

**DOI: 10.7596/taksad.v8i1.2059**

**Citation:** Pinkovetskaia, I., Gubernatorova, E., & Kiseleva, O. (2019). Evaluation of Entrepreneurial Risk Level as Social Process in the Russian Economy. *Journal of History Culture and Art Research*, 8(1), 475-486. doi:<http://dx.doi.org/10.7596/taksad.v8i1.2059>

### **Evaluation of Entrepreneurial Risk Level as Social Process in the Russian Economy**

**Iuliia Pinkovetskaia<sup>1</sup>, Elina Gubernatorova<sup>2</sup>, Olga Kiseleva<sup>3</sup>**

#### **Abstract**

Development of the entrepreneurial sector requires information on the current risk levels in economy. The paper deals with three levels of entrepreneurial risk: acceptable, critical and catastrophic. The research aim is to assess the values of entrepreneurial risk that has been existing in recent years in aggregates of small and medium enterprises, formed by size and industry characteristics. Risk evaluation was made on the base of official statistics, characterize activity of all medium enterprises, small enterprises and microenterprises situated in Russia in 2015 and 2016. The paper presents the results of risk assessment for a set of medium enterprises, small enterprises and microenterprises in the Russian economy. From the results of the study it has been concluded that there is a significant differentiation of entrepreneurial risk levels by the types of economic activity. The industries with the maximum and minimum values of the existing entrepreneurial risks have been determined. The research outcomes can be used by entrepreneurs including beginners; federal, regional and municipal departments' authorities related to the regulation of entrepreneurial activity; financial and credit, insurance, leasing organizations.

**Keywords:** Small enterprises, Medium enterprises, Microenterprises, Acceptable risk, Critical risk, Catastrophic risk, Type of economic activity.

**JEL Classification: L26; C31**

---

<sup>1</sup> Ulyanovsk State University, Russia. E-mail: pinkovetskaia@gmail.com

<sup>2</sup> Altai State University, Russia. E-mail: gubernatorova@email.asu.ru

<sup>3</sup> Ulyanovsk State University, Russia. E-mail: kiseleva\_o@rambler.ru

## **Introduction**

The criteria currently applicable in Russia for referring economic entities to small and medium businesses are defined by the Federal Law No. 209-FZ of July 24, 2007 "On the Development of Small and Medium Businesses in the Russian Federation". In accordance with it, the main criterion for attributing to small and medium enterprises is the number of employees, which should not exceed 100 for small enterprises, and ranges from 101 to 250 people for medium enterprises. Among small enterprises there are microenterprises with the number of employees up to 15 people. Total number of small and medium enterprises in 2016 in Russia is 2783908.

A significant increase in the production volume of goods and services in Russia provided by small and medium enterprises, having been defined as the priority task in the Strategy for Development of Entrepreneurship until 2030 (The strategy, 2016), requires an understanding of the role of entrepreneurial (economic) risk on their activities. To assess the level of this risk and its impact, it is necessary to study a wide range of issues related to risky activities. Therefore, at the present stage of entrepreneurship development it is relevant to analyze consistent patterns and trends that characterize the current level of risk in the entrepreneurial sector of the national economy, as well as identify industries and a set of enterprises with high and low values of such risks. That is why, development of the entrepreneurial sector requires estimation of the current risk levels in economy.

The modern concept of entrepreneurial risk is formulated in the international standard ISO 31000:2009 (Risk management – Principles and guidelines, 2009). It indicates that organizations of all types and sizes face internal and external factors and influences that make it impossible to determine how and when organizations will achieve their set goals. In this case, the risk is considered as the effect of uncertainty on the company goals. It is emphasized that any company's activity is associated with risk. The last thesis is also stated in the current legislation of the Russian Federation. Thus, the Civil Code of the Russian Federation (Section 1, Article 2) states that entrepreneurial activity is an independent activity carried out at its own risk, aimed at systematically receiving profit from using property, selling goods, performing works or rendering services.

The research goal, the results of which are presented in the present paper, is to assess the levels of entrepreneurial risk prevailing in recent years by an aggregate of small and medium enterprises, formed according to dimensional and sectoral characteristics.

The study examines two hypotheses. Hypothesis 1: there is a differentiation of risk levels depending on the size (number of employees) of the enterprise. Hypothesis 2: there is a differentiation of risk levels depending on the type of economic activity on which small and medium enterprises specialize.

## **Literature Review**

R. Cantillon wrote about entrepreneurial risk in 1755 in his essay (Cantillon, 1755) for the first time in history. He noted that both farmers and most urban entrepreneurs (manufacturers, wholesalers and retailers, homeowners, artisans, chimney sweepers) operate in conditions of uncertainty, based on the customer needs.

The majority of theoretical studies focusing on the issues of business uncertainty and risks arising from business activities were developed in the 20th century. F. Knight (2012) published monograph, which was devoted to the problems of entrepreneurship. He examined the relationship of risk, uncertainty and profit of an enterprise. F. Knight put forward the concept that profit was viewed as a gain from risky situations. He suggested that the level of risk can be estimated by a priori or statistical probability. The work of Heyne et al. (1994) is devoted to the consideration of the relationship of uncertainty in entrepreneurship and financial results. He points out that since there would be no gain or loss without uncertainty, the profits or losses of enterprises are the consequence of uncertainty. In the book (Wu, 2010) authors argued that

entrepreneurship risk was an important element of modern market economic. In the research (Sitkin & Paolo, 1992) made conclusion that entrepreneurial risk is related to the made decisions and reveals in the uncertainty of outputs. This uncertainty implies that results of decisions may lead to disillusion. The paper (Zhao et al., 2005) argued that entrepreneurship risk appear in the result deviation from the basic target of enterprise activity and due to complexity and uncertainty of business-processes, lack resources and the errors of management team.

Authors (Åstebro et al., 2014) pointed attention on the topicality estimation of probability distribution appearing risk in the economy. In the work (Dana 2002) made conclusion that most enterprises are tolerant to the acceptable entrepreneurial risk. Similarly, R.E. Hall & S.E. Woodward (2010) suggest that entrepreneurs must have a relatively high risk tolerance.

Manifestations of entrepreneurial risk in the modern economy are discussed in the articles by S. Tom & I. Alex (2012), as well as in N. Veskovich (2014).

Some aspects of entrepreneurial risk in various types of activity presented in paper (Nehrebecka, 2018). S. Gerosa & F. Nasini (2001) analyzed the risk of the entrepreneurship in the high technology industry.

In the researches (Tang et al., 2010; Lechner & Gudmundsson, 2014; Thapa, 2015) showed that entrepreneurial risk appear more in small firms in comparison with big enterprises.

A number of works are devoted to the issues of economic risk in Russia. In particular, the essence and classification of entrepreneurial risks along side with the description of their indicators and evaluation methods are given in the research papers (Granaturov, 2002; Lapusta, 2008; Pelikh et al., 2004; Shapkin, 2003; Kabakov, 2012; Kibitkin et al., 2013).

Unfortunately, complex estimation of entrepreneurial risks is not yet wide measuring among the researchers.

### **Research Methodology and Data**

The previous studies, as well as the accumulated experience, show that small and medium enterprises cannot calculate and carry out their actions with complete certainty. To make a profit entrepreneurs deliberately implement risky projects and solutions. Considering the entrepreneurial risks, it is advisable to proceed from the concepts of a single or elementary risk. This risk affects the performance of specific actions and operations. In terms of its type, individual risk may be external (that is, due to factors external to the enterprise) or internal, related to the operations of the enterprise itself. Risks are divided into one-time or long-term, financial, organizational, technological, environmental, administrative, etc. It is important to note that the effect of a single risk on the results of the performance of relevant works and operations can be both positive, that is, leading to an increase in the expected profit, and negative, leading to a decrease in profit. The concept of both reducing and increasing expected profits due to risk events, which was substantiated in the research paper (Bakchai, 1979), is very important for assessing the existing business risk. That is why the evaluation of the level of entrepreneurial risk for small and medium enterprises should be carried out not by individual elements of their activities, areas of implementation and specific projects, but by the total outcomes of the company performance over a long period of time. This statement, proposed by R.M. Kachalov (2002), is of fundamental importance when considering the outcomes of venture activities of enterprises. Thus, the research process was considered as the aggregated entrepreneurial risk in the company activities on the basis of its official reporting. Considering that since 2013, all small and medium enterprises are obliged to submit income and loss reporting to the territorial statistical bodies, it is most expedient to select one year for such a reporting period.

The conducted analysis of the previous studies shows that the most basic levels of risk, namely acceptable, critical and catastrophic describe the essence of risky business most adequately. These terms for the description of entrepreneurial risk are given in a number of works, for example, in the book of L.N. Tapman

(2002). At the same time, the procedure for evaluating the levels of entrepreneurial risks characteristic of specific small and medium enterprises and their aggregates has not been reflected in the profound research so far.

The study was based on the following principles. The risk in the activities of small and medium enterprises is always the case, but its level is different. Assessment of the entrepreneurial risk level in small and medium enterprises should be carried out not for individual elements of their activities, areas of implementation and specific projects, but for the total performance of a company for a long period of time (one year). As criteria for the classification of risk that occurs in the activities of a particular enterprise, it is proposed to use the following. The permissible risk is associated with a profitable activity, i.e. when profit is specified as the financial result in the official statements of the company performance. Critical risk is characterized by the lack of profit by the outcomes of a company's activity (that is, loss or zero profit), however, the company has not ceased its activities. Catastrophic risk is associated with the termination of a company's activity. These criteria are objective, easy in application, and clearly describe the boundaries of each level of entrepreneurial risk. As it is shown in the author's work (Pinkovetskaia, 2018), the number of small and medium enterprises, both belonging to different size categories, and specializing in different types of economic activity, is very large. Therefore, it seems logical to assess the prevailing entrepreneurial risk by sets of enterprises united by size and industry.

In our opinion, the proposed procedure for assessing the existing risk levels in the activities of sets of enterprises for the period in question should be based on the following indicators:

- the indicator of acceptable entrepreneurial risk is the proportion of profitable enterprises within the total number of functioning enterprises by the end of the year under review;
- the indicator of critical entrepreneurial risk is the proportion of non-profitable enterprises within the total number of functioning enterprises by the end of the year under review;
- the indicator of catastrophic entrepreneurial risk is a coefficient of official liquidation of small and medium enterprises that have ceased their activities. This coefficient is calculated as the ratio of the number of enterprises that ceased their activities in the reviewed year to the total number of operating enterprises and those that have ceased their activities.

In assessing the existing levels of entrepreneurial risk, official statistical information of the Federal State Statistics Service on small and medium businesses was used as the initial data characterize activity of all medium enterprises, small enterprises and microenterprises situated in Russia in 2015 and 2016 (Federal State Statistics Service, 2019). In particular, the indicators of the financial condition and demography of microenterprises, small (without micro) and medium enterprises were taken into consideration, i.e. data of three dimensional categories and 13 types of economic activity. Number of such enterprises in 2016 belonging to each of these groups is given in table 1.

**Table 1.** Number of enterprises in Russia.

Type of activity	Small enterprises (excluding microenterprises)	Microenterprises	Medium enterprises
Total for all types of activity	172916	2597646	13346
Agriculture, hunting and forestry	8096	53230	1930
Fishing, fish farming	456	4316	77
Mining	1018	9247	233
Processing industries	26268	219520	3524
Production and distribution of electricity, gas and water	2839	12822	325
Building and construction	20759	315189	1524
Wholesale and retail trade	57885	974182	3361

Hotels and restaurants	8310	71113	132
Transport and communication	9904	205447	653
Real Estate Operations	28415	572251	1284
Education	173	9776	4
Health care	3244	39389	177
Provision of community, social and personal services	3916	71123	116

Source: authors' calculated

### The Levels of Acceptable Entrepreneurial Risk

Calculations of the levels of acceptable risk were carried out for sets of medium enterprises, small enterprises and microenterprises specialized in each of the 13 types of economic activities. The results of these calculations for the 2016 data are given in Table 2. For comparison, 2015 value indicators are presented in parentheses. The acceptable risk values for small businesses in aggregate are given without taking into account microenterprises.

**Table 2.** Established acceptable risk levels, %

Types of economic activity	Medium enterprises	Small enterprises	Microenterprises
Agriculture, hunting and forestry	87.14 (87.96)	80.22 (80.81)	78.15 (78.54)
Fishing, fish farming	92.77 (86.67)	76.85 (78.54)	70.65 (70.90)
Mining	67.05 (66.15)	67.71 (68.76)	70.87 (70.83)
Processing industries	78.20 (77.16)	78.69 (78.94)	80.13 (79.62)
Production and distribution of electricity, gas and water	64.75 (60.58)	64.43 (63.15)	71.68 (71.83)
Building and construction	75.16 (79.01)	77.36 (79.01)	81.58 (80.92)
Wholesale and retail trade	86.13 (86.99)	82.96 (84.95)	83.63 (83.42)
Hotels and restaurants	71.50 (72.30)	73.97 (72.59)	74.55 (74.09)
Transport and communication	77.79 (75.70)	76.30 (74.63)	80.75 (79.34)
Real Estate Operations	77.42 (79.78)	77.18 (77.83)	76.28 (76.21)
Education	70.00 (83.33)	78.19 (80.30)	74.63 (74.95)
Health care	82.28 (78.72)	81.47 (80.36)	75.39 (75.55)
Provision of community, social and personal services	70.65 (67.30)	74.57 (72.84)	74.92 (74.80)
On average for all activities	80.53 (81.31)	78.94 (79.85)	80.09 (79.83)

Source: authors' calculated

The range of changes in the current levels of acceptable entrepreneurial risk for medium enterprises was from 64.75% to 92.77% in 2016. It should be noted that the average value of this indicator was 80.53% for

all medium enterprises in the country. The highest level of acceptable entrepreneurial risk in 2016 was observed in fishing and fish farming, agriculture, as well as trade enterprises (from 86.13% to 92.77%). An acceptable risk of less than 70% occurred in medium enterprises specializing in only two types of activities, namely mining and production and distribution of electricity, gas and water. A similar situation was observed in 2015, when the highest level of acceptable entrepreneurial risk was observed in medium enterprises of the same three industries. An acceptable risk of less than 70% in 2015 occurred in medium enterprises specializing in three types of activities. In addition to the two characteristic for 2016, the low level of risk was also seen in the provision of community, social and personal services. The comparison of acceptable business risk values for medium enterprises in 2016 with the 2015 values showed no significant changes in most of the activities. Significant alterations in indicators were only for enterprises related to fishing and fish farming (a 6% increase) and education (a 13% decrease). Taking into account a small number of medium enterprises in these industries, the fluctuations were not due, in our opinion, to systemic causes, but reflect the impact of random factors. The change in the average indicator's value was less than 1% for all types of activities for the period under consideration.

The range of changes in the existing levels of acceptable business risk for small enterprises (excluding microenterprises) in 2016 was from 64.43% to 82.96%. At the same time, the average value of this indicator for all small enterprises in the country reached 78.94%. The highest level of acceptable entrepreneurial risk was noted in trade, health care, agriculture (from 80.22% to 82.96%). The acceptable risk of less than 70%, as it was for medium enterprises, occurred in small enterprises specializing in the extraction of mineral resources, as well as the production and distribution of electricity, gas and water. In 2015, the highest level of acceptable entrepreneurial risk was observed in small enterprises of the same three sectors, as well as education. An acceptable risk of less than 70% occurred in small enterprises specializing in the same activities as in 2016. The comparison of acceptable entrepreneurial risk values for small enterprises in 2016 with the 2015 values demonstrated that there were no significant changes (less than 2%) for all types of activities. The change in the average value of the indicator was less than 1% for all types of activities for the period under consideration.

The range of changes in the established levels of acceptable entrepreneurial risk was from 70.65% to 83.63% for microenterprises in 2016. At the same time, the average value of this indicator was 80.09% for all microenterprises in the country. The highest level of acceptable entrepreneurial risk was noted in trade, construction, transport and communications (from 80.75% to 83.63%). Minimum values of acceptable risk in the range from 70% to 71% occurred in microenterprises specializing in mining, fishing and fish farming. In 2015, the highest level of acceptable entrepreneurial risk was observed in microenterprises of trade and construction. The least acceptable risk values (from 70% to 71%) were observed in microenterprises specializing in the same types of activities as in 2016. The comparison of the acceptable business risk values for microenterprises in 2016 with the 2015 values showed no significant changes in all types of activities (less than 2%). change in the average value of the indicator was 0.26% for all types of activity for the period under review.

The conducted comparison of acceptable entrepreneurial risk the values in 2016 for enterprises of different size categories allowed us to draw the following conclusions:

- There is a positive connection between the size of enterprises and the level of acceptable risk in agriculture, fish farming and fisheries, health care;
- There is a negative connection between the size of enterprises and the level of acceptable risk in mining, manufacturing, construction, hotels and restaurants, the provision of municipal, social and personal services;
- In other types of activities the connection between the size of enterprises and the level of acceptable risk was not found.

Data of last line table 2 show, that hypothesis 1 is approved, i.e. existing differentiation of risk levels depending on the size of the enterprise.

In general, the level of acceptable risk was about 80% for all small and medium enterprises in 2016. This allows us to conclude that every four out of five entrepreneurs who have set up their own enterprises in our country are conducting their activities quite successfully. Their companies not only survive in quite difficult economic conditions, but using market mechanisms, ensure the profitability of the products and services provided.

### The Levels of Critical Entrepreneurial Risk

Critical risk levels were calculated for sets of medium enterprises, small enterprises and microenterprises specializing in 13 types of economic activity. The results of these calculations according to the 2017 data are shown in Table 3. The 2015 indicator values are presented in parentheses for comparison. Critical risk values for aggregates of small enterprises are given without taking into account microenterprises.

**Table 3.** Established critical risk levels, %

Types of economic activity	Medium enterprises	Small enterprises	Microenterprises
Agriculture, hunting and forestry	12.86 (12.04)	19.78 (19.19)	21.85 (21.46)
Fishing, fish farming	7.23 (13.33)	23.15 (21.46)	29.35 (29.10)
Mining	32.95 (33.85)	32.29 (31.24)	29.13 (29.17)
Processing industries	21.80 (22.84)	21.31 (21.06)	19.87 (20.38)
Production and distribution of electricity, gas and water	35.25 (39.42)	35.57 (36.85)	28.32 (28.17)
Building and construction	24.84 (20.99)	22.64 (20.99)	18.42 (19.08)
Wholesale and retail trade	13.87 (13.01)	17.04 (15.05)	16.37 (16.58)
Hotels and restaurants	28.50 (27.70)	26.03 (27.41)	25.45 (25.91)
Transport and communication	22.21 (24.30)	23.70 (25.37)	19.25 (20.66)
Real Estate Operations	22.58 (20.22)	22.82 (22.17)	23.72 (23.79)
Education	30.00 (16.67)	21.81 (19.70)	25.37 (25.05)
Health care	17.72 (21.28)	18.53 (19.64)	24.61 (24.45)
Provision of community, social and personal services	29.35 (32.70)	25.43 (27.16)	25.08 (25.20)
On average for all activities	19.47 (18.69)	21.06 (20.15)	19.91 (20.17)

Source: authors' calculated

As noted above, the values of the existing critical risk levels reflect the proportion of enterprises that had no profit for the year under review, in the total number of all enterprises. Therefore, for each of the activities, the values of critical risk levels complement the values of acceptable risk up to 100%.

The range of changes in the current levels of critical entrepreneurial risk within medium enterprises was from 7.23% to 35.25% in 2016. At the same time, the average value of this indicator was 19.47% for all medium enterprises in the country. The highest level of critical entrepreneurial risk was observed in medium enterprises specializing in the production and distribution of electricity, gas and water (35.25), as well as mining (32.95%). The comparative analysis between the 2016 critical entrepreneurial risk values for medium enterprises and the 2015 ones showed no significant changes in most activities. The change of the average value of the indicator was less than 1% for all types of activities for the period under consideration.

The range of changes in the current levels of critical entrepreneurial risk was from 17.04% to 35.57% for small enterprises in 2016. At the same time, the average value of this indicator was 21.06% for all small enterprises in the country. The highest level of critical entrepreneurial risk was observed in small enterprises specializing in the production and distribution of electricity, gas and water (35.57%), as well as mining (32.29%). A low level of critical entrepreneurial risk was marked in trade (17.04%), health care (18.53) and agriculture (19.78%). The comparative analysis between the 2016 values of critical entrepreneurial risk for small enterprises and the 2015 ones revealed no significant changes in all types of activities (less than 2%). The change in the average value of the indicator was less than 1% for all types of activities for the period under consideration.

The range of changes in the current levels of critical entrepreneurial risk was from 16.37% to 29.35% for microenterprises in 2016. At the same time, the average value of this indicator was 19.91% for all microenterprises in the country. The highest level of critical entrepreneurial risk was observed in microenterprises specializing in fishing and fish farming (29.35%) and mining (29.13%). The minimum values of critical risk occurred in trade (16.37%), construction (18.42), transport and communications (19.25%). The comparison between the 2016 values of acceptable entrepreneurial risk for microenterprises and the 2015 ones showed no significant changes in all types of activities. The change in the average value of the indicator was 0.26% for all types of activity for the period under review.

The highest level of critical entrepreneurial risk was observed in small enterprises specializing in mineral extraction. It constituted more than 30% within the period under review. The high level of risk, in our opinion, is due to significant capital investments and costs for the preparation of production activities.

The current level of critical risk in the activities of small and medium enterprises on average was about 20%. That is, every fifth company faced financial difficulties in its activities, which were manifested in the total losses based on the results of operations in 2015 and in 2016.

### **The Levels of Catastrophic Entrepreneurial Risk**

Calculations of the levels of catastrophic risk were performed on aggregates of small and medium enterprises specializing in each of the 13 types of economic activity. The results of these calculations for the 2015 and 2017 data are given in table 4. Caused by the lack of relevant information in official statistical observations, calculations of the 2016 level of catastrophic risk had not been carried out. Size characteristics of enterprises had not been taken into consideration as well as for the same reason.

**Table 4.** Catastrophic risk levels, %

Types of economic activity	2015 year	2017 year
Agriculture, hunting and forestry	4.86	3.99
Fishing, fish farming	7.34	3.99
Mining	5.84	9.18
Processing industries	6.12	8.15
Production and distribution of electricity, gas and water	no data	7.70
Building and construction	6.49	12.98
Wholesale and retail trade	8.49	10.67

Hotels and restaurants	5.53	9.15
Transport and communication	6.74	12.37
Real Estate Operations	5.54	7.07
Education	3.49	2.04
Health care	4.52	7.27
Provision of community, social and personal services	no data	7.00
On average for all activities	6.7	9.12

Source: authors' calculated

The range of changes in the current levels of sectoral catastrophic risk was from 2% to 13% in 2017. At the same time, the average value of this indicator for all small and medium enterprises in the country reached 9.12%, that is, every eleventh enterprise could not overcome the consequences of risky impacts and ceased its operations. The same conclusion follows from the work (Åstebro et al. 2014), which indicates that the average value of terminated activity for the small enterprises considered by him is about 8.33%.

The highest level of catastrophic risk in 2017 occurred in the aggregates of small and medium enterprises specializing in construction (12.98%), transport and communications (12.37%), wholesale and retail trade (10.67%). This situation, in our opinion, is due to the wide development of large construction and transport enterprises as well as retail chains in recent years. It caused difficulty for small businesses to compete with. The values of catastrophic risk in processing industries, hotels and restaurants, and mining were somewhat lower (from 8.15% to 9.18%). This level of risk in these sectors is due to significant capital investments, which, in the conditions of the recent crisis, did not always provide the return needed for loans and other borrowed funds.

The lowest level of catastrophic risk (less than 4%) was observed in the enterprises of agriculture, fisheries and fish farming, as well as educational establishments. There was a decrease in the values of catastrophic risks in 2017 compared to 2015 in these types of activities. In our view, the decrease of the catastrophic risk level in agriculture, fisheries and fish farming was due to the consequences of import substitution measures taken in Russia. While the opposite trend was observed, i.e. an increase in risk values, for the other ten types of activities. It is worth mentioning that the values of catastrophic entrepreneurial risk increased dramatically (from 1.5 to 2 times) for enterprises specializing in mining, construction, transport and communications, hotel and restaurant business and health care during the period under review. In general, in 2017 the average level of catastrophic risk was 1.36 times more than in 2015 for all types of enterprises, that, in our opinion, indicates a significant decline of the entrepreneurial climate in the national economy during the period under review.

Data presented in tables 2, 3, 4 proved the right information in hypothesis 2 on the differentiation of risk levels depending on the type of economic activity.

## Conclusion

The tasks set during the research have been completely solved. The research findings, containing scientific novelty and originality, are the following:

- Proposed the data analysis of the existing levels of entrepreneurial risks of aggregates of small and medium enterprises, formed according to sector and size features;
- Formulas that allow to assess the existing levels of acceptable, critical and catastrophic risks for sets of small and medium enterprises have been proposed;
- Values of the established acceptable, critical and catastrophic risks have been estimated for sets of enterprises belonging to various sectors and size categories;
- The types of economic activity with high and low levels of entrepreneurial risk have been identified;

- It has been proved that despite the existing risk, business activity is a promising direction of the national economy development.

Based on the research results, the following suggestions and recommendations can be formulated:

- It seems appropriate to use the assessment of the existing levels of entrepreneurial risk when monitoring entrepreneurship in the regions by the type of economic activity;

- The proposed methodology and procedures for the calculation can be used to assess the existing risk levels for the aggregates of small and medium enterprises located in municipalities;

- It is necessary to inform start-up entrepreneurs about the expected levels of risk for certain types of activities and specific regions;

- While developing programs and long-term plans for the development of small and medium enterprises, it is worth taking into account the existing levels of entrepreneurial risk, taking into consideration territorial and sectoral features.

The research findings have a certain theoretical and applied significance, in particular, when analyzing specific patterns of the economy business sector, justification of proposals for its development, as well as business risk management. The proposed methods and tools for assessing business risk can be applied in subsequent research of the business sector in Russia and its regions. The research findings can be used in educational activities of higher and secondary specialized educational institutions or by researchers, as well as employees of state and municipal authorities.

The government, regional and municipal authorities can use the research findings in launching and implementing projects and programs for the development of entrepreneurship. The present research is able to provide these authorities with information on the division of small and medium enterprises into profitable and non-profitable, as well as the estimated number of enterprises that can terminate their activities in each of the analyzed industries. In addition, the research results can be used in the current activities of financial and credit, insurance, leasing and other organizations related to ensuring the operation and support of small and medium enterprises.

Further research of entrepreneurial risk may be related to the assessment of its differentiation level in the Russian regions.

## References

Astebro, T.; Herz, H.; Nanda, R. & Weber, R. A. (2014). Seeking the roots of entrepreneurship: Insights from behavioral economics. *Journal of Economic Perspectives*, 28(3), 49-70.

Bakchaj, T.; Mesena, D.; Miko, D.; Sep, E.; Husti, E.; Gorfan, K. & Ozimk, N. (1979). *Economic risk and its methods of measurement*. Economics, Moscow.

Cantillon, R. (1997). *Essai sur la nature du commerce en général*. INEd.

Dana, L. P. (2002). Sustainable development in the Maldives: The Dhivehi context of entrepreneurship. *International Journal of Entrepreneurship and Innovation Management*, 2(6), 557-565.

Federal State Statistics Service. Institutional changes in economy, available at: [http://www.gks.ru/wps/wcm/connect/rosstat\\_main/rosstat/ru/statistics/enterprise/reform/](http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/enterprise/reform/) (Accessed January 16, 2019).

Gerosa, S. & Nasini, F. (2001). Project Financing and Risk Management: a new challenge for program management in the space industry of the third millennium. In *Fourth European Project Management Conference, PMI Europe*.

Granaturov, V. M. (2002). *Economic risk: nature, measurement methods, ways to reduce*. Delo and Service, Moscow.

Hall, R. E. & Woodward, S. E. (2010). The burden of the non-diversifiable risk of entrepreneurship. *American Economic Review*, 100(3), 1163-1194.

Heyne, P. T.; Boettke, P. J. & Prychitko, D. L. (1994). *The economic way of thinking*. New York: Macmillan.

Kabakov, V. S. (2012). Business risks: the nature, types, management capabilities. *Bulletin of Leningrad State University*, 3 (6), 81-86.

Kachalov, R. M. (2002). *Business risk management*. Nauka. Moscow.

Kibitkin, A. I.; Rapnickaia, N. M.; Smirnov, A. V.; Skotarenko, O. V.; Drozdinina, A. I.; Bespalova, S. V.; Breslavetz, I. N.; Motina, T. N.; Gaponenkova, N. B.; Tsareva, S. V. & D. S. Boroukhin (2003). *Financial analysis: risk, solvency, investments*. Publishing House Academy of Natural Sciences. Moscow.

Knight, F. H. (2012). *Risk, uncertainty and profit*. Courier Corporation.

Lapusta, M. G. (2008). *Entrepreneurship*. INFRA–M. Moscow.

Lechner, C. & Gudmundsson, S. V. (2014). Entrepreneurial orientation, firm strategy and small firm performance. *International Small Business Journal*, 32(1), 36-60.

Nehrebecka, N. (2018). Sectoral risk assessment with particular emphasis on export enterprises in Poland. *Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu*, 36(2), 677-700.

Pelikh, A. S.; Chumakov, A. A.; Barannikov, M. M.; Bokov, I. I.; Dreev, G. A.; Pronchenko, A. G. & Popeta G. G. (2004). *Entrepreneurial activity arrangement*. Information and personnel center MarT. Moscow.

Pinkovetskaia, I. S. (2018). *Regularities and trends in the development of entrepreneurship in Russia*. Ulyanovsk state university. Ulyanovsk.

*Risk Management-Principles and guidelines* (2009). International standard ISO 31000:2009.

Shapkin, A. S. (2003). *Economic and finance risk. Evaluation, management, investment portfolio*. Publish-trade corporation Dashkov i Ko. Moscow.

Sitkin, S. B. & Pablo, A. L. (1992). Reconceptualizing the determinants of risk behavior. *Academy of management review*, 17(1), 9-38.

Tang, Z.; Kreiser, P. M.; Marino, L. & Weaver, K. M. (2010). Exploring proactiveness as a moderator in the process of perceiving industrial munificence: a field study of SMEs in four countries. *Journal of Small Business Management*, 48 (2), 97–115.

Tapman, L. N. (2002). *Risks in the economy*. UNITI-DANA. Moscow.

Thapa, A. (2015). Determinants of microenterprise performance in Nepal. *Small Business Economics*, 45 (3), 581–594.

*The strategy for the development of small and medium enterprises in the Russian Federation for the period up to 2030.* (2016). Government Decree of June 2, 2016 No. 1083-p. Collected Legislation of the Russian Federation. 24. Article 3549.

Toma, S. & Alexa, I. (2012). Different Categories of Business Risk. *Annals of "Dunarea de Jos" University of Galati Fascicle I. Economics and Applied Informatics*, 2, 109-114.

Vesković, N. (2014). Aspects of entrepreneurial risk. *Finiz Singidunum University International Scientific Conference*. Belgrade. Serbia. 115-117.

Wu, D. D. (Ed.). (2010). *Modeling risk management in sustainable construction*. Springer Science & Business Media.

Zhao, G. H. (2005). Research on the source and control of the talent entrepreneurship. *Contemporary Economy and Management*, 12 (4), 109-116.