

UDC 338.2(476)+316.42(476)

JEL Classification: H10, J58, P35, Z13

**METHODOLOGICAL SOLUTIONS
FOR LEVEL MEASUREMENTS OF SOCIO-ECONOMIC SECURITY
OF THE INDUSTRIAL SECTOR**

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**МЕТОДИЧЕСКИЕ РЕШЕНИЯ
ПО ПРОВЕДЕНИЮ УРОВНЕВЫХ ИЗМЕРЕНИЙ СОЦИАЛЬНО-
ЭКОНОМИЧЕСКОЙ БЕЗОПАСНОСТИ ПРОМЫШЛЕННОГО СЕКТОРА**

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Abstract. The basis of the description of the values of socio-economic security of the production system is based on the principle of extreme dispersion of industrial States along the axis of maximum security — the least security, taking into account the configuration of the composition and the degree of satisfaction of the society's needs, which determine the goals of ensuring socio-economic security. Groups of requests satisfied at various levels are formed on the systematization of requests proposed by Belarusian scientists. The degree of socio-economic security of the industrial sector, determined by the probability to meet all kinds of demands of society, is dependent on the emerging structure of production capacity. The acquired data allowed to form appropriate methodological solutions for level measurements of socio-economic security of the industrial sector.

Аннотация. В базу описания значений социально-экономической безопасности производственной системы положен принцип экстремального рассредотачивания состояний промышленности по оси «максимальная защищенность — наименьшая защищенность» с учетом конфигурации состава и степени удовлетворения запросов общества, которые определяют цели обеспечения социально-экономической безопасности. Группы удовлетворяемых на всевозможных уровнях запросов сформированы по систематизации запросов, предложенной белорусскими учеными. Степень социально-экономической безопасности промышленного сектора, определяемый вероятностью удовлетворять всевозможные виды запросов общества, находится в зависимости от складывающейся структуры производственного потенциала. Приобретенные данные позволили сформировать надлежащие методические решения по проведению уровневых измерений социально-экономической безопасности промышленного сектора.

Keywords: socio-economic security, government, society, enterprise, employee, threat, security, interests, economics, analysis, system.

Ключевые слова: социально-экономическая защищенность, государство, общество, предприятие, работник, угроза, защищенность, интересы, экономика, анализ, система.

The description of level data of social and economic safety for carrying out the differentiated measurements and their assessment is given in Table.

Table.

LEVEL CHARACTERISTICS OF SOCIO-ECONOMIC SECURITY BASED
 ON THE DISTRIBUTION OF EXTREME CONDITIONS OF THE INDUSTRIAL SECTOR

<i>Security level</i>	<i>Group of satisfied needs in relation to the scale and structure of production</i>	<i>The criterion of 'satisfaction of needs</i>	<i>The main objective of ensuring the socio-economic security of the industrial sector</i>
Maximum (maximum safety)	Absolute (perspective)	Maximum	Sustainable development
Minimum (minimum security)	To be satisfied (effective demand)	Maximum	Stable state
Emergency (emergency security)	Actually satisfied	Minimum	The implementation of simple reproduction
Rational (rational safety)	Actual need	Maximum Minimum	Sustainable development

Source: author's development on data [1-5]

The basis of the description of the values of socio-economic security of the production system is based on the principle of extreme dispersion of industrial States along the axis "maximum security-the least security", taking into account the configuration of the composition and the degree of satisfaction of society's requests, which determine the objectives of ensuring socio-economic security. Groups meet at various levels of queries generated for the systematization of the queries proposed by the Belarusian scientists. The degree of socio-economic security of the industrial sector, determined by the probability to meet all kinds of demands of society, is dependent on the emerging structure of production capacity.

The acquired data allowed to form appropriate methodological solutions for the level measurement of socio-economic security of the industrial sector.

First of all, the basis of level measurements is formed by requests of inter-country comparisons of the value of socio-economic security. Its essence is that statistically fixed operating characteristics of industrial sector work as indicators for determination of integral value of social and economic security of the States at which the relationship of financial and economic partnership with Republic of Belarus (for example, the Russian Federation, Kazakhstan, etc.) was created. The unity of information base allows to guarantee methodical uniformity for level measurements with the States having financial and economic dependence. For example, in the practice of the Republic of Belarus and the Russian Federation, a methodological approach is used to assess the value of security on the basis of a list of indicators of the industrial sector, for which "thresholds" are set. Until then, while in one of the compared States he will save, instrumentation conducting the level measurements have to be considered the proper basis for cross-country comparisons. But at the same time, this approach, acceptable for the "crisis" phase in the repetitive industrial dynamics, does not guarantee the reliability of the assessment in the "origin" and "rise" phases (with the four-phase structure of the industrial cycle). As a consequence, the principle of "mobility" within the boundaries of the non-hazardous spectrum will need to be taken into account in order to monitor the effectiveness of the socio-economic security and management of the industrial sector.

In-2, non-hazardous range of functioning of the industrial sector is specified on the basis of data on changes in the values of the characteristics of the sectors of the economy, which determine

the lower and upper limits of socio-economic security. For the typology of the sectors of the economy the resource approach is applied, in coordination with which the segments that differ in the share of consumption of production resources and the contribution to the improvement of properties or the creation of innovative resources have different levels of additivity, i.e. conditional independence of development from the resource base. The essence is that the processes of formation or formation of resources ("manufacturability" and "resource intensity") are differentiated by symptoms:

- features of the structure of the cost of production (material-intensive, labor-intensive, capital-intensive industries), which determine the "resource intensity" of the industry;
- exceeding the volume of costs for scientific research in the price of products more than 3 % (high-tech segment and segment without significant research costs) and innovation of the product (innovative segment, producing innovative products, and classic industries), which displays the moment of "manufacturability".

Segments with a relatively low degree of additivity are ready to have the least impact on the "mobility" of the socio-economic security value, which makes it possible to attribute them to its lower boundary. In accordance with this, the segments with a significant degree of additivity determine the upper limit. The prerequisites for the formation of a number of States demonstrate that the change in the characteristics of sectors of the economy with different additivity affects the duration of the period during which there are important changes in the level of socio-economic security. For example, the gradual transition to large levels: from "emergency security" to small and after that - rational. This phenomenon is monitored in details industrial sector Japan, Germany, France phase 1947-2005. For these States, 1947-1955, he was typical of the degree of "safety emergency". At this stage, the dominant segments for the production of food products, metallurgy, coal, energy, i.e. significant. An important measure that contributed to increasing the importance of socio-economic security was the strict limitation of imports and the accumulation of financial revenues from exports in a single account.

In 60-70-ies of XX century ("Renaissance") the values of industrial policy of Japan, Germany, France were changed. Its conceptual framework consists of provisions aimed at helping science-intensive and export-oriented industries. At the same time, import restrictions were maintained, which ensured a dominant role in the industrial development of material-intensive, capital-intensive and labor-intensive industries. For example, in Germany, the result of this policy was to increase the weight of the state in global industrial production from 6,9 % in 1950. up to 10,4% in 1970, in global merchandise exports from 4,7% to 7,9%. [2]. This provided an opportunity to support the leading segments of the industrial sector and to achieve greater importance of the socio-economic security of Germany.

On the basis of the conversion of economic entities of the military-industrial complex in Japan at this stage were formed innovative production systems of electrical appliances, synthetic fibers and resins, electronics, curtailed capital-intensive production (closed the bulk of coal mines, changed the fuel basis of energy). The list of industry values included segments, which provided a significant rate of technological progress and productivity growth. They reflected the replacement of the purpose of industrial policy-the creation of competitive companies in the global market and the development of export potential while maintaining and optimal consumption of available natural resources in the country. As a result of its implementation, Japan's volume in global industrial production reached 5,9 % (against 3% in 1960); in global merchandise exports — 4,9 % (in 1960 — 2,7%). At the moment, according to experts, the volume of Japan in global industrial production amounted to 7,8% (for comparison: the volume of Germany — 7,8 %, France — 4,6%). As a result, clusters of knowledge-intensive and export-oriented sectors of the economy were formed, which

provided an increase in security and a balance of optimal socio-economic security. But, at the same time, have had a concrete help in the development of labor-intensive and sigmente, representing an opportunity to reduce unemployment and perkasa in the labour market [6; 7].

The evaluation of the experience of individual countries shows that the lower limit of socio-economic security correlates with the symptoms of "emergency" and "minimum" security. These values are supported by resource-intensive segments (material-intensive, Fund-intensive, labor-intensive). The reserve of increase of security is formed in the presence and increase in the volume of export-oriented segments in the structure of the industrial sector. These segments facilitate the flow of funds into the national economy and increase the financial and economic component of productive capacity. The sufficiency and availability of sources of funds in the country's economy leads to the development of capital-intensive sectors of the economy, which are aimed mostly at a group of requests to be met. Based on this, capital-intensive segments, together with "resource-intensive", determine the lower limit of socio-economic security of the industrial sector. But, unlike the "resource-intensive" sectors of the economy, they form a resource to increase socio-economic security, due to the fact that they contribute to the rise of the production system (increase the price of property).

In-3, when carrying out level measurements, it is important to take into account the time of replacement of the stage of competitive recovery of the state, which will clarify the prerequisites for saving or modifying the formed limits of socio-economic security. This should take into account the features of the associated (current and subsequent) stages of competitive growth of the state and their impact on the stability of the limits of socio-economic security. For example, the preparation and formation of capital-intensive sectors of the economy is considered as a result of the formation of financial and economic potential at a certain stage. This stage is considered to be more (progressive) than the resource stage. Hence, the increase in the volume of capital-intensive sectors of the economy has the ability to be a sign of the upper limit of socio-economic security of the industrial sector in relation to the financial and economic stage of the competitive rise of the state. As a result, it makes sense to consider capital-intensive segments when measuring both the lower and upper boundaries of the socio-economic security of the industrial sector.

The upper limit of socio-economic security, defined by innovative capacity and evolving technological patterns, depends on the emergence of knowledge-intensive and innovative sectors of the economy in the industrial sector. The innovative stage, replacing the financial and economic one, leads to the sustainable development of the industrial sector. Accordingly, it is generally supported by accumulated financial, economic and innovative capacity. The sufficiency and availability of innovative and financial and economic sources have led to an increase in the number of innovative sectors of the economy aimed at creating an innovative product and knowledge-intensive sectors of the economy with high costs for research and development. So, this can serve as proof that innovative, knowledge-intensive and capital-intensive segments determine the upper limit of socio-economic security of the industrial sector. The reserve of increasing socio-economic security in the presented situation is set by the relationship of technological structures of different degrees of progressiveness in the financial and economic system of the state, as well as the expansion of the group of export-oriented sectors of the economy. The movement of the production system, causing a change in the value of its socio-economic security at the stage of industrial recovery, is guaranteed by the presence of a corresponding reserve. As the study demonstrated, the stock appears if the financial, economic and innovative potential accumulates more dynamically than is modified in the form of production resources (used for production purposes in the current period). In other words, specific investment and innovation redundancy is important for the security reserve, which, being involved in the production process, leads to a change in the properties of

industrial growth and supports it as a competitive advantage. It is taken into account that this movement is performed within the boundaries of the lower and upper limits of protection or non-hazardous spectrum [8; 9].

B-4, the need for certainty in the interpretation of the results of the forecast of socio-economic security of the industrial sector is not limited to the statement of the level properties. It implies that a vector can also be prescribed, in which the subsequent change of this property will be realized. The vector has the meaning of form-based dynamic assessment: "the narrowing of the security" — "security extension". The initial condition for dynamic assessments is the level of financial and economic dependence of the sectors of the economy, which are ready to make the greatest contribution to the preparation and formation of productive capacity. As the study demonstrated, the high level of financial and economic dependence refers to a number of main points that contribute to the reduction of socio-economic security. As a result, in addition to the typology of economic sectors that determine the boundaries of socio-economic security, it is proposed to mark the segments by the symptom of the degree of financial and economic dependence:

- with a low degree of financial dependence and economically independent;
- with a significant degree of financial dependence, including import-dependent.

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*Работа поступила
в редакцию 16.09.2018 г.*

*Принята к публикации
20.09.2018 г.*

Cite as (APA):

Shvaiba, D., (2018). Methodological solutions for level measurements of socio-economic security of the industrial sector. *Bulletin of Science and Practice*, 4(10), 372-377.

Ссылка для цитирования:

Shvaiba D. Methodological solutions for level measurements of socio-economic security of the industrial sector // Бюллетень науки и практики. 2018. Т. 4. №10. С. 372-377. Режим доступа: <http://www.bulletennauki.com/shvaiba-1> (дата обращения 15.10.2018).