

THE RESPONSIBILITY FOR RISK MANAGEMENT IN SMALL AND MEDIUM SIZED ENTERPRISES IN THE CONTEXT OF CLUSTERS

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Abstract

The success of each business entity depends on its ability to find and manage the risks and control hazards and eliminate the uncertainty. By uncertainty we can understand the situation in which we are unable to define with sufficient reliability either states, respectively the processes or results that may occur in that area of interest. The responsibility for risk management in each business entity is realized through the management. The highest responsibility is naturally carried out by owner of enterprise or top management. Based on the realized questionnaire surveys, the main aim of the paper is to evaluate the basic context of risk management organization in small and medium sized enterprises (SMEs), which are interested in participating in cluster – related activities. The experience and attitudes of owner are played significant role in the risk management of these SMEs. One possibility how to improve owners' experience and access to important sources of information represents the connection into the cluster. The proper cooperation between other firms and the other helpful organizations could improve the owners' experience with risk management.

Key words

Small and medium sized enterprises, risk management, cluster, responsibility

JEL Classification: L26, L80, L60

Introduction

In the current dynamic business environment in which small and medium-sized enterprises (SMEs) operate, the importance of risk increases. The success of each business entity depends on its ability to find and manage the risks and control hazards and eliminate the uncertainty. By uncertainty we can understand the situation in which we are unable to define with sufficient reliability either states, respectively the processes or results that may occur in that area of interest. The uncertainty we can define as the situation in which we know the possible states, respectively processes or results which can occur, but we cannot estimate the degree with sufficient reliability the likelihood that may occur. The risk is such uncertainty in which we are capable of: using various - especially mathematical-statistical - methods to quantify the probability of detection of actual conditions, actions or results from the predicted values. Risk is understood as uncertainty, danger, hazard, threat, and probability of failing to achieve an objective or an effect intended when a decision was made. The differences in the approach to risk appear in such issues, as for instance relations between risk and uncertainty, types of deviations that appear (unidirectional, multidirectional), point of reference (reality or situation; decision), possibility of making a measurement through the use of calculus of probability, etc (Gorzeń-Mitka, 2007). The risk can be

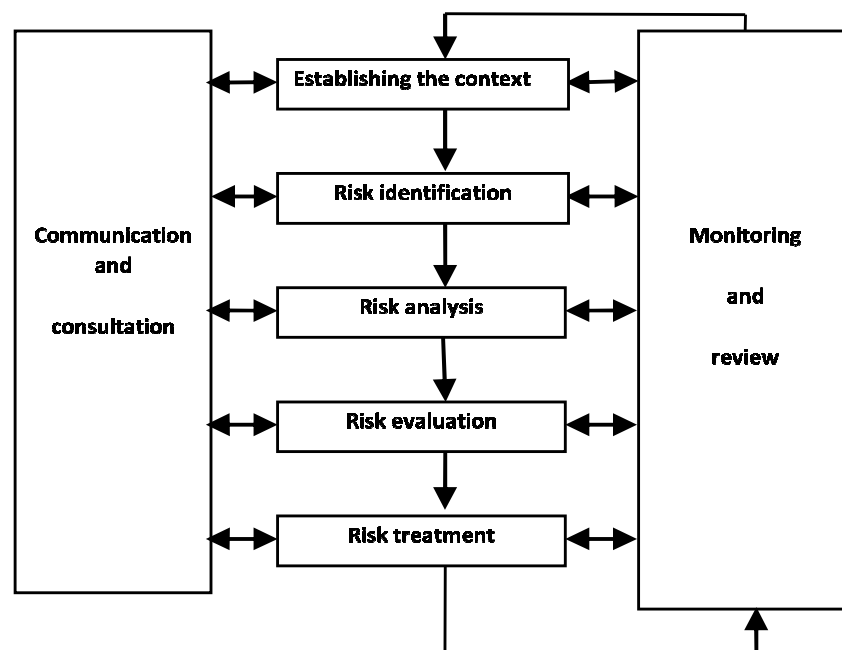
understood differently for different activities. In many scientific works, the definition of risk refers to such common characteristics as: the risk of such occurrence, the risk as a consequence, the risk as a potential threat and the risk as a deviation from the planned target. (Haviernikova et al., 2016a) From various definitions, it follows, that risk represents the danger of a loss, when the decision maker has a certain level of knowledge from the surrounding of the entity. The common base is the uncertainty connected with the activity of the entity. The risk represents such a fact which may transfer benefits but also cause a loss. The risk is associated especially with the distinction between planned and achieved goals, as well as the possibility of invested funds' loss. Each system is increasingly prone to complexity and uncertainty. From the point of management view, the important managerial activity is the decision making. The decision making could be realized in a frame of security conditions, risks, uncertainty and precariousness. Each of this type of decision making is presented by different base of information that helps to decision-maker to realize the appropriate decision. In case of incomplete information, decision-maker has to decide in the conditions of risk and uncertainty. From this point of view the risk depends on: uncertainty (uncertain impact or place and time of event occurrence), amount of consequences (determined by accepted measures with regard to their economic effectiveness), a decision maker and his/her willingness to take a risk as an opportunity/executed

return or as a threat/expected losses. (Haviernikova , et al., 2016b)

There are various forms of risk classification in literature. From a general point of view and depending on the origin, it is possible to split all risks into two fundamental groups: 1. external risks: financial risks (interest rate, exchange rate, credit policy), strategic risks (competition, changes in structure of customers demand, changes in sector, changes in demand), operational risks (composition of the Board, enterprise culture, regulation), other risks (natural factors, contracts, suppliers). 2. Internal risks: liquidity and cash flows, creative capital – research and development, recruitment and supplier's network, communication with public, employees, tangible assets. (Varcholová&Dubovická, 2008)

The explanation of the risk's issues also towards SMEs is provided in different professional literature. (Hollman and Mohammad-Zadeh, 1984, Belás et al, 2015, Hudáková et al., 2015, Dumitrescu et al., 2015, Kehinde et al., 2017 and many others). According Turner and Keetelaar (2005), An emerging concept in risk management is that there are three types of risk: opportunity-based risk, uncertainty-based risk, hazard-based risk. Opportunity-based risk may or may not be visible or physically apparent; it is often financial; it can have a positive or negative outcome; and it can have both short-term and longer-term outcomes. Uncertainty-based risks are: unknown or extremely difficult to quantify; catastrophic or disastrous in nature; associated with negative outcomes; and not possible to control or influence. Uncertainty-based risks for small business include: physical damage or damage to buildings by fire or flood; financial loss; loss of a vital supplier; unexpected loss of insurance; and loss of market share. Hazard-based risks for small business include: physical hazards – including noise, temperature or other environmental factors, chemical hazards – including storage and/or use of flammable, poisonous, toxic, or carcinogenic chemicals, biological hazards – including viruses, bacteria, fungi and other hazardous organisms, ergonomic hazards – including poor workspace design, layout or activity and equipment usage, psychological hazards –that may result in physical or psychological harm, including bullying, sexual discrimination, workload or

mismatch of job specification to employee capability. The category of SMEs is in developed economies considering as the most effective and progressive part of economy. Small and medium sized enterprises are businesses in the private sector and across all industries, that employ fewer than 249 people with main characteristics: they are independently owned and operated, they are closely controlled by owners or managers depend on sized category of SMEs, decision-making is principally done by the owners (managers, board of directors), that contribute most to each activities. (Ivanová, 2009, Šúbertová, Meszárošová, 2015, Masárová and Koišová, 2017) The risks are associated almost with every action of SMEs. Their business activity brings a lot of uncertainty that is resulting from growing of customers' requirements, rapid changes in economic development of countries, situation in common trade of European Union, the trends of globalization, but also from the results of research and development, modern technologies, new forms of doing business and many others. The economic environment is changing rapidly due to new technology development. (Srovnalíková et al., 2016) If SMEs want to survive, they have to accept all this aspects and have to adapt the main issues of risk management process in their work. Because managing the risks to reduce and minimize the loss exposure is essential for every SMEs. The risk management process follows same series of basic steps, although they can be different in dependency of used standard. In general, this process consists of five main steps: establishing context, risk identification, risk assessment, risk analysis. The risk management process should be implemented within every managerial decision. For managers, the risk management process is one of the most important things which they do in frame of managing the risks. For them it is necessary to know how to apply a systematic risk management process through the putting into action the core five risk management process steps. All risk management processes follow same series of basic steps, although they can be different in dependency of used standard. (Haviernikova et al., 2016b) The steps of the risk management process are summarized in Figure 1.

Figure 1. Risk management process

Source: Haviernikova et al., 2016b

The risk management is the systematic approach towards work with risk and uncertainty. The risk management framework depends on the nature of the organization. Despite the necessity, the SMEs rarely carry out detailed risk management process. It is due to the fact that main steps of this process require financial and human resources that are in SME considerably limited. SMEs decision about risk management process' realization depends on ongoing activities and resources.

Another important aspect of risk management in SMEs is the responsibility for the activist that are associated with it. The responsibility for risk management in each business entity is distributed throughout the management. It is the first issue on the organization of risk management. A risk management responsibility discusses who is responsible for setting up and developing the risk management and which personnel are responsible for the implementation of activities in individual parts of risk management process. The function of risk manager may range from a part time risk manager, to single risk manager, to risk management department. It also depends on economic branch in which business entity doing its business. The range of risk management responsibility is broad and extensive. The highest responsibility is naturally associated with the owner of enterprise, statutory authority and top management. According Risk management standard (2002), the role of the Risk Management function should include the following: setting policy and strategy for risk, management, • primary champion of risk management at strategic and operational level, building a risk

aware culture within the organisation including appropriate education, establishing internal risk policy and structures for business units, designing and reviewing processes for risk, management, co-ordinating the various functional, activities which advise on risk management, issues within the organisation, • developing risk response processes, including contingency and business continuity programmes, preparing reports on risk for the board and the stakeholders.

In view of the stated above, the following part of the paper deals with assessment of responsibilities for risk management in small and medium sized enterprises. Due to the fact, that paper is part of scientific research project VEGA 1/0918/16 Risk management of SMEs in the context of clusters' involvement activities in the Slovak Republic, for achieving of main aim of this paper, the questionnaire surveys were realized among SMEs from two areas in which Slovak clusters operates : technological and tourism.

Research methodology

The questionnaire surveys were conducted during the year 2016 -2017 in Slovakia. The representative sample of the populations in this study was entrepreneurs from categories of small and medium-sized enterprises who know the principle of risk management and cluster cooperation. It was not possible to use of randomization techniques for sampling in order to obtain representative sample.

That's why the expert sampling was used. There were interviewed 232 entrepreneurs from area of tourism and 304 from area of technology (energy, engineering, electrical industry, food industry, automotive industry, agricultural industry, biotechnology, key enabling technology industry and many other) in which Slovak clusters operate.

For the processing of questionnaires the Chi-Square test was used. We examined if there is relation between the sized category of SME and category of responsibility for risk management for each of observed area. The following working hypotheses were stated:

H0 between sized category of SME and category of risk management responsibility is not association.

H1 between sized category of SME and category of risk management responsibility the association is present.

These hypothesis were stated as for tourism SMEs, as well as technological SMEs. The low level of p value <0,05 means that the H0 is rejected and we accept the alternative hypothesis H1. Large probability (p-value>0,05) means the opposite.

Results and discussion

Table 1. Clusters in Slovak regions

Region	Technological clusters	Clusters of tourism
BA	Danube Knowledge cluster, National Energetic Cluster NEK, ABC - Academic Business Cluster	-
TT	Automotive Cluster Slovakia, Electrotechnical Cluster - West Slovakia, Energetic Cluster - West Slovakia, Cluster for Green and Innovative Technologies Support	
TN	Slovak IT cluster	
ZA	Z@ict	Cluster LIPTOV - association of turism, Cluster Orava, Cluster TURIEC - association of tourism
NR	Slovak Plastic Cluster, Bioeconomy Cluster	Cluster Topoľčany - association of tourism
BB	1st Slovak Engineering Cluster	Cluster of Border Castles
PO	Energetic Cluster of region Prešov, Railway Transport Cluster	
KE	Cluster AT+R, Cluster RADAR, BITERAP, Košice IT Valley	Košice- Tourism

Source: author's research (2016 -2017), BA - Bratislava, TT - Trnava, TN - Trenčín, ZA- Žilina, NR - Nitra, BB - Banská Bystrica, PO - Prešov, KE - Košice

Important parts of the clusters' membership are small and medium-sized enterprises. SMEs present dynamic part of modern Slovak economy while acting against the strengthening of monopolistic tendencies. However, their business activity is associated with a number of risks. Long-term success and prosperity

Cluster represents an organization consisting of regional stakeholders, that includes the business entities, regional institutions, scientific, research and educational institutions.(Havierniková et al. 2016,b, Jašková, 2017) Turning to cooperation philosophy, the cluster concept is remembered, when companies operating in the sector, focus their resources towards a common economic objective. One of the most important ways to keep competitiveness nowadays is clusterization. With its assistance companies, which operate in the same sector, can concentrate their resources and create new benefits, penetrate markets, which theretofore weren't achievable. Clusters, working in the renewable energy sector, today are fairly rare.. (Navickas et al., 2017) As Krajňáková & Krajčo (2016c) stated, the importance of clusters was confirmed for small and medium enterprises at company level and at national macroeconomic level in recent years.

In the scientific research project of VEGA the clusters are classified according methodology of Slovak Innovation and Energy Agency (SIEA) into two groups: technological and tourism. We found out that 19 of active clusters belonged to technology clusters and 6 to tourism clusters. The placement of both groups of clusters in Slovak regions illustrates the Table 1.

enterprise and the creation of sustainable values are not possible without effective risk management. Entrepreneurs participating in the survey are a specific sample, take account the fact that they are considering to join the cluster cooperation. The basic structure of respondents presents Table 2.

Table 2. Structure of respondents

Category of SME	Toursim SMEs	Technology SMEs
less than 10 employees	116	124
from 10 to 49 employees	97	100
from 50 to 249 employees	116	80
Total	232	304

Source: own research (2016 -2017)

The average number of employed person by the tourism SMEs is 1,6 employees with standard

deviation 0,6 and 1,9 employees with standard deviation 0,8 in technological SMEs. See Table 3.

Table 3. Descriptive statistic

Category of SME	Indicator	Mean	SD
tourism	number o of employees	1,6	0,6
technological	number o of employees	1,9	0,8

Source: own processing

The responsibility for risk management in each business entity is distributed throughout the management. In the framework of the questionnaire survey, entrepreneurs could identify one of the five options that determined who is responsible for risk

management in the enterprise. (a) owner, (b) the risk manager, c) members of the Board of Directors, (d) external experts, (e) other. Table 4 presents the percentage of respondents' answers according category in which Slovak clusters operate.

Table 4. Responsibility for risk management versus enterprise size by number of employees (%)

Category of SME	Category of cluster	(a)	(b)	(c)	(d)	(e)
less than 10 employees	tourism	47,84	1,29	0,43	0,43	0,00
	technological	39,80	0,66	0,33	0,00	0,00
from 10 to 49 employees	tourism	38,36	1,29	1,29	0,43	0,43
	technological	29,61	0,66	0,99	1,64	0,00
from 50 to 249 employees	tourism	6,47	1,29	0,43	0,00	0,00
	technological	21,38	1,32	3,29	0,33	0,00
Total	tourism	92,67	3,88	2,16	0,86	0,43
	technological	90,79	2,63	4,61	1,97	0,00

Source: own processing

According to category of business entity, in small enterprises the responsibility for risk management is usually concentrated at the level of owners, or statutory authority, because it is not necessary to employ a dedicated full-time risk manager. As we can see the results in table 4, in case of tourism entities 92,67% respondents marked first possibility and also in case of technological entities 90,79% of respondents answered on this question, that main responsibility has owner. The reason is also the low level of employed people. In small and medium enterprises, in general

could be the responsibility spread among individual managers. Our survey showed similar situation in both categories of SMEs, with small differences in technological SMEs. The responsibility is distributed among other person in enterprise (risk manager, other person responsible for risk management, members of the Board of Directors, or external experts). To refine the results, we used the method of mathematical statistic – the Chi- square test. We verified the stated hypothesis in methodological part through the Chi-square test in statistical software Statistica 6. (See table 5)

Table 5. The results of Chi-square statistic

Category of cluster	Chi square statistic	df	p	Results
tourism	11,8462	8	0,158215	H0 is confirmed
technological	26,3567	6	0,000191	H0 is rejected

Source: own processing

It was confirmed for SMEs that are carrying activities in area of tourism that between the sized category of enterprise and responsibility of risk management is not dependence (see table 5). It means that main responsibility in this type of SMEs lies with the owner, who is also the main manager responsible for many tasks and important decisions. His intuition and experience are important for managing not only the enterprise as a whole, but also the each step of risk management process.

In case of SMEs that carrying out their activities in area, in which technology clusters operate, the H0 was rejected at the significance level of 0.05. It means that between the size of the company and responsibility of risk management we can follow dependence. It is mainly for that reason, because the implemented activities are more demanding than the activities implemented in case of tourism SMEs. While tourism SMEs are focused on providing the services, the technological SMEs are oriented mainly on production that brings more.

Conclusion

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