# Using Methods of Risk Analysis in Slovak Enterprises

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## ABSTRACT

The risk management level in the Slovak enterprises is still being very low. The aim of this paper is to accentuate the importance of risk management in the Slovak enterprises. The important part of this paper is to point out using the methods of risk analysis and identification in business sphere. Coordinated approach to risks increases the competitiveness and profitability of the firms. Therefore the Slovak entrepreneurs should pay interest to risk management.

**Keywords:** risks, identification, analysis, methods.

## 1. CONCEPT AND IMPORTANCE OF RISK MANAGEMENT IN SLOVAKIA

One of basic objectives of the firm strategic management is to achieve certain competitive advantage with aim to meet the customers and market requirements. All market opportunities present the possibility of profit but also the risk of loss. We can talk about risk that is connected with firm strategy, with opportunities on the market, with use of the resources, etc. All types of risks influence the enterprise operation. If they are properly identified, analysed and solved then it is possible to have picture about the total portfolio of the risks affecting the enterprise, see Figure 1.
Many failures and bankruptcies of prestigious firms result in more interest of the entrepreneurs for the risk assessment and management.

In general risk is understood as danger that really achieved results in business are different from those supposed [7].

Risk management is a tool how to make the enterprise well-prosperous, functioning, without shocks and crises. It requires accepting measures for risk identification, prevention and regulation to cause minimum losses and damages in case of its formation.

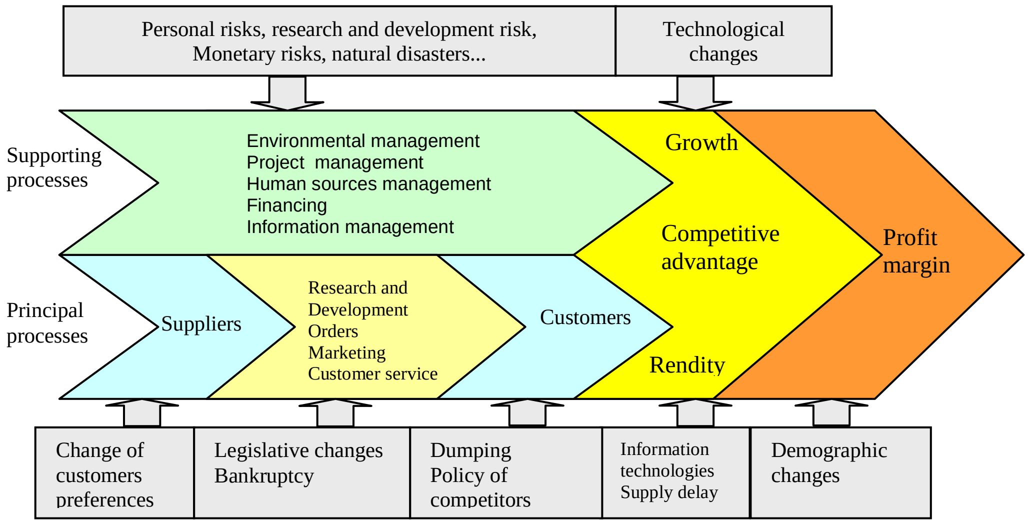



*Figure 1 Enterprise Activities and Environment [11]*

Risk management is aimed to ensure the company existence, its future success and minimize the costs resulting from risk. Risk management is function supporting decision making and approving competence. It endeavours to summarize single risks into total risk the firm is exposed. Risk management is often implemented especially into planning process [1].
Risk management should be especially strategic management that ensures the enterprise is able to respond to the future possible situations and limit adverse impacts of risk situations in advance.

Risk management as a process includes all activities ensuring system access to risks. The optimal risk management system consists of [11]:

1. Risk identification
2. Risk analysis (risk measuring and assessment)
3. Risk reduction or elimination
4. Risk monitoring

## 2. ENTERPRISE RISK MANAGEMENT IN SLOVAKIA

Risk management in its system understanding is relatively new way of enterprise management. Risk management has been developing from the 70s of the 20th century. Complicated economic conditions and rapid turns at world markets were the main impulse for its formation. Risk management development was stimulated also by growing competition in 80s and 90s of the 20th century. At present it is speedily developing field of science. Comprehensive knowledge of risk management is applied in practice all over the world: from America through Europe, Africa to Australia.

In practice of the Slovak enterprises the risk management encounters the problems of content specification and organizational incorporation. At the end of the 20th century, the risk management was especially realized in the financial or economic departments of the enterprises. Later (especially in great foreign companies) it started to be the part of commercial, technical, personal, political and other activities of the firms. At present we can see new factors and conditions affecting the risk management [10]:

- concentration of great investments in enterprise and increased possibility to achieve great loses,
- higher vulnerability of new and complicated technologies and devices,
- ecologic damages and exhaustion of natural resources,
- financial compensation cannot always compensate destroyed tangible goods.

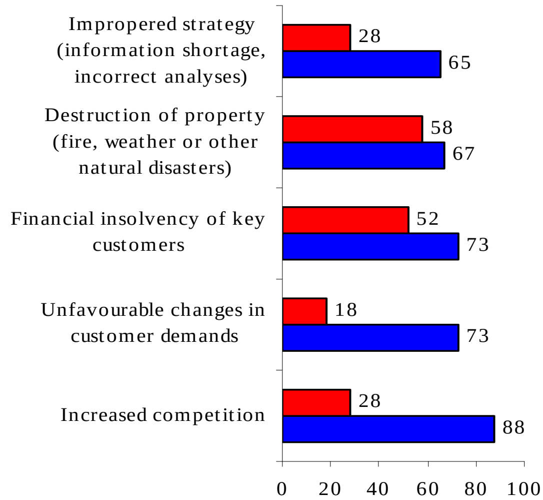
Dynamical changes of business environment increase the importance of risk and uncertainty and adequate integration of these factors into enterprise management in the form of risk management. Today risk management becomes inseparable part of strategic management in enterprise. Risk management department should have the priority position at the top management level [10].

At present the importance of risk management greatly increase also in the Slovak business environment. For the Slovak firms is important to understand that the main objective of the risk management is to create risk protection system, the costs for the risk protection are within the optimal range and guarantee certain effects, too.

Modern understanding of risk management means new approach and new forms of activity in comparison with present insurance practice. It helps the business subjects to realize their creative and systematic work in relation to risk assessment and providing favourable conditions for achieving required results. In comparison with enterprises in developed countries, majority of Slovak enterprises do not apply risk management in modern understanding. This statement can be documented by the results of Survey of the risk management in Slovakia realized by firm Marsh Slovakia in 2006. The aim of this survey was to find out the way of risk perception and their management in the firms of the Middle and East Europe [4].

The results of survey say that the Slovak firms are afraid especially these risks:

- Higher competition
- Unfavourable changes in consumer demands,
- Insolvency of key customers,
- Damage of the property due to fire, weather or other disaster,
- Improperly selected strategy in consequence of information shortage or inadequate analysis of macro-economical conditions.




% of respondents who have significant risk
% of respondents who applies measures for risk reduction

*Figure 2 The most afraid risks for Slovak entrepreneurs [4]*

The above mentioned survey confirmed that the rapid changes in business environment activate also changes in approach to risks in Slovakia. Risks conditioned by changes in customer inquiries and growing competition cause much greater fear of the managers than the traditional risks (e.g. natural disasters, accidents). Reliance only on insurance is not effective risk management because any uninsured risk can also prevent the organization to achieve the business aims. The growth of the enterprise express the will to risk and the better the organization understand the risks and are able to manage them the better results will be able to achieve.

## 3. USING METHODS OF RISK IDENTIFICATION AND ANALYSIS IN SLOVAK ENTERPRISES

Managers, to be able to identify, analyse and manage the risks, have to use the respective methods. The methods used for risk identification are various characters and normally they do not serve only for identification. They have their task also in the risk analysis and assessment and also give directions for proposed solutions. There are many methods dealing with risk identification and analysis, we mention only the most famous, e.g.:

1. **Methods for analysis of external environment**:
   - *PEST analysis* (social, technological, economic, environmental, political forces),

2. **Methods for analysis of internal environment:**
   - *VRIO analysis* is dealing with search of competitive advantages situated in the sources of the enterprise,
   - *Resources of a business* enable to create a picture about present situation in the enterprise and indicate its possibilities in the future,
   - *Analysis of strategic profile* serves as total approach to identification and analysis of strengths and weaknesses of enterprise in comparison with competition,
   - *Value chain analysis* investigates coincidence and connection of sources with strategic purpose they should be used,
   - *Financial analyses include* calculation of ratio indicators: profitability, liquidity, liability, etc.

3. **Methods for analysis of competition:**
   - *Five Forces Analysis* is based on five forces that have the most influence on environment,
   - *Competitive profile matrix* is aimed on identification of main competitors and their strengths and weaknesses,
   - *Benchmarking* compares selected factors of the firm with the most successful firms,
   - *Intensity of competitive forces* finds out intensity of potential competitors influence that is changing during the life cycle in dependence on the barriers of entry to branch,
   - *Segment analysis* means segmentation of branch into certain groups for the purpose of competition strategy.

4. **Methods for analysis of internal and external environment:**
   - *SWOT analysis* is based on identification of strengths and weaknesses of internal environment and opportunities and threats of external environment,
   - *SPACE matrix* (The Strategic Position and Action Evaluation) is aimed at evaluation and strategic position of the enterprise for its future development,
   - *BCG matrix* (The Boston Consulting Group) is analysis of the enterprise market share,
   - *GE portfolio matrix* enables creation and selection of various types of strategies.

Risk analysis methods differ in the way of formulating the parameters used in risk analysis.
In principle there are two basic groups of risk analysis methods: qualitative and quantitative eventually their combination.

1. **Quantitative methods –** the most used quantitative techniques of decision making in operational research are:
   - *statistical analysis* – statistical characteristics of the rate of variability (dispersion, standard deviation, variation coefficient) are the basis for risk determination,
   - *simulation* – quantitative risk analysis is supported by special software e.g. [8]:

   *Monte Carlo simulation method* - is based on generating large number of risks situations and calculation of selected evaluation criterion for each risk situation. The result is probability distribution of evaluation criterion that enables to measure the risk in form of statistical characteristics.
   *CRAMM* - Risk Analysis and Management Methodology – is based on model of system and assessment of the model security and safety. Achieved results are compared with introduced system measures for risk reducing,
   *@RISK* - use Monte Carlo simulation methods. Risks are evaluated in table and values that cannot be exactly stated are given by functions. This way produces model of assessed processes that is created in form of probability distribution of risks. ,
   *RiskPAC* - is software product that enables automated evaluation of filled in questionnaires,
   *RiskWatch* - is software product that enables identification, simulation and modification of system risk parameters [3].

2. **Qualitative methods** – risks are indicated in certain range e. g. small, middle, big, etc. Their level is usually specified by qualified estimate. These methods are simple, speed but more subjective. Financial estimate of costs necessary for risks elimination is missing. These methods need to be completed by certain measurable indicators that enable to measure the costs effectiveness.
   The most used methods are DELPHI, Brainstorming, Dot evaluation, etc.
   - *Delphi method* is based on written inquiry. Several experts present and discuss their opinions, their anonymity is preserved,
   - *Brainstorming* is high effective method based on direct discussion of experts,
   - *Dot evaluation* – the range is given usually by qualified estimate. Risks are indicated in certain range: e.g. number of dots (1-10), probability (0-1), verbally (small, middle, big).

## 4. CONCLUSION

From analysis of the present state in the risk management follows that the majority of enterprises acting in Slovakia are still confronting with the task to accept correct and principal decisions related to risk management. While some companies have understood the strategic importance of risk management in existing contest for survival and progress in business activity, many of them have not yet introduced the systems that will affect return on investments in insurance and risk management.

The key factors of good risk management are sufficient resources and investments in risk management and performance of employees measured on the basis of risk management and achieved profits. Number of Slovak companies, being aware of the reality that rational risk management means the competitive advantage and the way for improving the value of the firm especially on the developing markets, should grow more quickly.

Successful organizations that have adopted risk management differ from other organizations and can be practical example that good risk management correspond with good management of enterprise. Organizations that apply risk management are able to meet the customers' requirements more effectively.

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