

## Problems of SME Risks' Identification and Systematization

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**Abstract:** Inseparability of the risk concept from the entrepreneurial activity concept is the reason for that the risk management turns out to be the major subject throughout the management studies literature. However, the risk management of the small and medium-sized enterprises (SME), which are especially subject to the slightest fluctuations of an environment, remains a subject still insufficiently studied. Standardized and structured risk management practices' implementation at small enterprises is hindered with a lack of the necessary resources, the qualified labour force, lack of access to databases. As a result in the majority of the similar organizations an assessment of critical risk levels and even identification of possible threats are not carried out, not to mention adoption of strategic plans to decrease a risk component of business activity. For reduction of the uncertainty degree, characterizing production at small enterprises, we offer system of the risks which extent of influence is the highest. Within this work it seems to be especially important to emphasize existence of globalization risks as small and medium-sized enterprises throughout the world should exist in more and more unified and open environment.

**Key words:** SME • Risk management • Risk function • Globalization • Entrepreneurship • Avoidance mechanism

### INTRODUCTION

The market economy generates a broad set of risks. The risk is inherent in any form of human activity that is connected with a set of conditions and the factors influencing a positive outcome of decisions made by people. Historical experience shows that the risk of short-reception of the planned results shows up especially within the generality of the commodity-money relations (the competition of economic circulation participants). Therefore, with emergence and development of the capitalist relations there are various theories of risk and classics of the economic theory pay much attention to research of problems of risk in economic activity.

The success in the enterprise environment depends in a decisive way on correctness and validity of the chosen strategy of the enterprise subject. Thus probabilities of critical situations have to be considered.

The risk is an assessment of potential (greatest possible) losses, which the participants of the market who

are carrying out a certain financial activity can incur. For the institutional investor as a whole these greatest possible losses should not exceed a certain size. Otherwise, there is a probability of emergence of financial instability. In order to prevent it, the control system of risks is necessary.

The changes caused by globalization in the traditional, settled spheres of economic life conceal the mass of threats for competitiveness of traditional business activity.

Growth of number and strengthening of the importance of strategic risks reduce the number of enterprises, which are capable in the long term to have the thought-over and debugged system of tracking and management of such risks. In recent years the number of the companies receiving annually the highest credit rating, was sharply reduced. The same way, the number of the enterprises receiving the lowest ratings grew. Over the last 10 years more than a third of the companies from the Fortune-1000 list lost by about 60% of the market cost [1].

In the risk management sphere in recent years, however, significant progress was observed: heads of financial services in the companies learned to estimate and consider quite wide range of risks quantitatively: financial (for example, fluctuations of exchange rates), "material" (in particular, ecological disasters) and operational (for example, failures of IT systems). For protection against such time-proved means like risks insurance, reservations of computing systems, hedging etc. are used. Successes of banks in opposition to financial risks and also rigid demands to the corporate governance, made by Sarbanes-Oxley Act, induce more and more new companies to create control systems of corporate risks [2]. These projects are still at very early stage in many companies, while management of corporate risks is considered only as expansion of audit and the measures directed on observance of regulatory norms. Some companies went further, in particular, by starting estimating risks quantitatively and to coordinate them to strategy of distribution of the capital and decision-making process related to the transfer of risks. Also they include the same financial, operational and "material" threats in the risk management sphere. Meanwhile much more considerable are the strategic risks, many of which are capable to destroy business in the shortest terms. Therefore identification, classification and the analysis of strategic risks give the chance not only to maintain the company's value, but also to increase its competitiveness, to reveal additional sources of business growth. When operating strategic risk, it is possible to find the opportunity to influence it and thus to carry out more aggressive, but at the same time more circumspect and effective policy of development, to achieve financial stability and to find sources for profit growth. The mentioned issues made for a considerable interest to the subject mentioned in this work.

**The Existing Literature Review:** The problem that literature on a risk management generally touches activity of large corporations was specified relatively recently, in particular, in works of Henschel (2008), Vickery (2006), Rautenstrauch and Wurm (2008) who indicate a contradiction between recognition of a special role of small and medium-sized enterprises in economy and absence of distinct concepts of management of risk at such enterprises, considering specifics of their activity.

Despite a large number of works in which most common problems of globalization of economy as a whole are considered, very few authors pay attention to aspects of impact of globalization to business activity and to the

related problems including massive changes in the business purposes, forms of business, structure and scales of risks, their values for competitiveness of the companies, questions of control and effective management of these risks both at the level of the separate companies and at the level of the national states.

As for methodological bases of our work, we relied generally rather on the last elaborations on specific aspects of risk management in various environments and conditions than on the "classical" and general risk management studies. In particular, the concept of risk as an outcome of a certain activity at the lack of definiteness and completeness of information, is introduced by Stroeder (2008), the indication on the abundance of the corresponding definitions and refusal (logically following from this) to search for the most exact definition we face in Wesel (2010) and idea of a duality of the risk situation which outcome can affect positively as well as negatively on entrepreneurial activity is contained, in particular, in the work of Retzlaff (2007). In the papers of such authors as Dhanini (2007) and Hermann (1996), was revealed, perhaps, an exhaustive research concerning threats, borne risk situations, for different enterprises and methods of decrease and even avoidance of critical risk levels.

Thus, the review of existing literature indicates two aspects, concerning representation of a role of a risk management at small and medium-sized enterprises:

- small and medium-sized enterprises differ from large corporations according to many characteristics;
- existing researches do not have enough focus on activity of small and medium-sized enterprises [3].

It is obviously important for us to add the third aspect as well:

- risks of globalization in relation to activity of small and medium-sized enterprises are still insufficiently studied.

Proceeding from the mentioned problems, we carried out classification and systematization of risks of SME.

**Methodology of Risk Identification:** In order to introduce a simplified risk system, it is necessary to give some simplified definitions and examples limited to the components of SME security risks, namely: asset, threat and vulnerability.

**Asset:** anything that has value to the organization.

In our context an asset is a tangible or intangible component of an enterprise. Assets can be hardware, software, data, buildings, infrastructure, but also products, knowledge resources, customer relationships or reputation. To estimate the risk, firstly the security needs of each asset have to be evaluated by taking into account its value. The asset value could for example be the costs of reconstruction or replacement, or its value for the business functions, the value of lost or destroyed data or property or the value of the lost business opportunity. Determining these values and consequences is called “impact assessment”.

**Threat:** any action or event with the potential to cause harm. Threats can be of different types, for example:

- Environmental (e.g. flood, lightening, storms, earthquakes, etc.)
  - Organizational deficits (ill-defined responsibilities, etc.)
  - Human errors (wrong e-mail address, missing critical dates, noting passwords on stickers, mistakenly deleting files, etc.)
  - Technical failures (hardware failure, short circuits, hard disk crash, etc.)
  - Deliberate acts (hacking, phishing, fraud, use of malicious code, theft, etc.)
- ?Sources of threats could be vandalism, espionage or just human mistakes and accidents. In the two first cases the strength of the threat can result from two major factors: the motivation of the threat and the attractiveness of the asset.

**Vulnerability:** a weakness of an asset that can be exploited by one or more threats. ?Vulnerabilities can exist in all parts of an entrepreneurial system, e.g. in organizational structures, in the infrastructure or in personnel.

Risk assessment can be understood as the generation of a snapshot of current risks [4]. More technically, it consists of the following phases:

- Threats identification: identify all relevant threats
- Threat characterization: determine the impact and likelihood of the relevant threats
- Exposure assessment: identify the vulnerability of the assets
- Risk characterization: determine the risks and evaluate their impacts on the business.

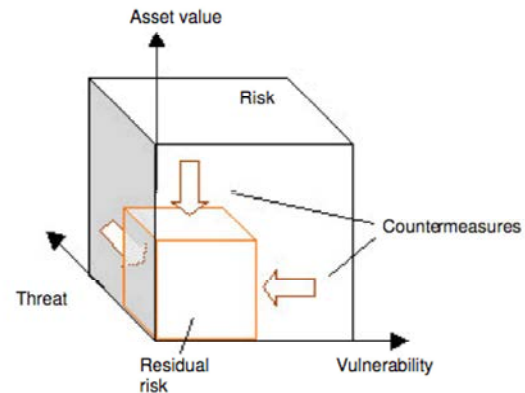


Fig. 1: Risk as a function of asset value, threat and vulnerability [4]

Figure 1 below illustrates how an SME risk can be seen as a function of threat, vulnerability and assets value. It also shows that there are different ways to reduce the risks: countermeasures can either reduce the probability for a threat to become true. They can reduce vulnerability or they might help to reduce the impact caused when a threat comes true.

We proceed now to the identification of risks influencing the SME activities implementation.

**Simplified System of Risks of Small and Medium Business:** According to the methodology of identification the risks of business activity having paramount value for competitiveness of the companies in the conditions of globalization (Fig. 2) were systematized. But firstly we introduce a lite classification of risks, which seem to be specific for the small and medium enterprises (Table 1).

Let us consider some types of risks in a more expanded way. The risks caused by globalization of information society are connected with acceleration of technological changes and arise as a rule during the implementation of innovations. The risks connected with change of consumers' behavior nature in the market include threats of clients' preferences change and also the risks related to the adaptation of a product in the foreign market. To the risks generated by development of the world financial market and its technical base, one may refer the risks connected with free movement of the capital and threat of cybercrimes. Among the risks connected with violations of the rights on the results of intellectual activity and means of individualization it is possible to highlight the production of piracy production and industrial espionage.

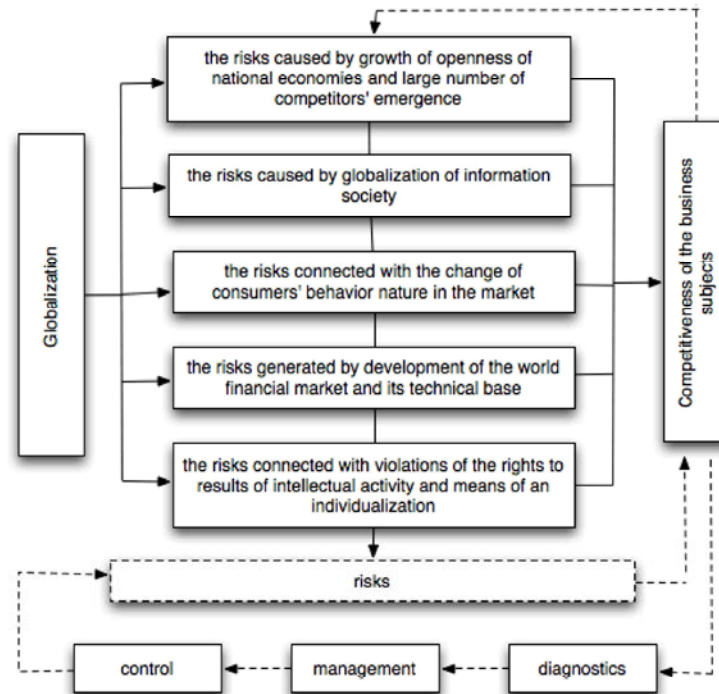


Fig. 2: Classification of risks of business activity in the conditions of globalization and its influence on SME competitiveness

Table 1: Classification of risk categories for SME

|                        |   |
|------------------------|---|
| Financial              | This category includes cash flow, budgetary requirements, tax obligations, creditor and debtor management, remuneration and other general account management concerns   |
| Organisational         | This relates to the internal requirements of a business, extending to the cultural, structural and people issues associated with the effective operation of the business.   |
| Compliance / Legal     | This category includes compliance with legal requirements such as legislation, regulations, standards, codes of practice and contractual requirements. This category also extends to compliance with additional 'rules' such as policies, procedures or expectations, which may be set by contracts, customers or the social environment. |
| Operational            | This covers the planning, operational activities, resources (including people) and support required within the operations of a business that result in the successful development and delivery of a product or service.   |
| Commercial             | This category includes the risks associated with market placement, business growth, diversification and commercial success. This relates to the commercial viability of a product or service and extends through establishment to retention and then growth of a customer base  |
| Safety                 | This category includes the safety of everyone associated with the business. This extends from individual safety, to workplace safety, public safety and to the safety and appropriateness of products or services delivered by the business.  |
| Strategic              | This includes the planning, scoping and resourcing requirements for the establishment, sustaining and/or growth of the business.  |
| Equipment              | This extends to the equipment utilised for the operations and conduct of the business. It includes the general operations of the equipment, maintenance, appropriateness, depreciation, safety and upgrade  |
| Security               | This includes the overall security of the business premises, assets and people and extends to security of information, intellectual property and technology.  |
| Reputation             | This entails the threat to the reputation of the business due to the conduct of the entity as a whole, the viability of product or service, or the conduct of employees or other individuals associated with the business.  |
| Service delivery       | This relates to the delivery of services, including the quality and appropriateness of service provided, or the manner in which a product is delivered, including customer interaction and after-sales service.   |
| Project                | This includes the management of equipment, finances, resources, technology, timeframes and people associated with the management projects. It extends to internal operational projects, projects relating to business development and external projects such as those undertaken for clients  |
| Stakeholder management | This category relates to the management of stakeholders and includes identifying, establishing and maintaining an appropriate relationship. This includes both internal and external stakeholders.  |
| Technology             | This category relates to the management of stakeholders and includes identifying, establishing and maintaining an appropriate relationship. This includes both internal and external stakeholders.  |

Source: [5]

In modern conditions on the “forefront” there are the risks caused by growth of openness of national economies and emergence in the market of such strong subjects, as the multinational companies. The competition and the related threats especially become aggravated today, in particular risk of appearance of the unique supplier, capable to take a considerable share of the market. The number of competitors becomes such big that any mistake threatens with leadership loss.

Growth of the competition becomes aggravated that multinational corporations, as a rule, have powerful financial resources thanks to which they can regularly update production and increase quality of production, carry out innovations, advance trademarks, develop information technologies and marketing. The small local enterprises are much more limited in resources that does them less competitive and more vulnerable in comparison with multinational corporation. In such conditions successful activity of the small enterprises is in many respects caused by protectionism and lobbying of interests of domestic business by the state structures at the international level.

Increase of national economies’ openness degree and growth of the competition also makes the threat of merges/absorption more urgent. Small local firms (generally in capital-intensive branches) often face a dilemma: either to attract investments (which are foreign as a rule) and to concede a part of profit or even part of the enterprise to foreign partners, or to continue to work with outdated technologies, supervising a market niche at the expense of extremely low prices of made production [6].

Besides that, multinational corporations often carry out aggressive strategy in relation to the local companies that is a direct threat for existence of the latter as quite often absorption is followed by immediate closing of production for the purpose of destruction of the competitor.

Cross-border merges and absorption are considered as the most economic and convenient way of penetration on the foreign markets [1]. However, M and As impose serious threat for the for the companies-initiators’ wellbeing and stability, as they can suffer because of complexity of process of association and the subsequent management and also because of the overestimated expectations from such transaction.

In the conditions of increase of level of the competition fight for such resources as the talent and qualification can appear the next threat for successful business. The success of any business depends today generally on the quality of the human capital.

As the results of numerous researches indicate, small and medium-sized companies suffer from the staff deficit as thanks to the financial resources multinational corporations have more opportunities to develop and introduce various innovative systems of motivation, to carry out various trainings, advanced training courses, to introduce special receptions of development of creative abilities of workers that is additional incentive for perspective experts to look for work in such companies. The similar situation for the SME is interfaced to a great risk to remain without key experts and to lose a market share. Broadening of such type of risk is also caused distribution of such method of involvement of leading experts, as “enticement” (this method is most often used by the technological companies).

**Avoidance Mechanism of Globalization Risks:** To avoid risks effectively is the basic final goal of any risk avoidance mechanism. Therefore, the most effective way for SMEs to avoid risks that might arise in their technology innovation activities is to build up a risk warning system.

This work can be pursued under the following procedure: first, data collection of relevant factors that account for risks. This is the fundamental step to construct a risk warning system. It requires SMEs collect datum that reflect the performance of innovative activities of SMEs according to their own organizational features and specific innovative project. Reliability of sample and datum is the most important factor that should be considered during this phase. The second one is the warning model construction. Advanced analyzing theories of technology innovation risk are used to handle datum collected during the first phase. The third step is to inform of final decision. This part is the conclusive point of the whole warning system. It is based on analyzing of up-dated datum and come to a conclusion that if SMEs should continue or stop their innovation project or how to adjust their innovative activities.

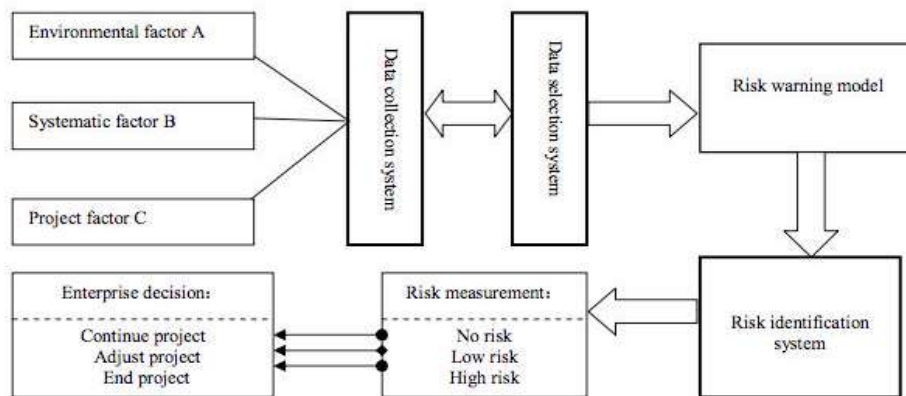


Fig. 3: Warning system of technology innovation risk of SMEs [7]

The warning system is illustrated in the following Fig. 3.

One of the main characteristics of globalization, as we know, is growth of dynamics of the markets which is connected with information revolution and acceleration of technological changes. The risks connected with it often have the most serious consequences for business indicators both large and average and small enterprise subjects. Speech can go about expiration of the patent or about moral obsolescence of this or that production. But the main danger is usually connected with unexpected emergence of essentially new technology, which makes at once certain products and services irrelevant. The success of the company also can conceal inner danger: businessmen often become self-confident and start criticizing new inventions which can their main business. Most often it happens to the large companies which management of time is quite far from "front line".

Scales of risks grow in modern conditions, coherent with development and deployment of various innovations: there is always a danger that the new product (an initiative, the program, the policy direction) will be insolvent or it will not please key clients that competitors will quickly copy a novelty and will take away a share of the market or that advance of a novelty will be too slow and will manage too expensive. Not smaller financial and organizational risks are connected with new marketing initiatives, projects in the field of information technologies and research and development and also merge and absorption transactions. The facts inevitably testify: from five new business projects four suffer failure.

In view of globalization and a competition aggravation consumers become the party dictating their own requirements. Nowadays' change of clients' behavior

gives rise to the mass of strategic risks for the companies, control and management with which are necessary for them for effective and successful activity [8].

The situation when it becomes too dependent on small category of consumers is rather typical for small business. But, perhaps, the greatest risk is connected with change in preferences of clients. These changes happen always, but thus can be sudden and sharp or gradual and almost imperceptible. Gravity of risk depends on the speed, scales and depth of such changes for the companies. Flexibility and adaptability start playing the major role in ensuring competitiveness of the companies.

Modern informational revolution and emergence of new types of communication make huge impact on marketing globalization. Traditionally buyers choose goods necessary for them proceeding from quality of offered production and information which to them is provided by suppliers. But also such forms of trade are threatened by search systems on the Internet by means of which the user in the conditions of the global markets appears in the face of much wider choice, than anywhere else.

## CONCLUSION

Thus, it was defined that in the conditions of globalization undergo changes of the purpose and organizational forms of business activity. It was revealed that concentration and capital centralization become the purposes causing strategy of activity of the companies, today economic activity in the global market. The deep, basic purpose of the company consisting in increase of its cost on the basis of formation of steady competitive advantages is replaced today with aspiration to short-term

financial success. According to the requirement of time organizational forms of business also evolve: more flat organizational structures constructed on the integration principles, electronic business develop; more economic decentralization of management today comes to change to hierarchical distribution of functions.

On the basis of studying of literature and data on systems of a risk management of small enterprises existing in practice we allocated the most essential factors generating risks of business activity in modern conditions: growth of power of the multinational companies (multinational corporation), bringing to unknown strengthening of the competition (including for resources); the virtualization of the financial market causing imbalance of national economies and significantly increasing risk of financial destabilization of business; development of the shadow criminal economy, capable to cause to the companies essential damage to influence their strategic interests and economic activity.

According to the purposes of our work risks having paramount value for competitiveness of the companies in the conditions of globalization were identified, classified by a source of the origin and the enterprise and systematized:

- risks caused by growth of openness of national economies and emergence in the market of a large number of subjects (in particular multinational corporation): risks of the competition, including for intellectual resources, risks of merges/absorption;
- risks caused by globalization of information society: the threats connected with acceleration of technological changes and risks, arising at implementation of innovations;
- risks connected with change of nature of behavior of consumers in the market: threats of change of preferences of clients and also the risks connected with adaptation of a product to the foreign market;
- risks generated by development of the world financial market base: the risks connected with free movement of the capital and threat of cybercrimes;
- risks connected with violations of the rights to results of intellectual activity and means of an individualization (production of piracy production and industrial espionage).

It seems that continuous monitoring of activity of competitors is necessary for risk minimization (reduction of areas of “crossing” with them); immediate reaction to technological innovations both in branch and in allied industries; continuous search of innovative opportunities; development of forms of cooperation and cooperation; ensuring information security and protection of intellectual property.

## REFERENCES

1. Nazarova, I.G., 2003. Risk management within the entrepreneurial activity. Uhta, Russia: USTU.
2. Popkova, E.G. and M. Beshanova, Yu, 2010. Factors, influencing the sustainable development of the enterprises. Modern Economy Problems and Answers Journal, 10: 51-62.
3. Napp, A.K., 2011. Financial Risk Management in SME. Master thesis, Aarhus School of Business.
4. ENISA ad hoc working group on risk assessment and risk management, 2006. Risk Assessment and Risk Management Methods: Information Packages for Small and Medium Sized Enterprises (SMEs).
5. Risk management guide for small business, 2005. The State of New South Wales: Department of State and Regional Development.
6. Popkova, E.G. *et al.*, 2010. Economic growth prognostication throughout the Russian Federation regions: methodology of analysis. In the proceedings from the Conference on Economical prognostication's models and methods, Voronezh, VSU, pp: 64-67.
7. Bin, X., *et al.*, 2007. SME Risk Avoidance Mechanism on Technology Innovation. In the Proceedings of International Conference on Enterprise and Management Innovation, pp: 989-994.
8. Delisle, S. and J. St-Pierre, 2003. SME Projects: A Software for the Identification, Assessment and Management of Risks. 48<sup>th</sup> World Conference of the International Council for Small Business (ICSB-2003), Belfast (Ireland), 15-18 juin 2003, CD-ROM proceedings, 19 pages.