

SPECIFICS OF THE INTERNATIONALIZATION PROCESS OF CZECH ENGINEERING SMES

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Abstract

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The aim of this paper is to define the specifics of the internationalization process of Czech engineering small and medium-sized enterprises (SMEs). Based on primary data collection among Czech engineering SMEs there were defined the main motives of the internationalization. There were also identified the factors subjectively considered by SMEs as the key success factors of the internationalization process. Attention was also paid to subjectively perceived risk factors of the internationalization process and to the issue of risk management in the internationalization process, while it was investigated whether the risk management affects the intensity of export of Czech engineering SMEs. Data were collected via electronic questionnaire surveys conducted in 2011 and 2012. In total 194 respondents (engineering SMEs) filled the questionnaires. The obtained data were processed on the basis of descriptive statistics. Moreover hypothesis testing was performed.

Keywords: internationalization, motives, success, risks, SMEs, engineering

INTRODUCTION

During the last two decades, many Czech as well as foreign authors have been focusing their attention on problems associated with engaging of a company in foreign trade activities. Thanks to the published results of their research, it is possible to observe the specific features of the internationalization process in individual countries or sectors and also differences arising from the size of the internationalizing companies as the development of large multinational companies, especially in certain sectors, makes the situation more complicated for small and medium-sized enterprises. Small and medium-sized enterprises' position in the Czech economy has been relatively stable for the last ten years. Small and medium-sized enterprises represent a stabilizing economic element, especially in terms of employment. Their share in total employment is just over 60% and has a slightly increasing tendency. SMEs' contribution to GDP and exports is comparable to the contribution of large companies. Share of SMEs in the economic performance and the overall added value is stable and exceeds 50%. The importance of small and medium-sized enterprises for the Czech economy

is also apparent from the fact that they represented 99.84% of all active enterprises in 2011. In the context of the internationalization process there has been a lot of discussion on the differences between the possibilities of large companies on the one side and the possibilities of small and medium-sized enterprises on the other side. Nevertheless, SMEs play an important role in the Czech economy as well as in the European economies. They significantly contribute to foreign trade of each country. The decisive factor for achieving growth and maintaining competitiveness in companies from smaller countries is their engagement in the processes of internationalization and globalization.

The aim of this paper is to define the specifics of internationalization of Czech small and medium-sized enterprises operating in the field of engineering. Engineering was chosen deliberately since it represents a traditional pillar of Czech exports.

MATERIALS AND METHODS

Internationalization of companies means their engagement in the international environment. Welch and Luostarinen (1988, p. 36) understand

the internationalization process as a '*process of increasing involvement in the international operations*'. The literature, however, offers also a wide range of other definitions. It is rather difficult to find a universal definition of '*internationalization*' and '*globalization*'. It is because the meanings of these terms are very similar and some authors de facto use the same interpretation for both of them. Yet there is a difference between the two concepts – for example Herman E. Daly (as cited in Kotabe and Helsen, 2010) sees the internationalization as a process of increasing engagement in international trade, international relations, co-operation, and agreements. The meaning he gives to the word '*international*' is '*something taking place between countries*' where the individual countries are considered the basic units in the process of internationalization. Daly (as cited in Kotabe and Helsen, 2010), on the other hand, understands globalization as a total economic integration of national economies into one global economy. The integration is driven mainly by free trade, free movement of capital, and free migration of population. An important role in this process plays the economically-motivated removal of boundaries between countries. In addition, Tarpczynski and Wrona (2013) emphasize that internationalization means not only entering foreign markets, but also any international activity even without operating beyond national borders.

Overall, the process of internationalization is being devoted a considerable attention, yet we can agree with, for example, Glas *et al.* (1999) that there is still a lack of empirical evidence that would be usable for assessing the internationalization processes, especially in small and medium-sized enterprises. However, the position of SMEs which try to engage in international activities differs from the situation of large enterprises. Harrison (2008), among others, tried to identify the main factors that motivate companies to engage in the internationalization process. According to him, it is possible to classify the motivators into the '*overarching factors*' (common factors) and the so-called '*firm specific factors*' (factors specific to a company). Among the general, overarching factors Harrison put the '*primary motives*', such as the business growth, competitive advantage, opportunity to increase profit, international reputation, etc. This group of factors also includes the '*motives that result from changes in the international environment*' – such as the growth of the world economy, international peace and stability, reduction of barriers to international trade, technological advances, etc. The third group of the overarching factors consists of the '*environmental factors specific to individual countries*' – such as the political and economic stability of a specific country, cultural factors, government support for entrepreneurs, etc. There are many other approaches to identification of the key motivators for the internationalization process and thus the literature contains many different breakdowns of the motivational factors. According to Mwiti

et al. (2013), the distinction between internal and external motives focuses on the origin of a motive. While internal motives arises from within the enterprise, the external motives stem from the company's external environment, be it domestic or foreign. Next to the internal-external classification there are also the '*pull*' and '*push*' factors which were introduced by Onkelix and Sleuwagen (2008). These authors defined the '*pull factors as those that are based on the conditions in foreign markets which are considered attractive by companies from other countries and the 'push' factors as those that reflect the specific situation of a particular company, i.e. the factors that are based on the company's resources, competitiveness, and the life cycle of its products*'. Another classification of the motives into the proactive and reactive ones was introduced by Czinkota *et al.* (2004). They defined the proactive motivational factors as the motives that stem from the company's internal decisions (e.g. efforts to implement strategic changes) and the reactive motivational factors as those that are de facto passive reflections of the company's actions (motives arising from changing domestic or foreign market conditions to which the company responds by increasing its international activities). Other authors, such as Hollensen (2008), focus specifically on the motives for internationalization of small and medium-sized enterprises. The point is there an assumption that the factors that motivate SMEs for entering foreign markets are not the same as the motivational factors of large enterprises. According to Hollensen (2008), it is also possible to classify the main motives for the internationalization efforts of small and medium-sized enterprises into the '*proactive and reactive*' ones. Moreover, Korsakiene and Baranauskiene (2011) point out that the motives differs depending on the stage of the internationalization process in which the enterprise currently is.

However, many enterprises (often the small and medium-sized ones) have limited possibilities to engage in the internationalization process. According to Korsakiene and Baranauskiene (2011) the success in the internationalization depends not only on the motivating factors but also on the factors that hinder this process known as barriers. Arteaga-Ortiz and Fernández-Ortiz (2010) found that many authors deal with the relationship between perception of barriers and the firm's exporting activities, thus indicating that barriers can influence the overall result of exports. Moreover, Kahiya (2013) stated that the export barriers also affect the enterprise's path to internationalization. The barriers can determine whether it will be a gradual or rather rapid process. The barriers to internationalization include according to Fliess and Busquets (2006, p. 4), '*all restrictions which prevent companies from initiating, developing, or maintaining their business operations in foreign markets*'. Many authors (e.g. Onkelinx and Sleuwaegen, 2008, or Siringoringo, *et al.* 2009) classify the barriers to internationalization

into the *internal barriers* – related to corporate resources and capabilities and the *external barriers* – given by the business environment in the domestic market and in the foreign markets in which the company operates or intends to operate. According to these authors, the *internal barriers* can be further divided into the following groups: **information barriers** related to problems with identification and selection of foreign markets, **functional barriers** which include, in particular, problems related to human resources, manufacturing, and financing, and **marketing barriers** related to elements of the marketing mix, i.e. product, price, distribution, and promotion (an example of such barriers may be low quality products, poor pricing policy with regard to foreign competition, insufficient product diversification, inability to find appropriate distribution channels in foreign markets, etc.). The *external barriers* include the so-called **procedural barriers** that arise from ignorance of procedures and legislative restrictions on entry into a foreign market (they are caused, for example, by different legal and regulatory frameworks in different countries). The second group of the external barriers are the **government barriers** that arise from an insufficient government support to exports and from absence of incentives for domestic enterprises to enter foreign markets, or vice versa, from protectionist measures in foreign markets (for example tariff and non-tariff barriers). We can also include the **barriers related to foreign customers and competitors** and, last but not least, the **environmental barriers** that relate to the economic, legal, political, and social environment of a particular foreign market. Surveys among SMEs (for example the study carried out by OECD (2009) in cooperation with APEC which was focused on the main barriers and motives for SMEs' internationalization) show that the majority of SMEs perceive the external barriers to the internationalization process as less important and put more weight to the internal barriers. The overall result of the surveys, however, is that it is necessary to distinguish whether a SME is already active in the international market or not. This is because this factor has a considerable influence over the perceived significance of individual barriers. For example, the companies that have not yet entered foreign markets put more emphasis on the risks associated with the financial barriers (internal barriers) while companies that are already internationally active consider more threatening the barriers related to the overall business

environment, including trade barriers (i.e. external barriers). We can deduce from these findings that the internationalization process is a process of learning where SMEs must overcome their internal hindrances at the beginning and with the increasing level of engagement in international activities they become more focused on challenges and barriers stemming from the business environment. These ideas are in line with the oldest model of the internationalization process – the so-called Uppsala Model¹ (Johanson and Vahlne, 1977), but they cannot be applied to the concept of the so-called '*born globals*'. Born global enterprises are created with the aim to enter foreign markets and they achieve soon after their foundation high export shares in several foreign countries (Mandl and Celikel-Esser, 2012). Ten major barriers to internationalization, as reported by SMEs in the study carried out by OECD (2009), include in particular the insufficient working capital to finance exports, identification of foreign business opportunities, limited amount of information to find/analyse markets, inability to establish contacts with potential foreign customers, ability to obtain a reliable foreign representation, lack of managerial time to deal with internationalization, lack of employees and/or employees untrained in international trade, difficulties in setting competitive prices, insufficient help and support from the government, and extremely high transport costs.

If a SME overcomes the internationalization barriers it needs to realize that the participation in international trade and penetration of foreign markets can bring benefits in the form of risk diversification and, on the other hand, specific risks or amplification of certain types of risks. According to a Korecký and Trkovský (2011), the *definition of risk* has shifted during the last twenty years from the earlier definition as a *loss or threat* to a more general formulation. For example the British OGC² defines risk as an '*uncertain event or set of events that (if they occur) have an effect on the achievement of company's objectives*' (Murray-Webster and Williams, OGC, 2010, p. 4). There are many other definitions of risk and some of them are of a similar nature with the OGC's definition. Smejkal and Rais (2010, p. 90), for example, define risk as a '*probability of getting any result different from the expected one*'.

Risks can be classified from many different points of view. A commonly used breakdown includes the *risks that are beyond the company's control* (such as political risks, economic risks, etc.) and the *risks*

1 According to the Uppsala model (Johanson and Vahlne, 1977), the operations in a particular foreign market develop gradually. This means that the company gradually, in stages, increases its engagement in international trade. Within the internationalisation process can be distinguished four stages. The stages were defined as follows:

1. Stage: no regular export activities.
2. Stage: export through independent agents.
3. Stage: creation of foreign subsidiary focused on sales.
4. Stage: foreign production / creation of a foreign manufacturing unit.

2 Office for Government Commerce – Government office responsible for government trade contracts.

that can be controlled (those directly related to the business activities; the company is able to reduce or completely eliminate these risks). Risks can be also divided into the *speculative risks* (associated with both the possibility of losses as well as profits, they include for example the risks associated with managerial decisions on entering a foreign market) and the *pure risks* (associated only with the possibility of loss – an often mentioned example is the risk of loss of a property, for example a company car) (Smejkal and Rais, 2010). Another classification (e.g. Fotr and Souček, 2011) distinguishes also the *systematic risks* which affect all business entities. These risks are given by the companies' social environment, i.e. they cannot be eliminated by diversification of activities because they stem from the overall market situation (they are sometimes also referred to as the market risks) and the *unsystematic risks* which affect only certain companies, such as the risks associated with emergence of a new competitor. Companies can hedge against this type of risks by diversification of their activities. However, since the individual risks may affect each other they should be seen as interrelated. A comprehensive approach to partial risks of internationalization must be integrated into every key decision during the internationalization process of a company. The risk will also vary with respect to the mode of entry into foreign markets – the risks associated with indirect exports, for example, are different than risks associated with foreign direct investments. Deciding whether to engage in the internationalization process is largely influenced by the associated risks. The way these risks are viewed determines the decision on whether and by which means engage in the internationalization process. For example, Reid (1981) found out that managers who have some experience with working in foreign markets and/or can speak some foreign language are less sensitive to the risks associated with internationalization. Other factors that positively influence the pro-internationalization thinking of managers are, according to Reid, the managers' personal characteristics (high personal ambitions, lower sensitivity to risk in general) and also their background or place of birth (Reid found out that managers who were born or lived abroad perceived fewer problems associated with their company's entry into foreign markets than the managers who spent their entire life in their home country). The literature contains many different perspectives and breakdowns of risks associated with international trade. One of the most frequently cited classifications of risks that are typical for the internationalization process include market risks, commercial risks, transportation risks, territorial risks, foreign exchange risk, and language-associated risks (e.g. Machková *et al.*, 2002). Rodriguez, Barcos, and Álvarez (2010) compiled a list and classification of risks arising from a company's internationalization. They divided the risks into 9 groups – risks associated with the business strategy, risks associated

with the company's management and corporate culture, risks associated with logistics infrastructure, risks associated with project management, risks arising from the company's external relations, risks associated with the socio-economic and political situation in the country, risks associated with the country's legal framework, risks associated with the market, and risks associated with the country's culture. Risks related to the internationalization process can be also divided in other ways, e.g. according to Stremtan *et al.* (2009), the risks within the internationalization process can be divided into two categories – risks caused by *underestimating costs* and *risks stemming from an uncontrollable international environment*. However, next to these two categories other risks may arise – Stremtan *et al.* (2009), for example, names a limited potential of the target market, inadequate infrastructure in the target market, or risks stemming from climatic events. Risks of the internationalization process were also analysed by Figueira de Lemos, Johanson, and Vahlne (2011). These authors dealt with a detailed risk management of the Uppsala model-based internationalization process. Authors of this paper thus work with the assumption that with an increasing engagement in foreign market activities the company's uncertainty decreases. This is caused by the increasing knowledge about the market and the possibility to take advantage of the obtained experience. This idea is in line with Petersen's (Petersen *et al.*, 2003) assertion that a company's increasing international engagement is related to accumulation of knowledge about foreign markets. Nevertheless, as far as risk management in connection with internationalization is concerned, some studies (e.g. Gorzen-Mitka, 2013; or Kubíčková and Toullová, 2013) indicate that SMEs deal with risk management issues rather intuitively and rely more on own experiences with foreign trade operations when identifying risks than on risk management practices.

RESULTS

The aim of this paper is to define the specifics of the internationalization process of Czech small and medium-sized enterprises operating in the field of engineering. The research questions which arose from the detailed review of the literature are:

Are the most important motives for internationalization of Czech engineering SMEs rather reactive factors or proactive ones?

Which factors do engineering SMEs perceive as important for the success in internationalization?

Which risk factors connected with internationalization are perceived by Czech engineering SMEs as the most intense?

It is therefore necessary to define the main motives for internationalization in the Czech engineering SMEs; then we need to identify which of the factors are perceived as the key determinants of success in the internationalization process. We also need to find out what risks do the engineering SMEs perceive.

In order to achieve this goal, the authors needed to obtain primary data from the Czech engineering SMEs. In early 2011 they carried out a questionnaire survey by using the electronic system ReLa – the system developed at the Department of Marketing and Trade, FBE, Mendel University in Brno. The questionnaire was sent to 800 small and medium-sized enterprises. The return rate of questionnaires was 14.63%, 17 of the received questionnaires were subsequently excluded because of an incompleteness, inaccuracy, or logical incorrectness of answers, or because of a non-compliance with basic conditions (they were not SMEs). A total of 100 questionnaires were processed. Some partial results of this survey were published in Kubíčková and Marková (2011). After the implementation of the survey, however, the author found out that there is not enough data on the internationalization-related risks. In order to define the specifics of the engineering SMEs' internationalization process, it was necessary to focus the research on the risks associated with internationalization. For this purpose, another survey among the Czech engineering SMEs was carried out in 2012. Again, the ReLa system was used for implementation of the survey. 94 questionnaires primarily focused on the risk factors of internationalization were obtained. The authors processed data from both surveys and defined the motives for entering foreign markets in engineering SMEs, they also identified the factors that SMEs subjectively perceive as the key determinants of a successful internationalization. The authors also tested the influence of selected factors that were reported as the determinants of success over the size of the revenues from foreign trade. Furthermore, the authors identified the internationalization-associated risks that perceive the engineering SMEs and analysed the dependence between revenues from foreign trade operations and the risk management the company uses.

Motives for Entering Foreign Markets

The first partial objective of the research was to identify the main motives for internationalization of engineering SMEs. The most frequently reported motives for entering foreign markets were efforts to *'increase sales'*, which were mentioned by 68% of SMEs, then the *'foreign demand for products'* and the efforts to *'expand customer portfolio'* (both these motives were reported by almost half of the surveyed companies). Other important motives were *'to enlarge the scope of the company's activities'* (40%) and *'the better business conditions in the foreign market than in the Czech Republic'* (33%).

Factors of Success in the Internationalization Process

The next step in the research was to find out which factors do the engineering SMEs perceive as the key determinants of success in the internationalization process. Some of the results of this survey have

been already published in Kubíčková and Marková (2011).

The following factors of success in the internationalization process of engineering SMEs were identified: *product quality* (average weight 4.57), *flexibility and adaptability* (4.27), *competitive advantage* (4.12), *qualifications of employees* (4.1), *skills and experience of company management* (3.67), *marketing skills* (3.66), *brand and company image* (3.59), *planning* (3.35), and *sufficient capital* (3.24).

In order not to rely only on the subjective views of managers of the surveyed enterprises, authors analysed the influence of different factors over the size of revenues from foreign trade. Revenues from foreign trade, or their ratio to total revenues, were chosen as a measurable indicator of success of a SME in foreign markets. Since the companies were willing to respond only within the intervals of relative volumes of sales (thus, this characteristic, called the *export intensity*, was not normally distributed) it was necessary to perform the non-parametric testing. Tab. I shows the calculation of Spearman's correlation coefficient, gamma correlation, and Kendall's tau. The independence testing showed that at the significance level $\alpha = 0.05$ the size of revenues from foreign trade is not influenced by the mode the SME chose for entering the foreign market. On the other hand, it is influenced by the time the company has been operating in the foreign market and by the number of countries in which the company operates.

None of the factors that have a provable influence over the size of revenues from foreign trade operations (i.e., neither the number of countries in which the company operates, nor the time it has been internationally active) was reported among the subjectively perceived key determinants of success of SMEs in foreign markets. This may be caused, among other things, by the fact that the size of revenues from foreign operations itself does not mean that the company is successful (this reasoning is also supported by the literature) as it does not take into account the profitability of foreign trade activities.

Another step in the process of identification of specifics of the internationalization process of Czech engineering SMEs was the determination of factors which the Czech SMEs **subjectively** perceive as the internationalization-associated risks. The attention was deliberately not paid to the individual risk factors but the emphasis was put on identification of **groups of risks** which the engineering SMEs perceive more intensely and which are less of a concern for them. The obtained data showed that most companies in this sector perceive the **commercial risks** at the first place, then the **economic risks**, **management risks**, and the **risks associated with innovations**. On the other hand, the risks that were not considered significant for the internationalization process include the **risks arising from climatic events**, **socially-pathological risks**, **political** and **institutional**

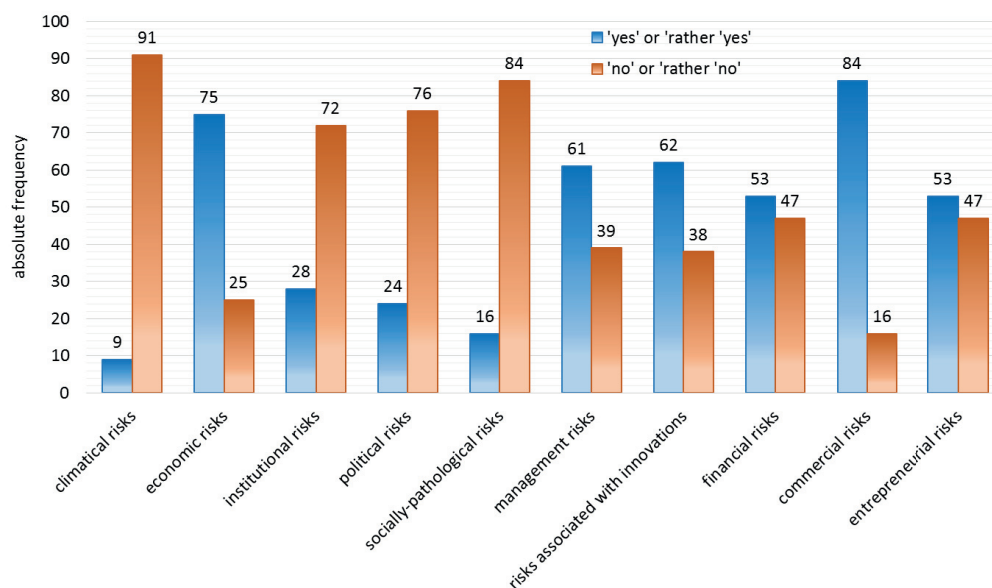
I: Testing of influence of the mode of entry into foreign markets, the number of countries in which the SME operates, and the time it has been internationally active over the size of revenues from foreign trade (engineering SMEs)

Pair of variables	Spearman's correlation coefficient significance level $\alpha = 0.05$			
	valid responses	Spearman's R	t(N-2)	p-value
Revenues from foreign trade (FT) & mode of entry into foreign markets (FM)	94	0.060064	0.577156	0.565244
Revenues from FT & the length of operating in FM	94	0.267455	2.662330	0.009160
Revenues from FT & number of FM in which a SME operates	94	0.422518	4.471373	0.000022

Pair of variables	Gamma coefficient significance level $\alpha = 0.05$			
	valid responses	Gama coefficient	Z	p-value
Revenues from FT & mode of entry into FM	94	0.068966	0.699983	0.483938
Revenues from FT & the length of operating in FM	94	0.294807	3.231567	0.001231
Revenues from FT & number of FM in which a SME operates	94	0.460828	5.006265	0.000001

Pair of variables	Kendall's tau significance level $\alpha = 0.05$			
	valid responses	Kendall's tau	Z	p-value
Revenues from FT & mode of entry into FM	94	0.049029	0.699983	0.483938
Revenues from FT & the length of operating in FM	94	0.226350	3.231567	0.001231
Revenues from FT & number of FM in which a SME operates	94	0.350656	5.006265	0.000001

Source: author's calculations



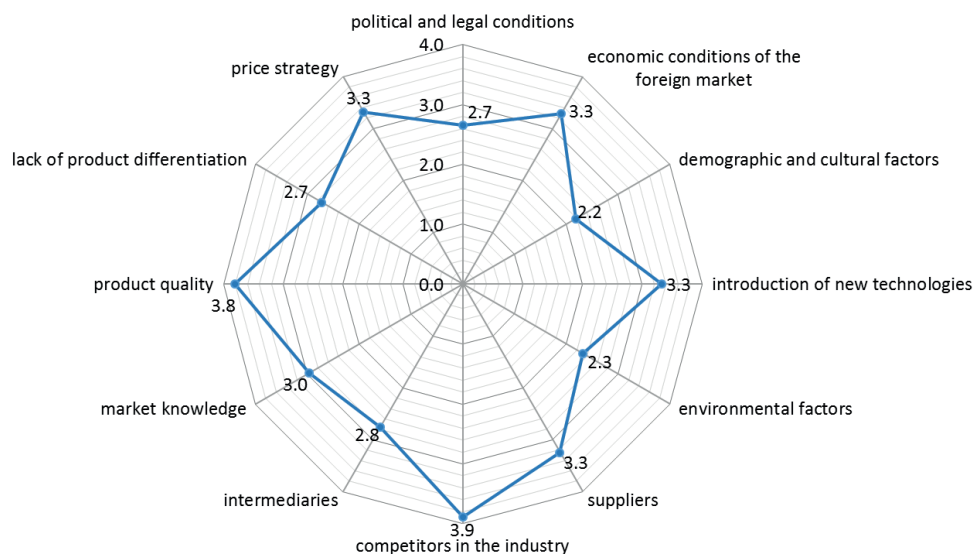
1: Subjective perception regarding risks within the internationalization process (engineering SMEs)

Source: author's results

risks. Regarding the perception of the individual risks, the engineering companies could answer 'yes', 'rather yes', 'rather no', and 'no' (see Fig. 1). The engineering SMEs were also asked how strongly they perceive the individual risk factors on scale from 1 to 5. The results showed that the most intensively perceived risk factors are the **competition in the industry, product quality, and new technologies**. The smallest concerns raise the demographic and cultural factors, environmental factors, and political and legal conditions. The average intensity of perceived risks is shown in Fig. 2.

Risk Management

The survey was also focused on risk management. The results showed that **63% of respondents use some kind of risk management**, while most of the surveyed SMEs, namely 67%, reported that they manage their risks in an intuitive way. Other used methods of risk management include the utilization of standardized systems and procedures, such as the ISO standards – these were reported by 56% of respondents. Another finding was that 51% of engineering SMEs systematically identify



2: Average intensity of perception of the specific risk factors by engineering SMEs
Source: author's results

risks. Less frequently used methods include crisis plans (reported by 27% of SMEs), appointment of responsible persons or teams (25%), modelling of crisis situations, creation of risk maps, and engagement of external experts on risk management (the use of the last three procedures was reported by 15% of engineering SMEs). Organizing crisis trainings as a method of risk management was reported by 7% of engineering SMEs. The obtained data also enabled the identification of reasons why some companies do not manage their risks. Quite surprising was the finding that **59% of respondents believe that risk management is not necessary during the internationalization process**, 25% of SMEs reported that they do not use risk management because of its administrative requirements, 22% of companies reported that they do not have enough information for employment of risk management, and 19% of the surveyed companies said that the risk management is too time-consuming and that they do not have sufficiently qualified employees to perform it. Financial demands as one of the reasons why the SME does not manage its risks were reported by 16% of companies. In the context of absence of a systematic risk management the companies were also asked how they respond if they become aware of a risk. In this case, 66% of respondents try to reduce the risk by either removing the cause of the risk or by reducing the adverse impacts of the risk, 28% of respondents try to avoid or eliminate the risk, and only 6% of respondents try to transfer the risk to another subject. Since this question was asked at a more general level, i.e. the objective was to identify the common methods to deal with the risk, the authors need to find out how do the respondents react to the risks associated with foreign trade activities. For this reason, the companies were asked how they respond to the potential risks of the internationalization process. The majority, about

57% of respondents, rely on their flexibility, i.e. ability to respond to various types of changes quickly and without excessive costs, 37% of respondents try to obtain additional information (market analyses, market research before introducing new products, information about competitors, etc.) if a risk occurs during their internationalization activities. One third of companies (33%) reported that they insure themselves against risks and 30% of the surveyed companies react to risks by an offensive company management. The same percentage of companies reported creation of reserves as one of the possible approaches to management of risks associated with internationalization. 28% of the surveyed engineering SMEs were considering risk diversification, for example in the form of expansion of their production programmes, 17% would diversify the risk by contacting multiple partners, and 9% would shift the risk to other business entities.

Since more than half of the respondents believe that risk management is not necessary, the author decided to test the independence between two factors – export intensity and risk management. The data was obtained from a survey of 94 Czech SMEs operating in engineering. The dependence between these qualitative characteristics was analysed through the non-parametric testing. The examined characteristics were ordinal and did not have the normal distribution, therefore, the authors chose Spearman's correlation coefficient, Gamma correlation, Kendall's correlation (see Tab. II).

Tab. II provides a rather interesting finding that at the significance level $\alpha = 0.05$ it is not possible to confirm the dependence between these factors, i.e. **whether a SME applies risk management techniques or not does not affect the amount of revenues from foreign trade operations**. Still, even if it was not possible to confirm the influence

II: *Dependence between export intensity and risk management*

Characteristics	Spearman's correlation coefficient significance level $\alpha = 0.05$			
	valid responses	Spearman R	t(N-2)	p-value
Foreign trade revenues & risk management	94	-0.057608	-0.553476	0.581280

Characteristics	Gamma coefficient significance level $\alpha = 0.05$			
	valid responses	Gama	Z	p-value
Foreign trade revenues & risk management	94	-0.081776	-0.733049	0.463528

Characteristics	Kendall's tau significance level $\alpha = 0.05$			
	valid responses	Kendall's tau	Z	p-value
Foreign trade revenues & risk management	94	-0.051345	-0.733049	0.463528

Source: author's results

of the risk management over the revenues from international trade in the engineering SMEs, the companies should not underestimate risk management. We must say, however, that one of the fundamental limits which may have affected the conclusions was the fact that we worked with relatively small data sets (100 or 94 companies). Another factor that influenced the informative value of the collected data was the chosen form of questioning. Written questionnaires have their advantages (low costs, possibility to stay anonymous, excluding any influence of the interviewer on the respondent) but they also have some specific drawbacks – the already mentioned poor percentage of completed questionnaires, impossibility to check whether the respondent fully understood

questions, whether the respondent is competent to answer the questions, whether the respondent did not just chose random answers, etc. In addition to the limitations that result from the chosen form of primary data collection, it is also worth mentioning that the research was focused on small and medium-sized enterprises as a whole and the data sets did not reflect the real size of companies – i.e. whether the respondent was a micro, small, or medium-sized enterprise – this was examined subsequently from answers to the identifying questions. With respect to these limiting factors that could affect the representativeness of primary data, it is necessary to be careful when generalising findings and conclusions of the research.

CONCLUSION

In order to define the specifics of the internationalization process of Czech engineering SMEs, the authors needed to find out whether the Czech SMEs are motivated to enter the internationalization process by the same factors as the SMEs from other countries. Therefore, the attention was first drawn to **the motives for engaging in the internationalization process**. The most commonly reported internationalization motives by the Czech engineering SMEs were the **efforts to increase turnover, foreign demand for products or services of the company, customer portfolio expansion**. Motives related to efforts to expand the portfolio of customers and to increase turnover or revenues belong to the so-called **proactive motives**, i.e. internationalization motives stemming from a company's internal decisions. Also the **reactive motives** have been reported, such as the second most common one – foreign demand for products or services. It is the reactive motive because it arises from changing conditions in the foreign market. Another step towards specification of the internationalization process of the Czech engineering SMEs was to **define the factors that determine success in foreign markets**. According to **subjective opinions of the engineering SMEs' managers**, the most important success factors include **high product quality, flexibility and adaptability, qualified employees**. In order not to make the conclusions about the specification of sub-parameters of the internationalization process of Czech SMEs only on the basis of the manager's subjective opinions, the authors tested the influence of various factors over the size of revenues from foreign trade. Foreign trade revenues, or their ratio to total revenues (*export intensity*), were chosen as a measurable indicator of SME's success in foreign markets. The authors performed non-parametric tests (Spearman's correlation coefficient, gamma coefficient, and Kendall's tau) which showed that at the significance level $\alpha = 0.05$ the size of revenues from foreign trade **is not influenced by the mode of entry to a foreign market**. On the other hand, **it is influenced by the time the company has been operating in the foreign market and by the number of countries in which the company operates**. The next step in identification of specifics of the Czech engineering SMEs' internationalization process was to find out the key risks that are associated with this process. First, SMEs were asked again which of the internationalization factors they subjectively consider to be the risk ones. The most intensively perceived risks were commercial

risks, economic risks, management risks, and risks associated with innovations. The engineering SMEs consider the **competition in the industry**, **product quality**, and **new technologies** to be the factors bearing the biggest risk. The smallest concerns raise, on the other hand, the demographic and cultural factors, environmental factors, and political and legal conditions. Despite the fact that 63% of respondents reported that they manage their risks in some way, the survey showed that 59% of respondents believe that risk management is not needed in the internationalization process. The authors also tested the dependence between a company's risk management and its intensity of exports, however, no dependence has been proven at the significance level $\alpha = 0.05$.

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