

## Approaches to the Assessment of Economic Security of Subjects Small and Medium Business in the Eurasian Economic Union

**Sergey Gennadyevich Simonov**

*Doctor of sociology, Professor*

**Makka Alaudinovna Khamatkhanova**

*Candidate of Sociology, Docent*

**Igor Vyacheslavovich Lysenko**

*Candidate of Economic Sciences, Docent Tyumen State Oil and Gas University,  
625000, Tyumen region, Tyumen, Volodarskogo, 38*

Doi:10.5901/mjss.2015.v6n4p509

### Abstract

*The article shows the place and role of small and medium farms in the business system of the EAEC, step by step description of the algorithm to assess their economic security. The main evaluation criteria and indicators of economic security of the business "second tier". The methodology for constructing the matrix damage small and medium businesses.*

**Keywords:** *business, business structure, economic security, financial stability, rentability.*

### 1. Introduction

Currently, the business post-Soviet space is represented by two levels. The upper level forms a big business, the scopes of which are primarily extractive industries of the EAEC (Teplokhov, 2005), and the boundaries are the national market and even the world commodity markets. The lower levels of economic agents form the "second tier" (Kadochnikova, 2006) - and small and medium businesses, which acts as the domain of domestic, regional market. Within the boundaries of the latter, as a space of reference medium and small businesses, there are three groups:

- Business structure, which, although different from big business, do the same structural function in the real economy of the region;
- Business structure directly serving large companies;
- Business structure, working with the population of the region in terms of final demand (Radaev, 2000).

The external environment in which we operate small and medium business, of course, is far from the state of perfect competition. However, monopolistic motives are weakly manifest themselves. Therefore, the regional market where vying considered economic entities "second tier" rather represents a market of imperfect competition.

Taking place in the market flow of capital from one sphere of activity to another less intense, more limited in scope and is influenced by a number of factors and conditions (the dynamics of the tax burden, the growth rate of inflation, the deterioration of the investment climate, lower incomes, and others.). All this leads the subjects of small and medium business to understand that the tactics of short-term profit has practically exhausted itself, has become a high-risk, and that comes to the fore the need to ensure economic security in general (Karashash, 2012; Abuova, 2007).

### 2. Techniques

However, in order to assess how risky or safe a particular business, requires research tools developed, methods based on a system of criteria and indicators to measure economic security (Prohoshev & Kornilov, 2009). Choosing the latter with respect to economic entities "second tier" due to the specific business structure and developed its activities in the field situation.

First of all, the economic security of small and medium businesses impossible without indicators of the number of

registered legal entities and dimension (Hobbs,1995). What now is a certain intensification of business activity shows stable trend growth in the number of business entities and the number of employed workers there.

Not less important for the economic security of small and medium businesses of their financial stability, which is a certain state of the accounts, guaranteeing permanent solvency industrial, and has as its base profitability (Ryan, Eckert and Ray,1990).

Among the criteria for assessing the economic security of business entities "second tier" should, in our view, include the technical condition and movement of fixed assets. At present, the depreciation of fixed assets is one of the main threats to internal business operations. Evaluation of technical condition and movements of fixed assets required for the planning and creation of a sinking fund business structure. This fund is formed in order to avoid the shortage of financial resources required for the renewal of fixed assets. The second direction is to assess the morale of fixed assets, i.e. their compliance with the requirements of both the current production process and innovation enterprise (Valyukov, 2003).

Finally, another criterion for evaluating the economic security of the subjects of small and medium management is the labor and pursued them in personnel policy. Sufficient necessary human resources and their rational use, high levels of labor productivity are also important to increase production and improve production efficiency. In particular, the availability of human resources, their skills and their effectiveness depends on the amount and timeliness of work, the efficiency of the equipment and, as a result, the volume of production, its cost, earnings, financial condition, business structure. The most important issues in this case are the qualifications of the personnel (recertification program); the staffing and dependence on the labor market (age composition, fluidity, the share of trainees, the extent to which a set volume of work); profitability staff (profit per employee, return on staff costs); labor productivity; effectiveness of the system of motivation and penalties (Siropolis & Nicolas, 1990).

Accurate identification of threats, the correct choice of criteria and indicators to measure them depend adequacy assessment of the economic security of small and medium business and a set of necessary measures for the prevention and countering the dangers of appropriate scale and nature of the threat (Simonov, Durtseva & Makhmudova, 2012).

Currently, there is a huge number of literatures, which contains the methods of analysis and evaluation of each of the chosen direction separately (Karacharovsky, 2008; Praliev, 2010). Most of the existing methods of analysis now business activities of the structure repeat or complement each other. It is obvious that they should be allocated indicators most accurately and fully characterizes the state of the relevant criteria and satisfy the condition of having a universal threshold. In this case, each of the criteria must match one indicator.

Among the many indicators used to assess the financial stability of small and medium businesses, the most common factors are: absolute liquidity, critical liquidity, current liquidity, autonomy, security of current assets own sources of working capital, availability of reserves and costs of their own sources of formation. The disadvantage of using these factors, however, is the complexity of their consolidation. Therefore, to assess the financial stability as a criterion of economic security for the integration of the results into a comprehensive index makes sense to use a methodology for in-depth assessment of financial stability, which provides for the submission of balance in aggregate form. On the basis of such a balance derived a general formula of stability of the financial condition of the business structure. It lies in the fact that the permanent capital (the sum of equity capital and reserves equal to its own liabilities and long-term payables) should not be less than the sum of non-current assets, inventories, costs and damages:

$$F+Z+Y \leq H^c + K^T$$

This dependence is determined by two main areas of evaluation of financial stability: the degree of coverage for inventory and costs, and sources of funds for the coverage of non-current assets funding sources. The most common indicator of financial stability is a surplus or shortage of sources of funds for the formation of reserves and costs, calculated as the difference between the value of the sources and the amount of reserves and costs. Depending on the degree of coverage, there are three indicators:

- Availability of own sources  $E^c = H^c - F - Y$
- Availability of own sources and long-term  $E^T = H^c - F - Y + K^T$
- The presence of common sources  $E^T = H^c - F - Y + K^T + K^i$ .

These three parameters correspond to the three indicators of coverage and costs:

- Excess or lack of own sources of formation of reserves and costs  $\pm E^c = E^c - Z$
- Excess or lack of own and long-term sources of formation of reserves and costs  $\pm E^T = E^T - Z$
- Excess or deficiency of the total amount of sources of formation of reserves and costs.  $\pm E^o = E^o - Z$

With these three parameters determined three-figure type financial situation on the ground, this can distinguish four types of financial stability:

$$S_E = \{S_1(\pm E^C), S_2(\pm E^T), S_3(\pm E^O)\}$$

$$S_i = \begin{cases} 1, \text{если } \pm E^{C(r,o)} > 0 \\ 0, \text{если } \pm E^{C(r,o)} \leq 0 \end{cases}$$

where:

- Absolute stability of  $S = (1,1,1)$ ;
- Normal resistance  $S = (0,1,1)$ ;
- Precarious financial state of  $S = (0,0,1)$ ;
- Crisis financial condition  $S = (0,0,0)$ .

All calculations are done in the table. Profitability indicators can be grouped into several groups:

- Indicators characterizing the return costs, production and investment projects;
- Profitability indicators of sales;
- Indicators describing the return on capital and its parts (Doncova & Nikiforova, 2007).

In Western Europe and the United States to assess the profitability is generally used, the following set of indicators: ROS - rentability sales (Return on Sales); ROA - return on assets (Return on Assets); ROIS - ROE (Return on Equity); RIC - return on invested capital (Return on Invested Capital) (Mukhtarova, Kenjebayeva & Tumbetova, 2003; Romanov, 2002). Using the above indicators of profitability, however, is complicated by the fact that their average level is highly dependent on the industry sector business structure. In this connection it is practically impossible to determine the threshold values for these indicators.

### 3. The Results

In order to evaluate the results of the financial and economic activity of the subject can also compare the dynamics of changes in indicators such as balance sheet profit, the volume of sales of products (works, services) and the value of assets. For optimal business structure is such their relationship, in which the growth rate of the balance sheet profit of not less than revenue growth, and revenue growth is not lower than the growth rate of currency balance. This means a relative decline in production and distribution costs, more efficient use of resources and the growth of the economic potential of the enterprise compared with previous periods. This relationship of these indicators is called "golden rule" of business. Therefore, it is advisable to use the relationship of these indicators in order to assess the economic security of the criterion profitability.

As class boundaries profitability can take the following options for the association between earnings growth, earnings and balance sheet total (Table. 1):

**Table 1.** Classes' profitability

class of profitability	Interrelation
«Gold»	$TRP \geq TRV \geq TRB \geq 1$ or $TRV \geq TRP \geq TRB \geq 1, ROS \geq 0$
Medium	$TRV \geq TRP \geq 1$ and $TRB \geq TRP \geq 1, ROS \geq 0$
satisfactory	$TRP < 1, ROS \geq 0$
critical	$TRP < 1, ROS < 0$

where,

- TRP - the growth rate of the balance sheet profit,
- TRV - revenue growth,
- TRB - the growth rate of the balance sheet total,
- ROS - Return on sales (return on sales).

Indicators of movement and use of fixed assets differ in stages of development systems, and the technical steps (way). At the stage of development reached the maximum value such factors as input, date, extension, capital productivity, and shift. At the stage of maturity begin to grow coefficients updates, depreciation, disposal, replacement, elimination, taking the maximum value at the stage of old age. In this regard, it is possible to choose one indicator, such as the coefficient of wear, which, though not give a complete picture of the state of fixed assets, however, will be an indicator of the economic security of the state enterprise under the criterion of fixed assets. As a threshold can take the following values of the coefficient with the appointment of classes corresponding to the stage of development of systems (Table. 2):

**Table 2.** Classes of state assets

State class	Degree of wear
recovery	from 0% to 25% - less wear
The Climb	from 25% to 50% - average wear
depression	from 50% to 75% - heavy wear
crisis	from 75% to 100%. - Critical wear

Sources of information to evaluate the economic security personnel are on the criterion plan for labor, timecard data and HR. The most important among the many indicators used to assess the workforce include:

- Turnover rate, arrival, disposal and consistency of personnel belonging to the group of indicators of security and movement of labor;
- Coefficient of average production output one working characterizing productivity;
- An indicator of the profitability of the staff, which is calculated to evaluate the efficiency of labor resources;
- Indicators of the complexity of production and net profit on currency wages

For these indicators appears, however, virtually impossible to establish universal threshold (normative) values, since the degree of automation, the need for personnel, personnel structure in terms of share of administrative and managerial staff and workers in various sectors are very different. The solution to this problem would be to use indicator of rationalization activity, calculated as the ratio of the number of proposed and implemented in the production process innovations by the average number of employees during the reporting period. The advantage of this indicator is to consolidate their information such as the qualifications of the personnel system performance motivation, personnel movement. In addition, it is not affected by the factor structure of the staff.

#### 4. Discussion

Establishment of criteria and selection of the set of indicators most accurately and fully characterize the state of the relevant criteria and satisfy the condition of having universal thresholds allow us to determine the significance of the selected criteria to the aggregate state of the economic security of the business (Simonov, 2011). Significance criteria can be expressed in assigning to each of them weighting coefficients. To determine the weighting coefficients are usually used method expert evaluations. In this case, the weights are made universal for all sectors and sub-sectors. This approach is not enough to correct for the following reasons:

- Expert method is subjective, which entails the possibility of different opinions on this issue;
- The importance of the criteria may vary depending on the industry, i.e., the universal application of the weighting factors entails inaccurate estimates (Khamatkhonova, 2013).

In this regard, it is necessary to create a system for calculating the weighting factors, which, firstly, would combine the expertise and analytical methods, and secondly, allowed them to calculate for each business structure separately and is one part of the assessment of its economic security. The solution to this problem it is possible by creating matrix damage («The risk management policy of "Locomotive"», 2009). Its nature and composition method are as follows.

As is known, the level of economic security of business activity depends on the realization of threats, leading to loss of resources and income, as well as additional costs. Exposure to business structures can be considered threats to previously established criteria: the dimension of the subjects of business, industry structure, financial stability, technical condition and movement of fixed assets, assessment of labor resources.

As a first initial condition, we assume that the existing threats in the event of their occurrence will bring the maximum possible negative consequences for the economic entity. It is obvious that the amount of damage to a particular business will depend on its level of economic security. In order to establish the degree of importance of the criteria of economic security as the second initial conditions will take full vulnerability to existing threats to business activities, i.e. level of economic security is assumed equal to zero. In accordance with the theory of risk management, the threat can be quantified by two parameters: the maximum size of the damage and the probability of its occurrence. Obviously, the maximum damage on various criteria will vary, and will also be different probability of threat. In this connection, to establish the degree of importance of the various criteria for specific business entities should assess the maximum damage possible on each criterion, and the probability of its occurrence.

For each of the criteria necessary to determine the maximum amount of damage upon the occurrence of a threat. In principle, it must be assumed determine the influence of the amount of damage upon the occurrence of a threat to the production result. However, it should take into account its impact on other items of costs and revenues (for example, the

income statement when the exchange rate risk or taxes when fiscal risks). The extent of damage shall take into account all direct (such as car repairs) and indirect (e.g., simple production) losses.

It is also necessary to determine the probability of the threat. This assessment can be made both by expert assessments and mathematical methods.

In determining the maximum possible amount of damage, it is important to pay special attention to the fact that the various threats may be unequal (in part or in whole) the impact on the subject of business that must be considered in their summation. It cannot be straightforward to put the amount of damage to all unit threats, since the occurrence of all possible threats to their influence can intersect or mutually exclusive. On the other hand, in the determination of the amount of damage you need to pay attention to the fact that one event can have consequences of various kinds of damage.

It should also be borne in mind that the threat may have different duration of exposure to the business. There are three main types of duration:

- A one-time, meaning that when an event occurs, defined as the risk of business entities will incur a one-time losses that will not be repeated in the future;
- Linear, in which the subject of business losses to continuously or intermittently in equal amounts; this type usually has more serious consequences than a lump sum;
- Progressive / retrogressive - these types are characterized by a loss it incurs for a certain period of time in a variety of sizes.

In the case of linear, progressive and regressing threats as the extent of damage should be the sum of all possible losses in the upcoming period of the threat.

Product of the maximum amount of damage each criterion on the corresponding probability of occurrence gives the degree of significance criterion. In the case of the existence of different options to assess the extent of damage and the probability of the threat should be considered a combination of these indicators, which can lead to the worst consequences for the business structure, i.e., the product of these indicators should be the maximum.

The weighting factor is determined on the basis of the obtained degree of importance of the criteria value in the following manner. Assuming that the sum of all the weighting factors is 10. Then, weighting criteria may be calculated using the following formula:

$$K_i = \frac{C_i}{\sum C_i} * 10$$

where C - a weighting factor.

In case of difficulty in determining the extent of damage and the probability for each criterion may be used a method of construction of the matrix damage.

Damages for each category on the basis of expert judgment can be assigned to one of the following four classes of damage: small, medium, strong, critical. Each class is assigned a range of damage extent of the damage, calculated with respect to equity business entity or planned balance results for this reporting period. More reasonable is, in our opinion, the use as a base size of equity, since the value of an indicator of profitability is highly dependent on sectors of the economy and therefore cannot be selected as a universal parameter (Table. 3):

**Table 3.** Classes damage

Class of damage	Extent of Damage
Slight	The amount of damage is less than 10% of equity
Average	The extent of damage ranges from 10% to 20% of equity
Strong	Extent of the damage is more than 20% and less than 50% of equity
Threatening	The amount of damage exceeds 50% of equity

Further damage is positioned in this class, i.e., or shifted to one of the boundaries of the class or set in the middle. Depending on the final position on the damage range is assigned an appropriate size, expressed in monetary units.

A similar scheme can be applied to determine the probability of the threat. The first step in determining the likelihood of a threat to a separate category is attributing it to one of four classes: lowest, low, medium, high. Each class is assigned a probability interval with values (Table. 4).

Further, the probability is positioned in this class, i.e., or shifted to one of the boundaries of the class or set in the middle. Depending on the final position on the probability interval corresponding to the value assigned to it as a percentage. To simplify the procedure for determining the amount of damage and the likelihood of the threat may be

formulated matrix damage.

**Table 4.** Classes' probability of threats

Class of Probability of Occurrence	The Scale of the Probability of Occurrence
Poor	From 0% to 10%
Moderate	From 10% to 20%
Average	From 20% to 50%
High	From 50% to 100%

Matrix damage is to achieve clarity, and is a system of coordinates whose horizontal axis describes the likelihood of a potential class of injury (%) and the ordinate axis - the size of the expected damage (in monetary units) each risk positions. Four classes of the amount of damage and the likelihood of four classes deposited respectively on the abscissa and the ordinate are combined so that one obtains a matrix 4x4, consisting of a total of 16 field threat. A color field's threat in the matrix (green / yellow / red) provides the first indication of the degree of optical significance in the general category of economic security of the subject business. In matrix entered threats for each of the selected categories in accordance with their parameters (extent of damage and probability of occurrence). During the construction of the matrix can be determined that one of the parameters to be adjusted criterion. Therefore, the specification of the parameters of the criteria is also included in the task of building the matrix.

On the basis of selected indicators, set thresholds and weighting factors of each category is compiled in Table 5.

**Table 5.**

Indicators Categories	Weighting Coefficients	Number of points			
		From 8 to 10	From 5 to 8	From 2 to 5	From 0 to 2
Financial stability	CFI	Abs.	Norm.	Unstable	Cris.
Profitability	CR	High	Medium	Satisfactory	Critical
Fixed assets	COS	Quick.	Under.	Depr	Cris.
Staff	CP	High	Average	Satisfactory	Cris.
In total	10				

In accordance with the actual level of performance set number of points for each of the criteria which must be multiplied by a weighting factor corresponding to the category, and then summarizes all categories. Thus, using these parameters is determined by the total amount of points. The calculation can be expressed as the following formula:  $Z = \sum Z_i \cdot K_i$

where  $Z_i$  is the number of points i-th criterion in accordance with the actual values,

$K_i$  weighting coefficient of i-th criterion.

Depending on the total score determines which level of economic security is the subject of business (tab. 6).

**Table 6.** Levels of economic security

Level	Points	Comment
Supreme	80-100	Business structure with a high level of economic security, resilience to crises.
Average	50-79	Business structure with an average level of economic security; effects of external threats are significant, but are removable.
Low	20-49	Business structure with a low level of economic security. Effects of the crisis can be disastrous for existence.
Critical	0-19	Business structure with a critical level of economic security, virtually untenable in the present moment.

Assessment of the state of economic security business entity may be supplemented if necessary by commenting. Under the latter is useful to consider the dynamics of the state of the economic security of the business structure.

## 5. Conclusion

Detailed methodology for assessing the procedural part of economic security depends on the goals, as well as various factors of information, time, methodological, and technical support personnel (Hataev, 2003). The logic of the analytical

work suggests the possibility of the organization of the process in the form of a two-module structure:

- Cumulative score of economic security;
- A detailed evaluation of the necessary areas using groups of indicators.

## References

- Teploukhov AA Management of social and economic security of the coal industry. - Omsk Omsk State University. - 2005.- 158 p.
- Kadochnikova IY Medium business: essence, features of formation and development in the modern Russian society. - Tyumen: Vector Book. - 2006. - 166 p.
- Radaev, V. Informalization of Rules in Russian Economy. Paper at the Annual Conference of International Society for New Institutional Economics: Tubinger, Germany. 22-24 September. 2000.
- Karashash NK Risk strategy of small and medium business: conditions, priorities, scenarios // Herald of Omsk University. - 2012. - №3. - P.74-79.
- Abuova A.N. The concept of economic security. // Finance Kazahstana.- 2007. - № 5. - p.38-41
- Prohoshev A. Kornilov M. On the problem of criteria and assessments of economic security // Society and economic.- 2009.- N 4-5.- s.225- 239.
- Bud Business: Professional crime in Modern Britain. By Duck Hobbs. Oxford,1995. P.17-57.
- Ryan J.D., Lee A. Eckert, and Robert J. Ray//Small Business – An Entrepreneur Plan. Harcourt Brace Jovanovich, Publishers, Orlando, FL. – 1990, chap.10.
- Valyukov SV Assessing the economic security entity. Problems of development of systems of effective service: a collection of articles of teachers, graduate students, job seekers. - M.: MSU. - 2003. - P.33-41.
- Siropolis, Nicolas C.//Small Business Vanagement, 4 ed., Houghton Mifflin Company, - Boston, 1990, chaps. 4 and 5.
- SG Simonov, Durtseva AG, MM Makhmudova Security management in business // Tutorial. - Tyumen: TSOGU. - 2012. - 152 p.
- Karacharovsky B. Organizational and managerial aspects of economic security // Society and Economy. - 2008. - №9. - p.88-101.
- Praliev J.S. Threats of economic security in a global instability // Al-Pari. - 2010. - №1. - p.19-23.
- Doncova LF, Nikiforova NA Analysis of financial statements. - M.: Case and service. - 2007. - 336 p.
- Economic security in the context of globalization: Textbook / Ed. KS Mukhtarova, AR Kenjebayeva, AS Tumbetova. - Almaty: Lawyer. - 2003. - 150.p.
- Romanov Z.I. Economic security in modern conditions // Latin Amerika.- 2002.- N 11. - p. 4-18
- S.G.Simonov Assessing the economic security of enterprise structures: theoretical and methodological aspect // Herald of Omsk University. - 2011. - №1. – P.177-182.
- Khamatkhanova MA Building economic security of small and medium enterprises in the countries of the Customs Union // Bulletin of Oryol State University. - 2013. - №4 (33). - p.146-149.
- The risk management policy of "Locomotive". - Astana, 2009. - 239 p.
- Hataev A. Ensuring economic security // Presidential kontrol.-2003.- N 4.- p.29-36.