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Evaluating Innovation Activities in Small and Medium Enterprises in Slovakia

Lubica Lesáková

Matej Bel University, Faculty of Economics
975 90 Banská Bystrica, Tajovskeho St. 10
Slovak Republik
E-mail: lubica.lesakova@umb.sk

Abstract: To strengthen innovation activities is one of the main tasks of small and medium enterprises (SMEs) nowadays. It's one of the 4 priorities formulated in the strategy of building a knowledge-based economy in our country. The aim of the article is to give an integrated view on the problems of developing innovation activities in the SME sector in Slovakia. The article is divided into three parts. In the first part attention is given to the building of an innovative business environment in Slovakia. A favourable innovative business environment is crucial to develop innovation activities in small and medium enterprises. Analysed are three most important frameworks determining the innovative environment: innovation policy framework, macroeconomy framework and institutional framework. In the second part of the article the situation in innovation activities conducted by small and medium enterprises in Slovakia is analysed and evaluated. Identified are the main barriers to developing innovation activities and formulated are some recommendations on how to overcome these barriers. In the last part of the article the importance of innovativeness, which is viewed as one of the prerequisites for successful innovation activity in small and medium enterprises.

Key words: small and medium enterprises, Slovak Republic, innovation activities, innovative business environment, innovativeness

Introduction

Globalisation, new economics, knowledge economics, innovations – these are only a few of the new attributes of the global changing environment. Strategic answers to all challenges resulting from changes in the global business environment can be only the development of an economy based on knowledge, innovations and educated people.

The Lisbon strategy which was approved in the year 2000 set out for the European Union an ambitious goal – to make the European Union „the most dynamic and competitive knowledge-based economy in the world capable of sustainable

economic growth with more and better jobs and greater social cohesion“ by 2010. The core of the revised Lisbon strategy (approved in the year 2005) was to support the economical growth and creation of labor opportunities in EU member states. The emphasis was given to building up knowledge-based economy – to the support of education, research, development and innovations, and to human resources. The revised Lisbon strategy has created the starting point for formulating the national Lisbon strategies by all European Union member states.

Slovak government has approved the National Lisbon Strategy in February 2005 under the title „Strategy of competitiveness of the Slovak Republik until the year 2010“. The document presented concretisation of Lisbon strategy for the Slovak Republik. To fulfil the aim of the strategy, were formulated action plans in 4 preferential areas: a) human resources and education, b) research, development and innovation, c) information society and d) business environment.

Slovak government has declared support to innovation development also in other documents such as „Innovation strategy of the Slovak Republik for the years 2007-2013“ and in the document „Innovation policy of the Slovak Republik for the years 2008-2010“, which covers concrete actions leading to the development of institutional infrastructure and to higher innovation activities of slovak enterprises.

In spite of all above mentioned declarations to support research, development and innovations, there is still low level of investments into research and development in Slovakia. One of the basic indicator to perform the Lisbon strategy – the percentage of expenditure from HDP on research and development (R&D) is still in Slovakia very low. In the year 2006 the percentage of R&D expenditure on HDP reached 0,47%, in the year 2007 it was 0,50%; in comparison to European Union states this is four-times less as an average in European Union (1,9%). The aim of the slovak government is to raise this indicator until the year 2010 up to 1,9 – 2,0%.

Engagement of European Union to raise the % of R&D expenditure on HDP up to 3% (1% from state budget and 2% from private financial sources) is fulfilled only by few EU member states. Not positive is evaluated also the proportion of private investments into research and development.

It could be stated, that the remainness in R&D in Slovakia is the result of:

- very low level of investments into R&D from public as well as from private financial sources,
- not sufficient interaction between the main actors in the innovation system (universities, research institutions, institutional bodies and firms) to enhance knowledge and technology diffusion,
- not adequate number of R&D workers.

Because of the need to use a systematic approach by analysing and evaluating innovation activities in enterprises, it is suitable to analyze three thematic areas:

1. Building innovative business environment.
2. Determinants of innovative activities in small and medium enterprises.
3. Innovativeness in activities of small and medium enterprises.

The analysis and evaluation was aimed at small and medium enterprises sector in Slovakia.

1 Building Innovative Business Environment in Slovakia

It's clear, that the small and medium entrepreneurship development is directly influenced by the quality of the business environment, which is formed by a wide range of conditions for business activities in the areas of legislation and institutional infrastructure as well as in the field of market functioning.

It seems that innovative policy cannot be divided or separated from entrepreneurship policy. They are closely connected and some points in entrepreneurship policy documents could be described as a „common goal for innovative entrepreneurship“ and special innovative strategy documents could be described as a more specific workplace for innovation.

The quality of innovative business environment depends on many variables; as the most important appears:

- *innovation policy framework* is represented by a innovation policies, strategies and documents supporting the creation of innovative business environment in national and regional context. The Innovation Policy in national context is represented by the document „The National Innovation Policy of the Slovak Republik“ (approved in the year 2005). This document itself is a proof that the government has adopted responsible approach to innovations. The aim of this document is to create conditions and to lay foundations for the formulation of the Slovak Innovation Policy. Another document which helps to implement innovation policy in Slovakia is the document „Innovation Strategy of the Slovak Republik“, which covers concrete actions leading to the development of institutional infrastructure and to higher innovation activities of slovak enterprises.

The concrete measures of this strategy are:

- governance framework for public R&D support,
- improved allocation of research funding,

- support for innovative small and medium enterprises,
- strengthening of research-enterprises links,
- expanding the venture capital market.

There are also other documents (Innovation policy of the Slovak Republic for the years 2008 – 2010) to support the building of innovative business environment. All above mentioned documents confirm the growing role of innovations, the governmental support in creating favourable innovative business environment as well as the importance to develop the innovation awareness in a society;

- *macroeconomic framework* – represents the economical basis for effective innovation policy. It is clear, that favourable and sound macroeconomic framework creates the basis for building innovative business environment and development of innovation activities. It could be demonstrated that the level of public expenditure on R&D is influenced – direct as well as indirect – by achieved economic level and efficiency. Empirical analysis confirm, that investments into education, R&D are investments into economic growth and are crucial for long term firm's competitiveness as well as for competitiveness of the whole economy;
- *institutional framework* – is constituted by institutional infrastructure to support the innovation activities. It should be stressed, that one of basic factors determining the quality of innovative business environment is institutional infrastructure. The current system in Slovakia is represented by various ministries (The Ministry of Economics, The Ministry of Education, Youth and Sport, The Ministry of Agriculture and others ministries) and institutions (Slovak Energetic and Innovation Agency, Slovak Agency for Investment Development and Trade, National Agency for Development of Small and Medium Entrepreneurship and many others). Each of these institutions has „lever“ to stimulate the innovation development in area of their own activity and thus influence the quality of innovative environment.

Special role in stimulating the innovation development play regions and regional institutions (especially RIC, RPIC, BIC, CPK and others). Their role is to help to create innovation stimulating environment and integrate the support of innovations into strategic plans and policies in a region.

In order to support building of innovative business environment it was approved to establish in Slovakia in the period 2008-2013 The National Innovation System (NIS) which will cover all state and private institutions, bodies, agencies at national as well as on regional level operating in this area, including support schemes and other instruments of innovation policy.

2 Innovation Activities in Slovak Small and Medium Enterprises

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.

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.

National Agency for Development of Small and Medium Entrepreneurship in Slovakia conducted with the INFOSTAT and Statistical Office of the Slovak Republik 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.

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. 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.

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. Many positive example 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). 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.

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.

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.

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.

Conclusions

Slovak Republik 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.

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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