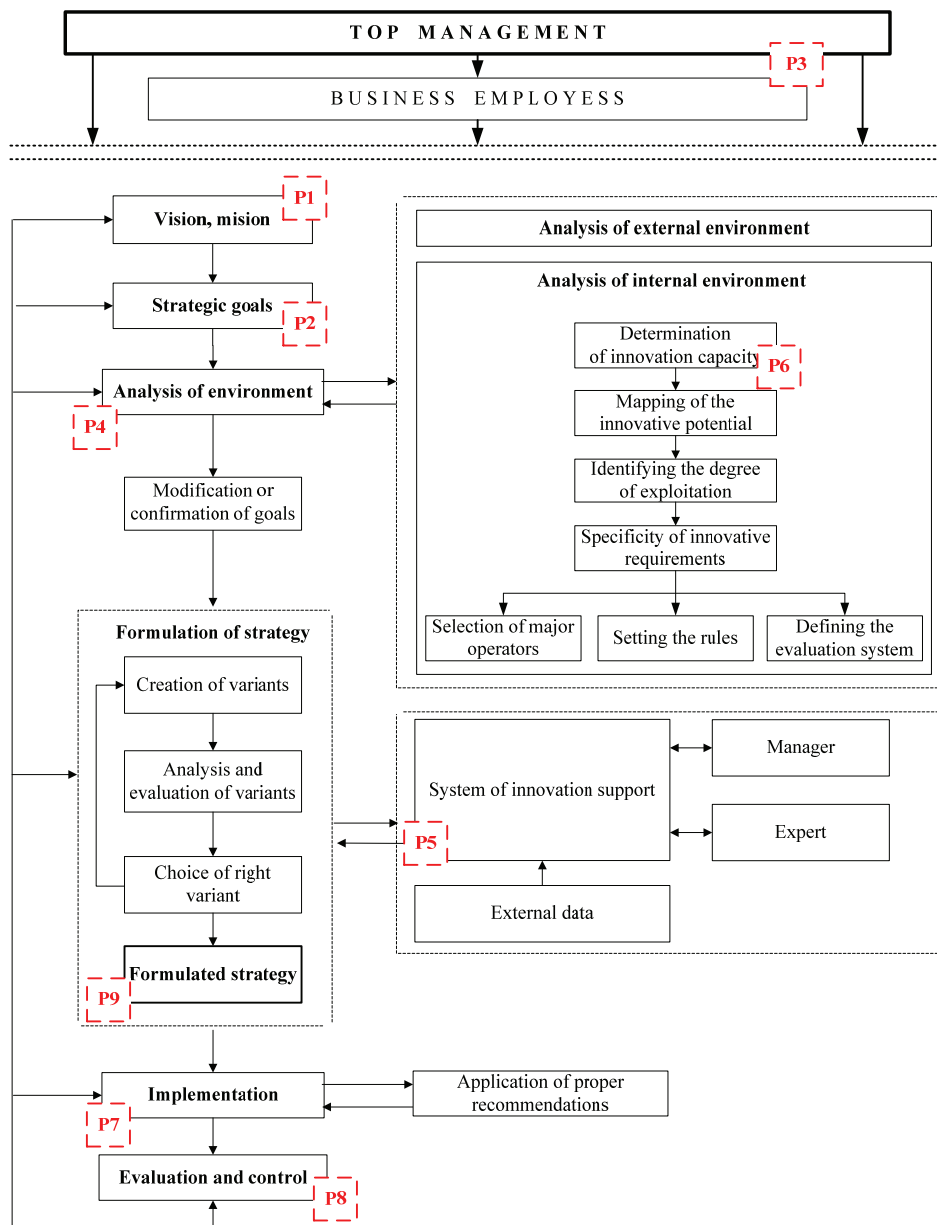
- business process innovation, or shift the corporate strategy for innovation, then their innovation strategy is based on product strategy,
- the application of change management and generation of creative business ideas, then their innovation strategy and has no links and it is built as a separate autonomous unit.

Proposal for a model of creation of innovation strategy and identify the main problems

The diversity of approaches of innovation strategy refers to the fact that innovation strategy as a system of work with innovation in the business is evolving. Therefore, it is possible to create a relatively

universal model that will ensure successful implementation and subsequent realization of innovation strategies. When creating a model of innovation strategy of business it should be suitably chosen structural (structural) elements of model so that it pointed to the importance of innovation in the business.

Referring to the opinions of many authors dealing with issues of model creation of innovation strategy in business and after a thorough analysis of the structure reported approach of innovation strategy; we designed the present model of innovative strategies. We took as a basis model of strategy by Jakubíková (2008). The process of innovation strategy is a complex process involving six basic



7: Problems arising out in the formulation and implementation of innovation strategy in business

Source: own elaboration

parts. It is to define the vision and mission business, setting the strategic objectives, the realization of a detailed analysis of business environment (internal and external), strategy formulation, its implementation and subsequent evaluation linked to the control (Jakubíková, 2008; Hittmár, 2006).

Creating innovation strategy in business, particularly services, is a complex process that requires detailed knowledge of the business environment. The failure of the formulation and subsequent implementation may be because of several reasons that may have a different nature. For an example, it is an initiative aimed at marketing or production area, investment in research and development have been realized without the

support to relevant business infrastructure, consider the current business innovation opportunities, analysis of innovation processes and the possible restructuring, to ensure effective work with inventiveness, innovative ideas and knowledge, lack of motivating employees to create and implement creative ideas without the support of lateral thinking, without encouraging the use of unconventional methods and techniques to solve business problems and in particular no links to corporate strategy as a basic building block for effective use of innovative potential.

On the other hand it should be noted that the reason for failure of implementation of innovation strategy in the business may be wrong formulated

innovation strategy and analysis of innovation potential of businesses, as well as lack of support and attention from senior management of the business. Another important factor influencing the successful implementation of innovation strategy is themselves employees of the business if they wish to build and enhance the innovative potential of businesses to use the innovation capacity.

Business should be ready, that the process of creating and applying innovation strategy brings a number of risks. Otherwise, the creation of an innovation strategy is doomed to failure. Essential for success in this area is early identification of risk areas and then take the appropriate decisions to increase the likelihood of successful implementation of innovation strategy in the business.

Fig. 7 are identified potential areas of risk in the proposed model of creation and implementation of innovation strategy.

In the next section are identified possible areas of risks together with recommendations, which are designed to help reduce these risks. Also it is prevention and prerequisite for the successful operation of an innovative routing business.

Problem 1: THE BAD PREPARED AN INNOVATIVE PROGRAM (P1)

The bad prepared an innovative program is often a problem in implementing innovation strategy in the business. Managers are too reliant on technology. The business must have sufficient details about innovative processes innovative capacity, innovative resources and information flows for successful realization innovation strategy. If the business does not pay the necessary attention to this work and develops an innovation strategy based on insufficient documentation, then the innovation strategy in the business is doomed to failure.

Business managers can be recommended:

- carry out a detailed analysis of the current situation in the business,
- correct understanding of the role of technology in implementing the innovation strategy,
- quality mapping potential for innovation and administrative specify of innovation requirements,
- properly set up an evaluation system and rules.

Problem 2: ERRORS IN DETERMINING OF STRATEGIC GOALS (P2)

The problems also occur in defining strategic goals that the business wants to achieve in terms of innovation in the innovation strategy. The most common for the business it is not clear what it wants to achieve, respectively what are the options for use of its innovation potential.

In this situation it is necessary to understand the concept of innovation potential, aware the potential benefits and be able to make these requirements into the goals. The most common cause of failure can be

considered a lack of understanding of the business's innovative potential and its possible applications.

Business managers can be recommended:

- a proper understanding of the innovation potential (good knowledge of the issue reached by studying literature, advice or appropriate professional training),
- clarify the situation where the business wants to get by implementation of innovation strategy,
- understanding of expected benefits and the way leading to their implementation,
- common vision.

Problem 3: EXCLUSION OF HUMAN FACTORS (P3)

One common problem is the exclusion of human factors in the process of innovation strategy. Employees who are not involved in the creation of an innovation strategy, who don't give sufficient information about the goals of innovation strategy, are not familiar with the intentions of business's innovation may in certain activities work passive.

Business managers can be recommended:

- ensure of regular communication with employees to form a pro-innovation environment,
- allow to employees to participate in the development of innovation strategy,
- consideration and welcome ideas from business employees to create innovation strategy,
- explain to staff the importance of innovation strategy for further direction undertaking,
- provide the necessary information for employees during each step of the implementation of innovation strategy.

Problem 4: AUTOMATIZATION OF PREVIOUS INCORRECT INNOVATION PROCESSES (P4)

In some cases can lead to automatization of previous erroneous innovative processes. Business managers can be recommended:

- identification and constant updating of innovation processes,
- emphasis particular on processes that are directly related to the work of innovation,
- identifying missing processes,
- attention to analyzing the current state of innovation processes,
- creating of own model of relations of innovation management (more Bartók, Ješka, 2006).

Problem 5: ABSENCE OF SYSTEM FOR EVIDENCE OF INNOVATIVE IDEAS, OPPORTUNITIES AND INNOVATIONS (P5)

Another problem is the absence of evidence of innovative ideas, opportunities and innovations (as shown by the results of the research). Marketing managers then have not an overview of the invention coming from external or internal environment, and then is usually the situation in which marketers pay attention only to the one the invention.

Business managers can be recommended:

- evidence of innovative ideas and opportunities, including those which the business currently does not apply,
- ensure the smooth flow of needed information about innovative ideas, opportunities and innovations in real-time,
- consider the use of IT applications for gathering and storing important data in a common database.

Problem 6: NON-UTILIZATION OF INNOVATION POTENTIAL (P6)

Non-utilization of innovation potential is reflected in the occurrence of misunderstandings, costs and implementation of inefficient processes (often it is repeated several times). First, it is necessary to carry out a detailed analysis of the business's innovative capacity. The business must keep track of their knowledge, experience, resources, assets and managerial abilities and skills at its disposal that can take full advantage in creating and managing innovation in the field of product policy.

Business managers can be recommended:

- carry out a detailed analysis of the innovative capacity of business,
- development incentive program to promote use of innovative potential by employees,
- improve the conditions of the working environment to create pro-innovative climate,
- staff training in the use of creativity.

Problem 7: IGNORING OF THE INPUTS CONDITIONS (P7)

Implementation of innovation strategy in the business can only be successful if the business accepts the input conditions, which include restriction of different character. Many serious problems can happen in the future, if the business does not keep the input conditions identified by detailed analysis of the current state and the action of external conditions.

Business managers can be recommended:

- create characteristic indicators of introducing innovation strategy in business,
- awareness of restrictions (time of introducing, the degree exploitation of innovation potential, risk of failure, the level of innovation capacity...),
- establish control points within the implementation of innovation strategy within the business.

Problem 8: ABSENCE OF FEEDBACK (P8)

Only in the case of setting measurable goals, senior management can assess and evaluate the benefits of implementation of innovative strategies. A very common mistake in the process of innovation strategy is unsecured feedback, which is intended to control of the implementation process. It is essential that the whole process of creating innovation strategy (from analysis to the end of implementation) with continuous control.

Business managers can be recommended:

- ensuring of on-going evaluation implementation of innovation strategy in the business,
- clearly defined goals of introducing innovation strategy and measurable indicators,
- selection of appropriate metrics to assess the fulfilment of defined goals,
- clear definition and set of metrics, enabling better setting of measurable goals and to enable more efficient management of relevant parts of the business that affect its innovative approach,
- set of metrics must be based on the main priorities in the management of innovative business activities.

Problem 9: INSUFFICIENT STARTING POINT OF FORMULATED STRATEGY (P9)

Such a situation occurs most often when the business decides to implement an innovation strategy, but has not made clear the fact, what will form the basis for formulating an innovation strategy. The critical success factors can be considered to ensure fulfilment of business needs with business goals. The focus must therefore be business undertaking as a whole and its needs. Recently, it is increased the role of customer in the process of business strategy. Its needs, expectations and desires must be directly or indirectly reflected in the form of business goals. When a business chooses a starting point for the creation and subsequent formulation of innovation strategy the manufacturing strategy, then loses connection and links to other important units of the business. The base in the business strategy will ensure a sufficient knowledge base for the development of innovation strategy.

Business managers can be recommended:

- review of the business goals in relation to its desired innovative direction,
- projection of innovations into long-term business plan,
- concrete ideas about working with business innovation, including how to achieve it.

Verify the accuracy of the model

The proposed model is possible (and necessary) to check in two ways, namely:

1. verification of the model in real business,
2. verification of the model by experts in the field.

Verification of the model in real business

Verification of the proposed model in real business, that decides to create and subsequently implement innovation strategy.

Up to 22% of surveyed businesses in the Slovak Republic responded to the offer of model creation and implementation of innovative strategies in the business. These subjects were contacted by e-mail and personal questioning. Based on interviews with managers of the company has promised to assist in

verifying the model. The actual verification of the model makes it difficult for two things, namely:

1. development and subsequent implementation of innovative strategies in the business considered a continuous process, whose results are reflected in the business in the long run,
2. businesses that have expressed interest in verifying the model already are trying to apply some form of innovation strategy. Nevertheless, the model took more and thinking about improvement and possible extension of areas of concern in the implementation of innovative strategies.

The above-mentioned businesses have primarily adopted the recommendations designed to prevent problems in the implementation of innovation strategy. At present, they implement these recommendations to their businesses. Several statement of managers of these businesses to indicate not only correct choice of the key elements of an innovation strategy that form part of the model

components and linkages between them, but also the importance and relevance of recommendations that significantly contribute to streamlining the (present or future) implementation of innovative business strategies.

Evaluate the accuracy of the proposed model formulation and implementation of innovative business strategies is premature, especially in terms of time. Changes made by managers of the business will be felt until later. Therefore it is necessary to constantly monitor and communicate with these businesses and follow their evolution in innovation management and innovation activities. It would be desirable to find a business that is willing to apply the proposed model formulation and implementation of innovative strategies. It should be a business that would still not apply innovation strategy.

Evaluate the accuracy of the proposed model formulation and implementation of innovative strategies in the business can be suitably selected based on measurable indicators or metrics. The indicators will be in the future when applying the

II: Proposed indicators to assess the success of the application of innovative strategies in business

Field	Indicators
<i>Performance of innovation</i>	<ul style="list-style-type: none"> ● return on investment in innovation, ● quantity of sales (earnings) of innovative products, ● ratio of sales of innovative products to total sales, ● the percentage revenue growth due to successful innovation, ● life of an innovative product, ● number of patents per year per worker.
<i>Effectiveness of innovation</i>	<ul style="list-style-type: none"> ● the profitability of product innovation, according to life stages, ● the percentage decrease in the cost of innovative processes and products, ● percentage of profit from successful innovations by its type (new products, improving product/process...), ● sales of product innovations per employee, ● added value of successful patents.
<i>Business management support for innovation</i>	<ul style="list-style-type: none"> ● percentage of time of managers spent innovations compared to conventional daily operational tasks, ● the percentage of managers, having training in methods and tools of innovation, ● number of changes that the management has made over the past 5, 10 years in corporate business.
<i>Processes</i>	<ul style="list-style-type: none"> ● number of ideas submitted by employees for the last 3, 6, 9 months, ● submitted ideas and share successful ideas, ● number of on-going innovation, ● the average time from submission of the idea to its profitability on the market.
<i>Balancing of sources</i>	<ul style="list-style-type: none"> ● percentage of capital invested in innovation and recovered in new products, ● number of innovators in the business and profitability their innovations, ● the share of employees' working time, which is designed for innovation, ● number of products marketed in the past year + profitability, ● profitability of new-placed products over the past three years, ● change in fair value of the business (or the structure of income) due to successful innovation (the phenomenon of getting rich, "Increasing wealth").
<i>Capacity of sources</i>	<ul style="list-style-type: none"> ● percentage of employees for whom is innovation a key performance targets, ● percentage of employees who have received training in innovation, ● number of tools, methods that are available to employees for innovation, ● number of new skills (e.g. knowledge, experience) for innovation, calculated for selected staff, ● number of new strategic actions (e.g. newly created opportunities in connection with the existing business), ● number of new markets surveyed in the past year.

Source: According Chromjaková, Rajnoha, 2009

proposed model in a business to assess and validate its correctness. Selection of indicators should be based and take into account the chosen innovation strategy and implementation of the objectives of innovation strategy. The objectives and expectations of the application of innovative strategies may include for example:

- number of innovators in the business and earnings its innovation,
- number of tools, methods that are available to employees for innovation,
- number of new strategic actions (i.e. newly created opportunities in connection with the existing business),
- percentage of time managers spent on innovations in comparison with conventional daily operational tasks,
- number of ideas submitted by employees for the last 3, 6, 9 months,
- return on investment in innovation.

The following table provides an overview of appropriate indicators by which it is possible to verify the correctness of the proposed model formulation and implementation of innovative business strategies.

It is important to point out that the success of implementation of an innovation strategy can be measured only indirectly, such as comparing data before and after. If the increased number of ideas submitted by employees or the increased volume of sales of innovative products, this success can be attributed to the efficient work of innovation. On the other hand, it is important to take into consideration other factors that may affect the final results, such as the arrival of new competitors on the market. Therefore, when comparing the results will have to be based on the analysis of other factors (marketing campaign, expansion of productive capacity...), whose values must be reflected in the final accuracy of the proposed model.

Verification of the model by experts in the field

The proposed model should be verified by experts in the field. The experts may be considered managers of business services who are responsible for research and development department, oversee the use of innovative potential. They use own procedures for management their innovative

activities. In most cases there are very simple operations, mainly focused on introducing new products and services to market. Through them, opens the possibility of verifying the model in real existing establishment assuming ownership of the proposed model formulation and implementation of innovative strategies.

In the implementation of empirical research were contacted several managers on leading positions in R & D department of business services operating on the Slovak market. The response was positive and it can be concluded that the proposed model considered effective and successful tool that can have their application in practice. Managers of these departments especially appreciated the focus of the model on the role of business in the implementation process of innovation strategy.

CONCLUSION

Based on the analysis (literature, empirical research carried out) were discovered the facts that helped to create the model and pointed out problem areas that affect the creation and implementation of innovation strategy in business. The collected theoretical aspects of innovation strategy with reference to the relationship to the concept of lateral as well as prepared methodological assumptions showed the absence of an integrated model development and implementation of innovation strategy in a business. The diversity of models of innovation strategy and structure pointed out that the innovation strategy is the subject of research and its definition is constantly evolving. Therefore, it is possible to create a universal model that will ensure successful creation and implementation of innovation strategy in a business.

Solution of the paper was aimed at the creation and implementation of innovation strategy in a business, and it's crucial outcome is to identify the main problems in the implementation of innovation strategy in the business. For the smooth progress have been developed the recommendations, which represent a valuable tool for managers in developing and implementing innovation strategy in the business. Recommendations are not only for reducing the likelihood of problem areas and as prevent, but also as a tool to improve innovation processes in the business.

SUMMARY

The main aim of this paper is to gain new knowledge in innovation management, innovation strategies, specifically identifying the main problems hindering the successful implementation of innovation strategy and provide appropriate recommendations to minimize their occurrence.

The necessary information was obtained on the basis of scientific literature and through carried out empirical research on a sample of 462 respondents who were managers of medium and large businesses operating in the Slovak Republic.

Solving of problems required the use of multiple methods, and methods of analysis of documents, questionnaire method, semi-structured interviews, observation methods, the method of quantitative evaluation, methods of induction, deduction, synthesis and abstraction.

Based on the analysis of scientific literature, the authors defined the definition of the innovation strategy: *Innovation strategy is innovative direction of business approach to the choice of objectives, methods and ways to fully utilize and develop the innovative potential of the business. This is the direction given of its boundary, which determines the potential of innovative strategies.* They identified five key elements of an innovation strategy, which are innovation management, strategy, innovation potential, lateral thinking, pro-innovation environment and organizational structure.

Carried out by empirical research brought the following major findings:

- Up to 58.66% of respondents defined the innovation strategy as the innovation of a product or service,
- 35.5% of respondents said that the innovation strategy of their business is fully utilized,
- 41.13% of respondents record all the innovative ideas and use them if necessary,
- 32.9% of respondents regularly review the innovation strategy,
- 46.97% of businesses identified as a major problem for using innovation strategy in the business the lack of necessary funds.

Was created a model of innovation strategy, which identified nine major problems impeding the implementation of innovative strategies in the business:

1. The bad prepared an innovative program
2. Errors in determining of strategic goals
3. Exclusion of human factors
4. Automatization of previous incorrect innovation processes
5. Absence of system for evidence of innovative ideas, opportunities and innovations
6. Non-utilization of innovation potential
7. Ignoring of the inputs conditions
8. Absence of feedback
9. Insufficient starting point of formulated strategy.

Each identified problem is characterized, and the recommendations are designed to minimize the problem. These recommendations do not only serve to reduce the likelihood of problem areas, as prevention, but also as a tool to improve innovation processes in business.

Acknowledgement

This paper was partially supported by the Slovak scientific grant VEGA 1/0992/11 2011–2013.

REFERENCES

- BARTÓK, M., JEŠKA, A., 2006: Procesy riadenia a implementácie inovácií vo firemných podmienkach. In: *Transfer inovácií* 9/2006: 222–224. ISSN 1337-7094.
- DE BONO, E., 1993: *Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas*, HarperBusiness. ISBN 978-0887306358.
- DODGSON, M., GANN, D., SALTER, A., 2008: *The management of technological innovation: strategy and practice*, 2nd Edition, Oxford University Press.
- GILBERT, J. T., 1994: Choosing an innovation strategy: theory and practice. In: *Business Horizons*.
- HITTMÁR, Š., 2006: *Manažment*. Žilina: EDIS – vydavateľstvo ŽU, ISBN 80-8070-558-5.
- HORNÁKOVÁ, R., ZAUŠKOVÁ, A., 2008: *Vyhodnotenie inovačného potenciálu a inovatívnosti vo vybraných malých a stredných podnikoch drevospracujúceho priemyslu*. Zvolen: Technická univerzita vo Zvolene. ISBN 978-80-228-1889-6.
- CHROMJAKOVÁ, F., RAJNOHA, R., 2009: Ekonomika inovácie ako súčasť zvyšovania výkonnosti firmy. In: *Journal of Competitiveness*. 1/2009. ISSN 1804 – 171X dostupné na internete <http://www.cjournal.cz/files/7.pdf>.
- JAKUBÍKOVÁ, D., 2008: *Strategický marketing Stratégie a trendy*. Praha: Grada Publishing, ISBN 978-80-247-2690-8.
- KATZ, B. R., DU PREEZ, N. D., SCHUTTE, C. S. L., 2011: *Definition and role of an innovation strategy*. [online]. [2011-01-02]. Available on Internet: <http://www.saiie.co.za/ocs/index.php/saiie/SAIIE10/paper/view/119/72>.
- KOVÁČ, M., 2007: *Tvorba a riadenie inovácií*. Košice: Technická univerzita v Košiciach. 121 p. ISBN 80-8073-690-1.
- LENDEL, V., VARMUS, M., 2011: Creation and Implementation of the Innovation Strategy in the Enterprise. In: *Journal Economics and Management*. Kaunas University of Technology: Kaunas, Lithuania, No. 16. 2011. p. 819–825. ISSN 1822-6515.
- SLOANE, P., 2003: *The Leader's Guide to Lateral Thinking Skills: Powerful Problem-solving Techniques to Ignite Your Team's Potential*. Nordwolk: Clays Ltd. ISBN 0-7494-4002-3.
- SOVIAR, J., 2009: Cluster initiatives in Žilina region (Slovak republic) In: *Economics & Management*. Kaunas University of Technology: Kaunas, Lithuania, ISSN 1822-6515. No. 14 (2009), p. 528–534.

- STRECKER, N., 2009: *Innovation Strategy and Firm Performance: Empirical Study of Publicly Listed Firms*. Gabler Verlag, 242 p. ISBN 978-3834917553.
- TIDD, J., BESSANT, J., PAVITT, K., 2007: *Řízení inovací. Zavádění technologických, tržních a organizačních změn*. Brno: Computer Press, 549 p. ISBN 978-80-251-1466-7.
- ZAUŠKOVÁ, A., 2006: *Riadenie inovácií*. Zvolen: TU vo Zvolene, 220 p. ISBN 80-228-1634-5.

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