

UDC (UDC number according to classification)

JEL Classification O3, M1, M00

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SMES' INNOVATION APPROACH IN THE CZECH REPUBLIC

The paper focuses on innovative activities of small and medium-sized enterprises (SMEs) in the Czech Republic. The purpose of the article is to fill the gap in the knowledge of general innovative behaviour of SMEs in terms of their perception and real doing inside of companies as well as the manner of innovation management in this business segment. What also remains less surveyed (compared to the large or multinational companies) are the areas in which innovation primarily take place in SMEs and the main motives for innovation activities. The aim of the research, therefore, was to map general attitudes of SMEs to innovation and the manner of innovation management in this segment in the Czech Republic. Another aim was to identify common areas in which innovation take place in SMEs most often as well as to predict the trend of innovation development. Given the often limited funds allocated to innovation in SMEs, the paper also contains part of research results determining the SMEs' view of tax relief in implementation of innovation. The research questions were what importance SMEs attribute to innovation in general and whether the innovation process is not underestimated in them, because the segment of research and technology-oriented SMEs is still considered relatively underdeveloped in the Czech Republic. The results of the presented research and compilation of further surveys where the author of this article participated bring new insight into the SMEs' manners in innovative doing, revealing the internal preferences, drivers and also constraints the small businesses have to deal with. The dominant method of survey was quantitative survey among 514 SMEs. The research concludes that SMEs are aware of the importance of innovation for business and competitiveness, but they approach innovation management and planning in a rather unsystematic way. A capacity barrier plays an important internal role in particular in SMEs; it is manifested as engagement of personnel capacities in ongoing projects, where it is very difficult to find space for systematic research activities. This is faced by a large part of medium-sized companies, which otherwise have a very good innovation potential. Significant findings are also directed in the area of drivers (motives) for innovations, where customer preferences, availability of funding and competitors' actions prevailed. The paper also discusses institutional barriers with influence on SMEs' innovative activities, which seem to be considered as a significant constraint in the Czech Republic. Dominant area of innovation in SMEs is connected with services and marketing. Since specifically these areas are the most dynamically developing nowadays further research on detailed forms and manners would be useful to be able to support SMEs more systematically in their innovative activities.

Key words: Innovation, SMEs (small and medium sized enterprises), Innovation Management, Innovation Motives and Barriers, Czech Republic

Formulation of the problem generally

Only one or two decades ago, Europe had an undeniable technological advantage over countries (especially in Asia) which are not its confident competitors in most world markets. This also applies to the area of quality and its stability in more sophisticated sectors and products, which is one of the developmental stages of competitiveness (the ability of one-off attaining of a certain qualitative degree is significantly easier than subsequent stability of a

certain qualitative level without fluctuations. This remains one of current widespread manufacturing problems, which mostly applies to serial and large-volume productions). Although a high degree of industrial experience of qualified personnel (not only education) is also often needed in highly specialised products, the technological superiority of the Western world is gradually disappearing. To certain extent, it is still partly being replaced by superiority of the ability to innovate, but Europe realizes very well that this ability must be radically strengthened because it is one of very few ways to ensure regional prosperity even in future. Also, the pressure on the added value and specialisation is growing. Innovation is, therefore, what matters the most to help achieving the described above.

Only little is known about the small and medium sized enterprises' innovative behaviour in terms of their perception and real doing inside of companies. Another only little known problem is their attitude to innovation and the manner of innovation management in this business segment. What remains less surveyed (compared to the large or multinational companies) are the areas in which innovation takes place in SMEs as well as the criteria for planning and managing of the innovation process in the segment of small and medium sized enterprises. The relevant and concrete data is missing in fact. Therefore, the survey was undertaken and other relevant sources were used for this paper creation.

In terms of methodology, the paper is based mainly on an independent survey on a sample of 514 mostly small enterprises operating in the Czech Republic; the surveyed competent person was always exclusively the company owner or director. In particular, three areas were examined for the purposes of this paper: SMEs' attitude to innovation and perception of its position in the company, analysis of the innovation process over the last two years, and prediction of the innovation process in future. Another foundation of this paper is a compilation of several other surveys (or their parts – for details see the part: Basic materials). Also, data were used from expert analyses aimed at certain topics or segments of small and medium-sized enterprises prepared by the Association of Small and Medium-Sized Enterprises and Crafts of the Czech Republic, among other things using controlled interviews with experts from companies. Finally, the data and outputs are confronted with the state of current scientific knowledge. ASME CR (Association of Small and Medium Sized Enterprises and Crafts of the Czech Republic, in Czech abbr. AMSP ČR), www.amsp.cz, is an influential non-profit representative of this segment of companies, mapping regularly the business environment, making analyses and consulting the new legislation with an impact on small and medium sized businesses. The author of this article has been involved in the Board of Directors of ASME CR since 2008 and has been regularly participating in the SME surveys.

Analysis of recent researches and publications.

Small and medium-sized enterprises (SMEs) including sole traders are considered not the true backbone of not only the Czech but also of European economies, primarily responsible for wealth, economic growth and, most importantly, social cohesion whose relevance is on the rise. Another important feature is the stability of small and medium-sized enterprises in national economies. These only rarely leave their home countries in terms of transfer of production, and they rarely park their capital out of their countries [7]. Into this group it is possible to include also family business. It plays a significant role for the development of the regional potential in the Czech Republic. Family businesses are strongly connected (in terms

of business as well as socially) with the region, they create regional business spine and they are also a base of regional infrastructure [13, p. 89].

However, SMEs are also the carriers of a substantial number of small innovations, which make the market, services and attitude to customers move and further sophisticate. Nevertheless, the practical and also research problem is that internally, small and medium-sized enterprises do not approach innovation very systematically, and very rarely they allocate human resources exclusively to innovative activities, which was also subject to the survey whose results are presented in this paper. Therefore, there is an assumption that innovation occurs in SMEs rather randomly or as a 'side-product' of another process or change, in the best case in the development of a product. On the other hand, it should be noted that SMEs are inherently much more flexible than corporations (large or multinational companies), and therefore the cycle of innovation introduction, its implementation and, where applicable, its commercialisation, is incomparably faster. Also, usually due to a flatter organisational structure, SMEs offer a greater opportunity to apply creativeness and discuss (innovative) ideas at the current time. As reported also by Ortega-Argilés, SMEs may be better positioned to take advantage of external knowledge than large firms through less bureaucratic and more flexible management practices [12].

Although the bulk of innovation is realised by large firms, the importance of SMEs is unquestioned [5]. The share of SMEs in industrial research and development (R&D) expenditures in the USA grew from 4.4 % in 1981 to 24.1 % in 2005 [11]. Overall, 30.0 % of the total SME population in the EU27 are innovating in-house [8]. A minority of these innovative SMEs collaborate with other organisations (9.5 % of all SMEs in the EU27). A significant part of SMEs (33.7 % in the EU27) also introduce innovative products, services, and processes [8]. These data illustrate that SMEs are important players in the innovation landscape.

Another examined area was tax relief (concession) as an instrument to promote innovation by the state. As Storey [15] says, governments in many countries have encouraged, developed or financed business programs to improve the entrepreneurial and innovation capacities and business performance of small and medium enterprises. However, we witness that some instruments are limited in practice. On the other hand, as shown by Spithoven et. al. [14], resource constraints may incentivize SMEs to rely on less expensive and less risky alternatives than formal inhouse R&D.

Havlíček [9], in his book *Management & Controlling of a Small and Medium-Sized Enterprise*, however, emphasizes that innovation cannot be perceived only as improvement of products companies offer. "We can change business processes, products as well as the overall focus and direction of the company. From this perspective, we divide innovation into strategic, product and procedural ones, which create the overall innovation framework of the business," he adds.

In the book *Innovation and its Funding in a Small and Medium-Sized Enterprise* [6], the authors state: "Innovative activities are successful only if there is appropriate response from the market, for example in the form of higher sales, in the form of more satisfied customers, strengthening the image or development of better relations with stakeholders in the company."

Aims of the article

This paper focuses in innovative activities in the Czech Republic, in particular in the segment of small and medium-sized enterprises (SMEs), which are considered, from the macroeconomic point of view, a weaker link in the area of innovation. Considering the problem specified in the chapter Formulation of the problem generally few aims were elaborated prior to the conducting the research itself. The aims primarily were:

- to realistically map a general innovative behaviour of SMEs, their attitude to innovation and the manner of innovation management in this business segment
- to identify and discuss the most common areas in which innovation takes place in SMEs as well as to detect the trend of innovation development in those areas (for example, approach to customer, how to expand and create new markets, services, marketing, product innovation)
- also to identify criteria for planning and managing of the innovation process in SMEs

Given the often limited financial resources allocated to innovation in SMEs, the paper also contains part of results of research determining the SMEs' view of tax credit in implementation of innovation as one of the institutional instruments to promote innovation in the Czech Republic. Last but not least, the discussion part of the paper presents the main institutional barriers to innovation in the segment of small and medium-sized enterprises.

Basic material with substantiation of the result of the research

From the methodology point of view, the basis of this paper is a combination of several sources. The first and dominant source is the survey [1] conducted among 514 companies from the segment of small and medium-sized ones mapping their attitudes to innovation and their innovative behavior. Since funding of innovation is, in particular in the SME sector, a relatively important issue, part of results of subsequent research [4] mapping SMEs' view of the possibility to use tax credit for research and development as one of the institutional instruments to promote innovation in the Czech was also used.

Another foundation of this paper is a compilation of couple of other (newer) surveys (or their parts) [2, 3] as well as use of data from expert analyses aimed at certain topics or segments of small and medium-sized enterprises prepared by the Association of Small and Medium-Sized Enterprises and Crafts of the Czech Republic (ASME CR), among other things using controlled interviews with experts from companies. Finally, the data and outputs are confronted with the state of current scientific knowledge.

Unique research mapping innovative behaviour of small and medium-sized enterprises (SMEs) in the Czech Republic [1] was conducted in cooperation with the aforementioned Association (ASME CR) on a sample of 514 predominantly small enterprises. The main aim of the research was to discover SMEs' attitudes to innovation and perception of its position in the company. This part focused on the general conception of innovation process in SMEs. The main research question was to what extent companies in the SMEs segment deal with innovation, what form they use to plan and manage the innovation process, and how they perceive the innovation process within their business concept. The conception and perception of the innovation process suggests to that extent the innovation process is important for the entrepreneur.

Another examined line was to determine the degree of innovation process in the segment of SMEs in the last two years (prior to the survey). Main attention was focused on the extent of implemented innovation and its division by type. Significant findings are directed in identification of areas in which SMEs implement innovation most often, but interesting findings were also brought by results of examination of criteria for innovation process planning and management.

In order to obtain empirical material, quantitative research was chosen and applied, although a sample of 514 companies may be assessed in different ways in terms of statistical significance. However, one has to take into account the size of the Czech market and the number of relevant business entities actively operating in it. The main research method was surveying using in-depth telephone interviews (CATI—Computer Assisted Telephone Interviewing) based on a structured data collection questionnaire. The survey was conducted in May 2012 and the author of this paper actively participated in it (for details see ASME's 16th survey titled "Opinions of small and medium-sized enterprises on innovation and its funding" [1]).

The questionnaire consisted of 25 questions, of which 10 closed-ended, 8 semi-opened-ended, 2 open-ended and 5 segmentation ones. The target group were small and medium-sized enterprises (SMEs – according to the standard of the European Commission No 800/208) and the respondents were highly competent persons, i.e., exclusively owners or directors of the companies. Respondents who said they did not carry out innovation at all were excluded from the survey (almost one fifth, namely 19%). The sample of companies was selected randomly. In terms of line of business, most respondents were from the area of services (53%) and from the area of trade (29%). Manufacturing was represented relatively less (17%). In terms of regional pertinence, the respondent sample was balanced, but regional pertinence is defined vaguely in the Czech Republic because the place of registered office often does not correspond to the place of actual performance of business activities.

Since funding of innovation—whether in terms of funds or their internal management—turned out to be a weak point of small and medium-sized enterprises, as well as frequent pointing out to insufficient support by the State, another survey was conducted in 2016 aimed to evaluate the use of tax credit for research and development in the innovation process. The survey was conducted in December 2016 on a sample of 114 companies that apply tax credit on research and development. The data collection method was against CATI (telephone interviewing of companies), and a structured questionnaire of approximately 10 minutes was used.

The results of the dominant survey [1] titled Opinions of small and medium-sized enterprises on innovation and its funding, show that small and medium-sized enterprises are well aware of the importance of innovation for their business and competitiveness, but they approach its management and planning rather unsystematically. In the two years prior to the survey, an innovation process was most often introduced in the area of new services (72% of companies in the SME segment), the second area of innovation process was marketing innovation (53% of companies), and product innovation had been introduced in 37% of companies. In about half of the cases it was a completely new model (as part of innovation), and in about one third of cases it was modernisation of an existing model (product service, process, etc.). Results of examination of criteria for innovation process planning and management yielded interesting

findings. The survey showed that the main motivation for innovation in SMEs is the needs and wishes of customers, acknowledged by three quarters of companies, availability of funding, and actions of competitors.

SMEs' attitudes to innovation and perception of its position in the company. A greater part of companies in the segment of small and medium-sized enterprises (SMEs) currently have active experience with the innovation process. 81% of respondents stated they carried out at least occasional innovation in their companies. Survey [1] results suggest that a large majority of surveyed companies subjectively rank themselves among companies that carry out innovation in their business.

Innovation was presented and perceived by respondents as one of parts of business. A majority of surveyed business owners (51%) stated that it was even a key process without which they could not do in practice. Innovative activities are beneficial but not absolutely necessary for business for 42% of respondents. It is therefore apparent that companies in the SME segment realize that innovation—albeit done randomly—is important for survival in the market. Despite this, there is a relatively large number of companies that do not realize the necessity of continuous (and systematic) change management.

The survey [1] also included the area of motivation—the reasons for carrying out innovation, which in practice transform into criteria important for innovation planning. The survey showed that the main motive for innovation in SMEs is the ***needs and wishes of customers*** (74% of companies innovate according to their customers). This is not bad news as it means that companies realize the importance of the market, have feedback from it, and systematically manage their approach to customers through their marketing and trade departments. The second most important motive (64%) for innovation (hence the criterion for innovation process management and planning) is ***funds*** a company has available for the innovation process. Customer requirements and needs define the ideal degree of the innovation process; however, the process is limited by funds the company has available. The dynamics of innovation in the market (that is, ***according to competitors***) is essential for almost a half of companies (48%) if they are to carry out innovation. Slightly surprising result was one that the ***innovation project profitability*** was the drive for one fourth of companies only (27%).

In general, it can therefore be deduced that in terms of criteria for innovation planning, customers and their preferences are dominant (74%). It is not an entirely surprising conclusion because companies have operated in a predatory competitive environment for more than two decades, and they thus perceive the dictate of customers as a crucial factor for change management. A less positive finding is the fact that financial profitability is a significantly less important impulse (it plays a role in only about a quarter of companies). This could cause financial problems in small and medium-sized enterprises over time. A lower influence of controlling and a greater influence of the market (in particular, the segment of customers and competitors) are thus manifested. Another significant criterion that appeared to have influence on the intensity and regularity of innovation is financial capabilities of the company (64% of companies manage the innovation process based on their financial capabilities). A systematic management of innovation costs in relation to sales is typical rather of large corporations; SMEs tend to base them more on the immediate needs of the market and availability of fast resources. They apply an operational approach rather than a strategic one.

Although the majority of respondents said they dealt with innovation in some form, only 39% of them regularly compile a plan for the innovation process. On the contrary, 58% of companies manage their innovation arbitrarily and irregularly, depending on the economic development of the company and its surrounding (stakeholders).

In terms of internal organization of innovation and change management, companies from the SMEs segment generally do not form a special team of people completely devoted to the innovation process. A special team or individual devoted to the innovation process are found in 13% of companies, and they are usually small teams or individuals. Innovation teams are formed more often in larger companies, where usually only the owner (or the director), or members of top management, deal with innovation. In 2012, less than a third of companies in the SME segment cooperated on business innovation with external entities. Most often, these included another company or a sole trader in the area of IT, web presentation but also the area of marketing innovation. The result corresponds to services SMEs currently outsource most. However, in comparison with the most developed world economies, cooperation with universities and scientific institutions in general is poor in the Czech Republic. Generally, it can be assumed that *external “purchase” of a part of the innovation process will grow together with the overall increase in specialization.*

Management of the innovation process in the SME segment does not require formation of any special working groups or jobs that would focus solely on the issue of the innovation process. In only 13% of companies there is a special innovation team; it is mostly company owners who deal with the innovation process.

Innovation process in surveyed SMEs in the last 2 years (prior to survey) [1]. According to the survey a specific innovation had been introduced by vast majority of the surveyed companies (91%). This confirms that the SME segment is very dynamic, companies actively deal with innovation and see their significance. Innovation processes were most often introduced in the following areas:

- Service innovation (72% of companies)
- Marketing innovation (48% of companies)
- Product innovation (37% of companies)
- Organizational innovation (35% of companies)
- Strategic innovation (e.g., of the business model) (23% of companies)
- Innovation in the manufacturing process (19% of companies)
- Another area of innovation (7% of companies)

The findings once again prove the fact that SMEs effectively communicate with the market and are aware of the importance of the customers' role in the entire business process. This also corresponds with the results in the previous chapter related to the sources of motivation to carry out innovation, where the market situation or impulse from, in particular, the customer or competitors, were the strongest drivers of innovation.

As the author of the present papers states in her book *Innovation and its Funding in Small and Medium-Sized Enterprises* [6], marketing is one of the most dynamically developing disciplines within a company. Responding to the developments, changes, preferences and behavior of customers as well as the entire market (or its segment) is essential for success in business. It is a very broad scope, which is often erroneously narrowed down to promotion of sales, but that is only one part; moreover, it fundamentally has to be preceded by market analysis and systematic work with it. The reason is to obtain the most relevant market information. It has always played a decisive role in the company success, but with the acceleration and intensification of flows, actions and reactions in markets, it has more than ever become the key factor for business. It is not about quantity but quality of information, which is, with current technological possibilities, a great risk and challenge for company owners and managers.

The survey also revealed that companies with a history shorter than 3 years introduce significantly more innovation in the area of services than other companies do. It is not surprising that the sector of services is in a state of very intensive development, not only in the area of service provision as main business activity, but mainly in the area where a potential competitive advantage is linking of a service to the flagship product (artefact, goods). A trend in customer approach generally is increasing the comfort; this applies to the consumer market (B2C) as well as the B2B market.

According to the survey results [1], completely new models had been introduced as part of the innovation process most often in the area of *product innovation* (37%). Approximately one half of these companies that had carried out product innovation also introduced a completely new product. Product innovation is the most dynamic innovation due to the emergence of new models. In the case of other innovation, modernization of an existing model prevails. In comparison – although innovation of services was by far the most common innovation in the past 2 years, “only” 29% of companies had introduced a completely new service.

Generally, the process of innovation highlights the fact that in the case of introducing innovation, companies go for modernization of existing models and procedures, whereas completely new models only arise in about one third of cases.

As the authors of the book *Innovation and its Funding in SMEs* [6] state, marketing guru Philip Kotler [10] considered the consumer market oversupplied and customers resistant to advertising already in 2005. “It is no longer sufficient to bring new brands to the same market, no matter how well they are analyzed and segmented. Winners create new markets, new products, encourage new customers' needs.” The same applies to the industrial (B2B) market. The key is to ask basic questions such as: if we in any way innovate an existing product, what other segment of customers will be able to reach out to? Or: what further purpose can our existing product serve?

It is, however, necessary to mention that for SMEs in small countries (with small domestic market) it is more complicated to introduce brand new innovation. As Spithoven et al. [14] say, in a small open economy, such as that of Belgium, the introduction of a product or service new to the market almost inevitably means that this market is broader than the national market. As a result, it is no surprise that competitive pressures are very high for these

innovative firms in Belgium and that, consequently, their degree of geographical openness is high from the very start of the introduction of new products and services. Companies based in larger countries can experiment in their domestic markets and improve their products before they face international competition. Firms in small countries have to enter these international markets more or less from the onset of product/service development. Nonetheless, large companies (not surprisingly) are more rewarded for working in international markets than SMEs.

Institutional barriers to doing business in the CR. This part of the paper is not directly based on the survey “Opinions of small and medium-sized enterprises on innovation and its funding” but it is based on other listed sources and analyses, in particular on the 2016 survey [4] “How companies evaluate the use of tax credit for research and development” as one of the forms of institutional support for innovation. Businesses' investment into research and innovative activities of businesses is increasing but according to a report of the Governmental Office of the Czech Republic “National Research, Development and Innovation Policy of the Czech Republic in 2016–2020 with a View to 2025”, it is driven by multinational companies and the segment of research and technology-oriented small and medium-sized enterprises is relatively underdeveloped.

- Although general standard how to account for innovation, or specifically the costs necessary to achieve it, are in place, a ***non-transparent system of audits*** posed a significant barrier until 2016, whereby the same innovation matter and eligibility of costs were assessed differently by various institutions. It was, therefore, not exceptional for, e.g., the CzechInvest (agency to promote business and investment under the responsibility of the Ministry of Industry and Trade) assessed eligibility of costs of innovation positively, whereas an audit from the Ministry of Finance (through a tax office) excluded the same case, assessed additional tax, and penalized it. The entire process is identical for large and smaller companies, but allocation of resources for this process falls more harshly to the segment of small and medium-sized enterprises.
- However, the reliability of the ***system of tax eligibility of costs expended on innovation*** is still being addressed, because tax office clerks still have ambitions to assess what it and what is not innovation. This is despite the fact that it is a very comprehensive and technical issue in which the assessment of fulfilment of individual parameters of innovation definition is not a trivial matter at all. In practice, this constitutes a significant innovation barrier because remedies or even judicial proceedings are very demanding and less accessible for SMEs in terms of allocation of (personnel and financial) resources. Another problem revealed by the survey in relation to tax deductions for research and development appears to be administrative burden and ambiguity of terminology of this instrument—75% of companies that have used it previously perceive it as such.
- A significant innovation barrier in terms of applied research in the microsphere starts to be the ***ratio of funding from public versus company money***. This concerns the set-

up of conditions of drawing of EU subsidies to innovative activities, which is currently, in the case of a medium-sized enterprise, only 35%; the remaining part is to be funded by the company's own resources. Subsidies should thus always be "just" a bonus, but in the case of innovation activities, whose character is specific and which, moreover, represent one of few opportunities for future prosperity of our country and the entire Europe, it is absolutely inadequate support in the context of other expenditure. Still, approximately three fourths of companies consider the possibility of tax deduction for research and development (tax credit), which is not as advantageous as subsidies, cost saving. Only 24% of companies see this instrument as strategic, for the development of competitiveness. The system of research, development and innovation management and funding, *not very strategically oriented* and with missing or insufficiently functioning coordination mechanisms, which restrict effective cooperation among elements of this system. This is related to the issue of insufficient transfer of R&D&I results to the corporate level, or their commercialization.

- *The number of researchers* or employees able to participate in the innovation process is growing in the business sector, but in international comparison with technologically developed countries it remains to be relatively low.
- *A capacity barrier* is, in particular in small and medium-sized enterprises, the engagement of personnel capacities in ongoing projects, where it is very difficult to find space for systematic research activities. This is faced by a large part of medium-sized companies, which otherwise have a very good innovation potential.
- Subsequently, a considerable barrier has long been, in the Czech business environment, *incentives (state investment incentives)*, whose criteria are set in a way that only rather large, often multinational, companies can reach them. The result is, among other things, depletion of the surrounding labor market, which constitutes a major personnel problem mainly for small and medium-sized enterprises. While they are usually able to compete with salaries, but a company drawing a state incentive, for example in the form of tax credit or subsidies for systematic training of employees, will be able to provide additional benefits that are not easily accessible for a SME. It should be added that a company drawing incentives does so at the expense of the state budget of the country, which is funded from taxes of all companies, including SMEs. Moreover, at a time of dynamic economic boom, when the unemployment rate is under the natural rate of unemployment (approx. 6%), incentives with a criterion of creation of jobs lack logic and economic justification.

Conclusions and directions for further research

The results showed that small and medium-sized enterprises (SME) are well aware of the importance of innovation for their business and competitiveness, but they approach its management and planning rather unsystematically, and only rarely they allocate exclusive personnel resources for innovative activities. Innovation thus occurs rather randomly. Generally, the process of innovation highlights the fact that in the case of introducing

innovation, companies resort to modernization of existing models and procedures, and completely new models only arise in about one third of cases.

An innovation process was most often introduced in the area of new services (72% of companies in the SME segment), the second area of innovation process was marketing innovation (53% of companies), and product innovation had been introduced in 37% of companies. Since this area develops dynamically it could be an implication for further research in terms of changes and differences over time including more in-depth focus.

Interesting findings were also revealed by examination of reasons or motives to carry out innovation. The results showed that the main criterion for innovation planning is the customer and their preferences. It is not an entirely surprising conclusion because companies have operated in the Czech Republic in a predatory competitive environment for more than two decades, and they thus perceive the dictate of customers as a crucial factor for change management. Another important factor for innovation planning is the current availability of funds, but also actions of competitors. Less positive finding is the fact that financial profitability (as a motive for innovation) was significantly less important impulse. This may cause financial problems in small and medium-sized enterprises over time. Therefore, as a very important factor the financial literacy in SME segment in various aspects might be another direction of further research.

Funds for innovation were not identified in the survey in sufficient detail because most of the surveyed small enterprises do not distinguish innovation analytically in their accounting. However, a qualified estimate of a majority of respondents indicates that it is a relatively wide range between 1 and 10% of the company's turnover. However, it turns out that the turnover is not a key indicator for the amount of investment in innovation. A systematic management of innovation costs in relation to sales is typical rather of large companies; SMEs tend to base them more on the immediate needs of the market and availability of fast resources. They apply an operational approach rather than a strategic one.

Also a capacity barrier plays an important internal role in particular in SMEs; it is manifested as engagement of personnel capacities in ongoing projects, where it is very difficult to find space for systematic research activities. This is faced by a large part of medium-sized companies, which otherwise have a very good innovation potential. Subsequently, a considerable barrier has long been, in the Czech business environment, incentives (state investment incentives), whose criteria are set in a way that only rather large, often multinational, companies can reach them. The result is, among other things, depletion of the surrounding labor market, which constitutes a major personnel problem mainly for small and medium-sized enterprises, which are then unable to healthily compete with the subsidized projects.

Companies' innovative activities reflect a significant influence of the institutional environment, which indirectly affects the availability of funds, motivation to innovate, legislation, linking of academic and research institutions with the private sector, and partly also commercialization of innovation. Deeper tool for assessing the importance and influence of institutional environment onto private segment would be useful as well as a comparison

with other countries. The implications for more effective innovation approach at the macro-economic level could arise then.

Acknowledgment

This academic text has been dedicate to the project of the VŠFS a.s internal grant agency in Prague: grant IGA 7773 (2016-18) with the following topic: „Aktuální trendy ve vývoji finančních trhů“ (Topical trends in development of financial markets) ", which has been supported from the institutional grant dedicated to the long-term conceptual development of the research organization University of Finance and Administration.

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