

Innovations in Small and Medium Enterprises in Slovakia

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Abstract: Innovations have become not only very important determinant of successful development of every firm, but also their necessity. Small and medium enterprises are forced to make innovations, because they are under permanent pressure of competitors at the market. From this point of view the ability to compete in innovations plays very important role as a factor of their competitiveness. To strenghten innovation activities is one of the main task of small and medium enterprises (SMEs) nowadays. It´s also one of the priorities formulated in the strategy of building knowledged based economy in our country. The aim of the article is to give the view on the problems of developing innovation activities in SMEs sector in Slovakia. Because of the need to use a systematic approach, the stress will be given to the main factors determining innovation activities in SMEs in Slovakia and to innovativeness, which is viewed as one of the prerequisites for successful innovation activity in small and medium enterprises. The paper is elaborated as a part of VEGA project 1/0700/08 Determinants of innovation activities in small and medium enterprises in the Slovak Republik.

Keywords: small and medium enterprises, innovations, innovativeness, innovation activities, Slovak Republik

1 Introduction

Small and medium enterprises are faced more and more with the critical issue of how to respond to the changes caused by the process of globalization. To the most important changes in the business sector belong trade liberalization and movement of financial capital, information and communication technological processes, changes in international division of labour and international trade, a huge concentration of capital connected with qualitative and quantitative changes in the size as well as in a character of enterprises. The global business environment is changing very quickly. Strategic answer to all challenges resulting from changes in global business environment can be only development of economy based on innovations, knowledges and educated people [11].

Innovation is meaningful, dynamic, developing process, which result is positive change oriented on improving of transformation process in enterprises and better satisfying of customer needs [5].

OECD definition describes an innovation as a restoration and widening of products and markets portfolio, as a new designing, manufacturing and distributing methods, implementation of changes in work organization and labor force skills, etc. This definition recognize product, technological and organizational innovation.

Present approach to innovations prefers that innovation is a key word for entrepreneur; emphasizes global approach to innovations as a philosophy (way of managing of enterprises), which influences all parts of transformation process in enterprise (marketing, research and development, planning, manufacturing, managing, etc.) [5]. The ability to compete in innovations plays very important role as a factor of their competitiveness.

The aim of the article is to give the view on the problems of developing innovation activities in SME's sector in Slovakia. The article is divided into two parts. In the first part of article is analysed and evaluated situation in innovation activities conducted by small and medium enterprises in Slovakia, identified are main barriers to develop innovation activities and formulated are some recommendations how to overcome these barriers. In the last part of article is presented the importance of innovativeness, which is viewed as one of the prerequisites for successful innovation activity in small and medium enterprises.

2 Innovation Activities in Slovak Small and Medium Enterprises

Current economy tends to be characterized as a new, global and knowledge-based economy. The new, global economy is the economy of knowledges and ideas, where innovative ideas and technologies fully integrated in services and products became a key to generation of new working positions and higher life standard. Only those businesses that are dynamic are able to respond to the market demand swiftly, and are capable of research and development of new products, innovations and technological changes.

Innovations in all european countries are declared to be their priority and many various programmes within European Union are developed in order to support innovation activities in small and medium enterprises.

Innovation activities are supported primarily by those business entities, which are motivated by pressure of competition, necessity to develop and implement new technologies, to make production more effective, to penetrate to new markets, or

react to changes of business environment [7]. No doubt that we can consider innovations to be result, instrument and way at the same time, enabling to overcome mentioned necessities.

There exist no doubts about the benefits of innovations in all businesses. With the development of innovation processes in all types of enterprises, it is evident the growing role of innovations also in small and medium enterprises. Many examples confirm, that small and medium enterprises create a larger space for innovation, because they are much more flexible in comparison to large-scale enterprises. In spite of all above mentioned advantages, small and medium enterprises have also some handicaps – many of them don't own research capacities and face many financial problems.

There is a high correlation between the size of enterprises and their innovation activities. In large enterprises is the proportion of innovation activities higher according to small ones (Figures 1 and 2). This is the case of all member states in European Union. What concerns the indicator giving the proportion of enterprises with innovation activities on the total number of enterprises, it is 2,3 times higher in EU countries as it is in Slovakia [10].

Figure 1

Share of enterprises with innovation activity in total number of enterprises by their size in EU and in Slovakia in the year 2006 (in %) – indicator 1

Indicator 1	European Union	Slovak Republik
All enterprises	51	22,7
Small enterprises	37	17,4
Medium enterprises	65	31,8
Large enterprises	81	56,6

Source: Eurostat, 2008

Figure 2

Share of enterprises with innovation activity in total number of enterprises by their size in Slovakia (in %) – indicator 2

Indicator 2	2003	2004	2006
All enterprises	19,4	21,1	22,7
Small enterprises	14,6	14,9	17,4
Medium enterprises	24,2	32,7	31,8
Large enterprises	47,5	57,4	56,6

Source: Statistical Yearbook of the SR, 2008

Important indicator giving the view on innovation activities by type of innovation is share of enterprises with innovation activity in total number of enterprises by type of innovations in Slovakia (Figure 3).

Figure 3

Share of enterprises with innovation activity in total number of enterprises by type of innovation in Slovakia (in %) – indicator 3

Indicator 3	2003	2004	2006
All kind of innovations – total	19,4	21,1	22,7
- Successful innovations	18,5	20,0	21,6
Product innovations only	11,9	3,7	4,9
Process innovation only	1,5	7,1	8,1
Product and process innovations	5,1	9,2	8,6
- On-going or abandoned only innovations	0,9	1,1	1,1
Enterprises without innovation activity	80,6	78,0	77,3

Source: *Statistical Yearbook of the SR, 2008*

Positive is viewed the growth in number of enterprises implementing the processes innovations. While product innovations enable to reach the competitive advantage through changes in the product/services which an enterprise offers, processes innovations have the tendency to rationalize the production through changes in the ways in which product/services are created and delivered ¹.

National Agency for Development of Small and Medium Entrepreneurship in Slovakia conducted with the INFOSTAT and Statistical Office of the Slovak Republic in the year 2005-2006 research on the sample of 1070 small and medium enterprises oriented on the analysis and evaluation of the state of SME's in Slovakia. Special section of the research was aimed at identification of main innovation activities conducted by small and medium enterprises in Slovakia as well as on identification of main barriers to develop innovation activities in SMEs. Results of the research [12] confirm, that 35% of surveyed SMEs with innovation activities have improved technology of production, 19% of SMEs have developed and implement quite new product (mostly from industry production) and 35% of SMEs have innovated their product/service [12]. As the most important contribution from implementation innovation activities SMEs have identified: raise of turnover (72%), lower costs of production (40%) and raise of exports (14%) [12].

¹ Enterprises with innovation activities are those enterprises that have had any kind of innovation activity during surveyed period, i.e. have introduced new products or processes or have had on-going or abandoned innovation activity. Product innovation was realized when a product (good, service) is new or significantly improved with respect to their fundamental characteristics or technical specifications. Changes of a solely aesthetic nature or pure sale of production innovations wholly produced and developed by other enterprises are not included. Process innovation includes new or significantly improved production technologies, new and significantly improved methods of supplying services and delivering products. Purely organizational or managerial changes are not included [14].

As the main barriers to develop innovation activities by small and medium enterprises were identified:

- 1 Small and medium enterprises in Slovakia give as the main barrier to develop innovation activities lack of financial sources. The results of above mentioned survey confirm, that most of innovation activities were financed by their own financial sources. Low utilization of other financial sources is in many cases the consequence of a weak informativeness about other alternative sources of finance [13]. As a source of finance could help various loan guarantee schemes for small and medium enterprises, schemes to support the start-up enterprises, venture capital, but also various EU programmes (especially initiative JEREMIE). To fulfil the aim – to improve innovation activities by small and medium enterprises – it requires to be more active in the process of drawing financial means from EU funds.
- 2 As a factor of insufficient innovativeness in small and medium enterprises was identified low awareness about the impact of innovations on their economy and competitiveness. This fact involves fear that small and medium enterprises don't perceive innovations as a competitive advantage. In other words: it's necessary to develop the innovation awareness in Slovak small and medium enterprises; attention has to be given to human resources for innovation [9].
- 3 Small and medium enterprises have identified as one of the barrier for innovation the lack of innovation infrastructure. Only a small part of small and medium enterprises possesses sufficient capacities as well as know-how for realization of all activities of innovative process, therefore it is needed to fill this gap with services of specialised consulting organisations. The aim is to create effective system of specialized consulting services for support of innovations. It's also helpful to complete and extend existing infrastructure for support of innovations to the same level of leading European countries. It contains mainly technological incubators, technological and innovation centres and scientific parks. And important is also support of existing network of supporting organisations such as RPIC, BIC, CPK and others.
- 4 The positive examples from EU countries confirm, that the participation of small and medium enterprises in networks and clusters, support of partnership's building is the way, how to involve small and medium enterprises into innovation activities. Innovation process of a higher level calls for improvement of interaction between small and medium enterprises, research institutions and universities and for creation of various effective networks and partnerships [15]. Many positive examples in Slovakia (from commerce, services, automobile industry, machinery industry, wood industry) confirm the advantages of this progressive form of organization.

- 5 The example of how to use the opportunities which offers globalization for small and medium enterprises (especially in countries with small internal market) represent firms born global (global start-up firms) [2]. They play an important role in the development of innovation. Born global firms operate in businesses where the product life cycle is very short (for example information and communication technologies). Firms which are born global are set up to exploit international market opportunities in almost in any sector. These firms destroy the classical forms of entering the international market and they adopt a global approach to the business from the beginning. Born global firms are becoming the driving power of radical innovations in the new economy. They create new markets for new products.

It can be stated, that a systematic approach to innovation activities in small and medium enterprises calls for:

- generating ideas and permanent accumulation of all impulses which could lead to innovations,
- creative human resources,
- ability to judge the reality of innovation ideas,
- effective team work,
- ability to manage innovation projects,
- cooperation with external institutions (universities, research institutes, consulting agencies),
- ability to judge the risk,
- ability to possess the right courage and spirit,
- motivating all workers,
- implementing systematic education.

In today's entrepreneurial practice innovations must be natural part of any entrepreneurship. Permanent and regular innovation is becoming a competitive necessity; to be successful in the future requires interrupting conventions. There is a time of changes and the only way how enterprise can be successful is to accept these changes, adapt to them and utilize them.

3 Innovativeness in Activities of Small and Medium Enterprises

Innovativeness plays a central role in the knowledge-based economy; it is practically omnipresent and concerns all areas. Innovativeness means creativity, the ability to come up with new thoughts, ideas and a unique way of combining or connecting. Small and medium enterprise that encourages innovativeness creates preconditions for new procedures and solutions. When managers talk about the need of changes in an enterprise, they usually mean encouraging the innovativeness of the employees. Accordingly, we understand the term innovative management as the management whose methods and techniques of managing are based on accentuating innovativeness, i.e. encouraging new, creative solutions. This requires some creativity of human potential in SMEs, implementation of new, progressive methods and techniques of personnel development, implementation of knowledge management, as well as pro-innovative firm's behaviour. Every improved, changed or new solution is a result of an innovative and creative approach [1].

Being creative means seeing ideas or objects in a different context, either by recognizing their inherent potential to be used in a different way, or by putting previously unconnected ideas together to create something completely new.

Employer's interest to develop innovation activities requires a certain level of proinnovative culture in a firm, where employees are involved into the process of business policy formulating and are challenged to submit new innovative ideas.

Managements in slovak small and medium enterprises are looking for the best management practices in Europe and worldwide. Our managers (mainly of middle and older age) are a bit disadvantaged in comparison with their colleagues abroad, as they must train alongside their working career and have little time for development of their capabilities and characteristics. In a relatively short time they must master the contents of a lifelong preparation of Western managers. It's clear, that creative methods – their mastering and usage – are one of the means how to minimize the gap.

Famous is the system „Innovativeness action“, which was developed by Consultation and training centre in creativity and innovation in Canada. The system serves as a support of organization's inovativeness by applying creative potential of human resources. It aims to create new products, new production procedures, new markets and new strategies in order not to stay ahead of competition. The system uses creative process to transform the knowledge of organization's employees to the knowledge with added value. It consists of five steps:

1 The structure and program of voluntary participation with an aim to develop, support and assess initiative and creativity

It is evident that developing the innovative environment in SMEs calls for the distinctive quality of leadership, coupled with management knowledge and abilities. Innovative organizations do not happen by chance. They are the end products of good leadership and management. The essence lies in getting the balance right between freedom and order, between the anatomy of the parts and the integrity of the whole.

The innovative organization is the reverse image of bureaucracy: flat rather than pyramidal; decentralized decision making and developed responsibility; informal instead of formal; emphasis on lateral as well as vertical interaction; rules kept to a minimum; positive about appropriate and properly calculated risks.

One way how to harvest new ideas is to introduce what could be called innovative systems, notably Suggestion Schemes and Quality Circles, which are designed to encourage and harvest ideas at work.

A leadership team that is eager for innovation is much more likely to enjoy a successful and profitable Suggestion Scheme. The Suggestion Scheme should be as simple as possible. The more complicated and bureaucratic it becomes, the less effective it will be. Suggestion scheme is the innovative system that is highly individualistic. By contrast, Quality Circles do employ team creativity. For a Quality Circle is a group of 4 to 12 people coming from the same work area, performing similar work, who voluntarily meet on a regular basis to identify, investigate, analyse and solve their own work-related problems. The Circle presents solutions to management and is usually involved in implementing and later monitoring them. Each Circle has a team leader. Within an organization the groups are supported and coordinated by a facilitator. Quality Circles have flourished best in Japan (the Japanese are usually much more creative in groups than as individuals).

2 Develop organizational culture and positive environment for creativity development in the organization

The attitudes, personal qualities and skills of leaders in organizations stand out as a group of vitally important factors in innovation. Be they supervisors or first-line managers, middle managers or executive directors, the leaders of an enterprise can do a great deal to encourage creativity.

The top leadership team – the chief executive and executive directors – need to show visibly that they are committed to the strategy of innovation. Their weight and influence is necessary to overcome the barriers and resistance to useful change which innovators often encounter. The top management team should seek ways of making their commitment to positive and useful change visible to all concerned.

Building innovative organization is a long-term perspective. Flexibility is the key quality to the truly innovative organization. The flexible person, team or organization is capable of responding or confirming to changing or new situation. That places a high premium on communication. In organizational terms it means to create an entrepreneurial and matrix-type management structure while preserving the efficient monitoring system.

It is virtually impossible to innovate without accepting an element of risk.

Management commitment, a long-term perspective, responsiveness to change and acceptance of risk are all contributors to the right culture or climate in which new ideas can arise and significant changes implemented.

Innovative organizations encourage participation in decision making, problem solving and creative thinking. They have policies or guidelines rather than rules, keeping the latter to the minimum. They have good internal communications, more by word of mouth than by memo or letter.

Team creativity cannot be organized, but there are structures which encourage it. The ethos of a group or organization is obviously important. The right climate will encourage people to express ideas, however half-formed. Members are able to discipline themselves in order to suspend judgement. They listen for ideas. They build and improve on one another's contributions. In other words, the conversation in that organization is positive, confident but realistic, and essentially constructive. Criticism is necessary, too, because it is a vital ingredient in effective thinking.

3 Develop a diagnostic tool that would enable the assessment of the performance in creativity and innovation

It means, that the special system how to assess the performance in creativity and innovation is implemented.

Without systems and proper controls sensibly applied, there can be no organization worthy of name. It requires leadership and management to achieve productive order without sacrificing freedom and creativity. Developing the diagnostic tool to assess the performance in creativity it should be taken into account that:

- Creative people tend to be more open and flexible than their less creative neighbours. They bring a freshness of mind to problems. They have usually exhibited the courage to be different and to think for themselves. They are comparatively more self-motivated and often addicted to their work.
- Creative people stand in special need of encouragement and appreciation. The recognition of the value or worth of their contribution is especially important to them, particularly if it comes from those whose opinions they respect.

- A creative person tends to be most effective if allowed to choose the area of work, and the problems or opportunities within that area, which arouses deep interest.
- Creative people need conversation with colleagues in order to think, not for social intercourse. Organizational structure should facilitate these formal and informal interactions.
- Creative people respond well to an organization which encourages them to take calculated risks.

The above conditions become motivational in conjunction with the inner interests and drivers of creative individuals. The quality of an innovative organization depends ultimately and largely upon the quality of the employed people. Machines do not have new ideas. Computers cannot create. Money alone cannot create a satisfied customer... Creative leadership means the kind of leadership that encourages, stimulates and guides the process of innovation from beginning to end. The challenge of innovation is largely the challenge of leading creative people.

4 Think of, develop, implement and assess a training program focused on development of creative potential of individuals

To operate an innovative organization with a culture of team creativity does presuppose a trained and educated workforce. Apart from technical training, everyone today needs training in the skills and techniques of effective thinking: analysing, imaging (using the brainstorming technique), valuing, and how the mind works – especially the positive part played by the unconscious mind in restructuring problems and providing solutions.

A broader education is also to be encouraged, for an innovative organization is by definition also a learning organization.

5 Introduce reward system (financial or other) designated for employees that contribute significantly to the efforts in creativity development in the organization

There are various more or less important but still significant factors which matter to the creative individual, such as its tolerance of a degree of unconformity, the opportunity to work alone as opposed to always being a member of a group and the level of financial reward.

There are many examples how the right implemented reward system can support the employee's effort in creativity development in the organization.

Central aspect of innovative management is a human being as a unique personality with his/her own development, with a need to learn and pass on the knowledge, a man producing values, who is creative, able to understand the necessity of change and is willing to adapt to it. Sensible managers support innovative ideas that can

form a base and space for new opportunities. It is obvious that an effort to innovate (in the broadest sense of the world) should be inherent in every small and medium enterprise.

Conclusion

Slovak republic as a small country has to build their own prosperity and competitiveness especially through the ability to acquire and to implement new knowledges into the new products, processes, technologies and services.

Small and medium enterprises are forced to make innovations, because they are under permanent pressure of competitors at the market. From this point of view the ability to compete in innovations plays very important role as a factor of their competitiveness.

The contemporaneous financial and economic crisis has impact on all areas of business activities and results in problems with free accessible financial sources which are needed to finance investments, especially innovations. Despite the crisis there is just the time to support innovativeness, education and to use all accessible financial sources on innovation activities in order to raise their competitiveness and thereafter also competitiveness of the whole slovak economy.

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