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# **A METHOD OF ESTIMATION OF RESOURCE COMPONENT OF THE ECONOMIC SECURITY SYSTEM**

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**Summary:** The article generalized the essence of resource component of the economic security of an enterprise. This was a certain system requirement of the estimation of the resources of an enterprise. We investigated the modern methods of estimation of resource component of economic security and outlined the domestic requirements for their application. The most optimal methods of estimation of the resource component system of economic security are proposed.

**Keywords:** resources of enterprise, economic security, personnel and its intellectual activity, estimation of resource component, quantitative methods of estimation.

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## **1. Introduction**

The issue of the application of effective methods of the estimation of the resources of business structures on the whole, and as a component of their economic security in particular, occupies an important place among the modern economic problems of Ukrainian enterprises. Permanent negative tendencies in the activity of business subjects induce them to search for alternative methods of management on the basis of the introduction of the newest systems of planning, analysis and estimation. It should be noted that the problem of the development of a method of estimation in the system of economic security of micro-economics structures is a topic for scientific research of modern problems of the development of enterprises and the area of increasing attention of domestic and foreign research workers. However, despite considerable scientific research available, still there is a number of open questions, in particular in relation to the grounds of the constituents of economic security, and also the systematization and optimization of the method of their estimation, etc.

Thus, the lack of a unique scientific approach in terms of the essence of the components of economic security of enterprises, and also the methods of their estimation, need further research and justification for practical application. The current

requirement of domestic enterprises for the introduction of an operating system of economic security underlines the pertinence of the mentioned problems, and the development of effective methods of estimation of the resource component stipulates a research purpose. The purpose of this research is to generalize the possibilities of the use of quantitative methods of assessment of the resource constituent of the economic security of Ukrainian enterprises. Quantitative methods will be foremost economic methods that are especially attractive due to their possibilities for interpretation, and at the same time to their simplicity and availability of their practical applications.

## **2. Essence of resource component of economic security of enterprises**

The analysis of scientific literature shows that now it lacks a uniform theoretical ground of resource constituent of economic security of enterprises, which explains the complications of the mentioned category. It is noteworthy that most research workers distribute a resource component in terms of the protection of property, finances, personnel and their intelligence, machinery and equipment, and the like. In our view, the allocation of resources into separate components is reasonable if it is selected as an object of research in the system of economic security. However, in the context of researching the economic security of an enterprise as a whole, developments of the system of estimation of their association in one resource constituent are expedient and will provide for the existence of co-operation between them, to co-ordination in the system of measures of e.g. defense, and others. The classification of these resources is important in the estimation of resource constituent of economic security. This classification is excellent from the point of different economic aspects. In the system of an enterprise economy resources are allocated to facilities of labour (material and non-material) and subjects of labour. In economic and financial analysis, resources are classified as financial, material, non-material, labour. In the system of accounting and estimation, the resources of an enterprise are summarized: assets (circulating and irreversible), which the enterprises contain, which include financial and non-material resources, and also provision and obligation of payments for personnel, actual charges on the payment for labour. In our opinion, none of the existing classifications fully satisfies the needs of the system of economic security. Taking into account the modern necessities of a control system in the business structures of Ukraine for the evaluation of economic security and its components, it is expedient to take as a basis the accounting classification of resources. Thus, the accounting system, both financial and managerial, provides information for all types of analysis and control. The problem of accounting in the context of the system of estimation of the resource constituent of economic security, consists in the absence of such type of resources (asset) as human resources (personnel of enterprise). In our opinion, the operating of enterprises in modern global conditions call for recognizing personnel as a resource (asset) in the accounting system. Thus both the physical and intellectual output of labour is used in the financial and business activity of an enterprise, is planned in the longer term, carries over the cost

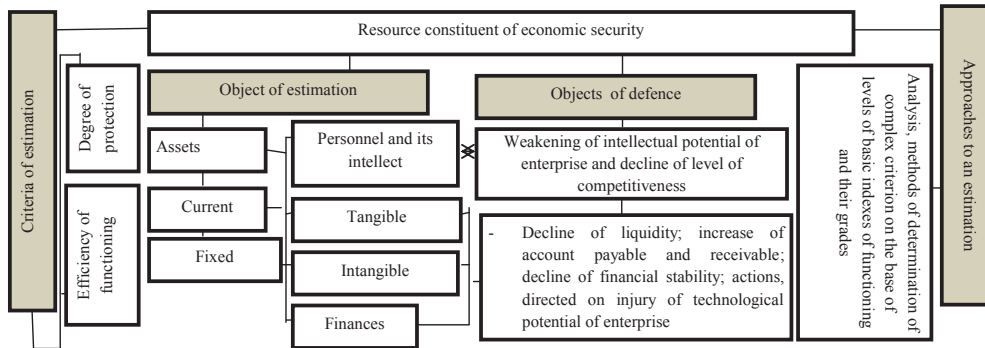
on the value of products and services, needs permanent modernization (up-skilling), and is exposed to moral and physical wearing-out. It is possible to accrue charges on salary, bonus and training as a cost of “human resource asset and its intellect” and fund it from the retained earnings of enterprises. The introduction of “human resource asset and its intellect” in the accounting system will allow to plan and forecast charges on salary, bonus and training and the like for future periods. Similar to reserve capital, charges on “human resource asset and its intellect” can be recorded in separate accounts. In our opinion, the application of an accounting approach in the classification of resources will allow the systematization of the collection of information on the resource component of the economic security of enterprises.

### **3. Objects and criteria of estimation of resource component of economic security**

Research shows that a resource component of economic security is of major importance for the business, which is attracting more and more attention in the context of providing for competitiveness of commodities and services, and also the competitiveness of personnel. The question of the protection of the resources and providing them with a competitive advantage for modern enterprises is relatively not new. However, a market environment in which business structures function evolves constantly, the newest types of mutual settlements develop, there are new types of commodities and services, and also new requirements are put to the producers.

An evaluation of economic security of companies in general and its particular resource component is a complicated and laborious step as it involves an assessment and synthesis of both the entity and its system of protection. In our view, the proposed domestic approach does not provide a clear understanding of the level of economic security that exists in the company, or assesses mainly the effective functioning of the entity or, on the contrary, assesses mainly the level of risk hazards. As noted in previous studies, the most, in our opinion, appropriate approach to resource assessment methodology component of economic security is proposed in academic views, the proponents of which are T. Kuzenko and S.M. Shkarlet. These authors consider to some extent, operation and protection of its component in evaluation. However, this approach is not perfect and needs further improvement on the generalization and systematization of techniques, taking into account today’s economic conditions. Let us explore the existing methodologies for evaluating the resource component of economic security (Figure 1).

As seen in Figure 1, we have summarized the evaluation criteria, objects of evaluation and protection, as well as approach to assessment. It should be noted that the methods that take into account all the criteria and evaluation parameters are difficult to change, synthesize and process. Straightforward and visual methods of evaluation of resource component of economic security do not take into account all the parameters of protection. We believe that combining performance and clarity of evaluation is an essential requirement to summarize its methodology.



**Fig. 1.** Objects and criteria of estimation of resource constituent of economic security

Source: own elaboration.

#### 4. Generalization of the method of estimation of resource constituent of the economic security of enterprises

All methods of assessing the resource component of economic security in enterprises are largely built on the methods of financial and economic analysis, and practically do not take into account the protection of enterprise resources. Let us generalize valuation methods used by modern domestic enterprises (Figure 2).

As seen in Figure 2, for the compilation methodology for assessing the resource component of economic security we consider the most commonly used (traditional) methods and techniques not yet in practical everyday use (non-traditional). In summarizing the assessment of human resources, we present methods used in the system of HR appraisal including intellectual potential. It should be noted that the choice of methodology for assessing this type of resource depends on the structure of the enterprise, the purpose of assessing it, etc. Almost all of the reviewed economic methods focus on the efficiency of the personnel. However, as part of economic security, the assessment “of the human capital and its intelligence” should also take into account the degree of protection and preservation of its competitive advantage in terms of destabilization activities under the influence of internal and external factors. It should be noted that the methods used to estimate human capital and its intelligence in the company should be simple, clear and effective.

Tangible resources, which are complex real disposable items for processing during production, play an important role in the plan for production, cost reduction, growth of revenue and profitability, etc. The basis for the analysis and evaluation of material resources is a complete and timely provision of company raw materials in the required mix and quality. Traditionally businesses use methods of economic analysis, which involves the calculation of indicators. In the application of economic-mathematical methods in the evaluation system of material resources, economic problems are





**Fig. 2.** Summary of methodology for assessing the resource component of economic security

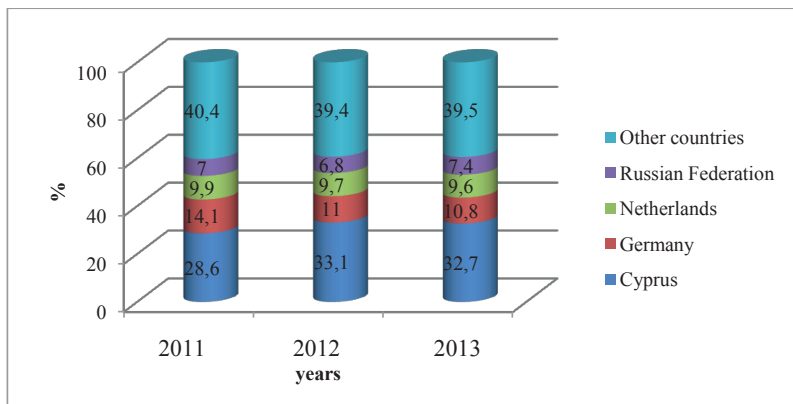
Source: own elaboration.

solved. These tasks include planning the optimization of material resources, and the statistical processing of information on their consumption. It should be noted that the degree of protection of these resources is not regarded by the economic analysis and mathematical models.

Intangible resources is the only type of resource that modern systems for companies is to be investigated in terms of not only the efficiency of use, but also the degree of protection and security. Today Ukraine has made the first steps to protect the information and personal data. Thus, from June 1, 2010, the state established

strict requirements for the handling, use, storage and protection of personal data of individuals (employees) and contractors. However, the already mentioned regulatory requirements are another mandatory legislative innovation to business entities that are not seen or understood as a degree of information security, and have not received effective practical application.

It can be noted that at present there is no single universally accepted evaluation system of protection of information resources. In traditional methods of evaluation, the system of economic analysis and accounting in evaluating the basis refers to the monetary valuation of the resources. In non-traditional methods of assessment, this is carried out in the areas of protection of basic parameters (model CIA). The evaluation of these parameters is possible with a variety of special software, methods and approach that are complex and cumbersome, like the information system itself.



**Fig. 3.** Largest countries – investors in the capital stock of Ukrainian enterprises

Source: the official statistics of Ukraine.

Financial resources determine the timeliness and completeness of the financial security of the economic activities and enterprise development, financial obligations to the state and other entities. The system of traditional assessment methods, typically investigates the optimal demand for financial resources, the structure, sources and the reasonable directions of use. European integration processes in Ukraine necessitate a reorientation of domestic manufacturing enterprises to manufacture cheap and competitive products that require significant capital investment. It should be noted that among the domestic enterprises in recent years, the share of equity and investments in it has been on the decline. As another negative factor we can consider the decrease in foreign investment (Figure 3).

As seen in Figure 3, the largest country equity investors are Cyprus and Germany, however, the volume of investment from these countries for the period has been decreasing. Also Ukraine has recently seen a decline in capital investment from the state budget, which indicates a lack of government support for business (Table 1).

**Table 1.** Structure of capital investments by source of financing in Ukraine (%)

Sources of funding	Years		
	2012	2012	2013
State budget	7,5	6,3	2,5
Local budgets	3,4	3,2	2,8
Own funds	59,2	59,2	63,4
Other funds	29,9	31,3	51,3

Source: the official statistics of Ukraine.

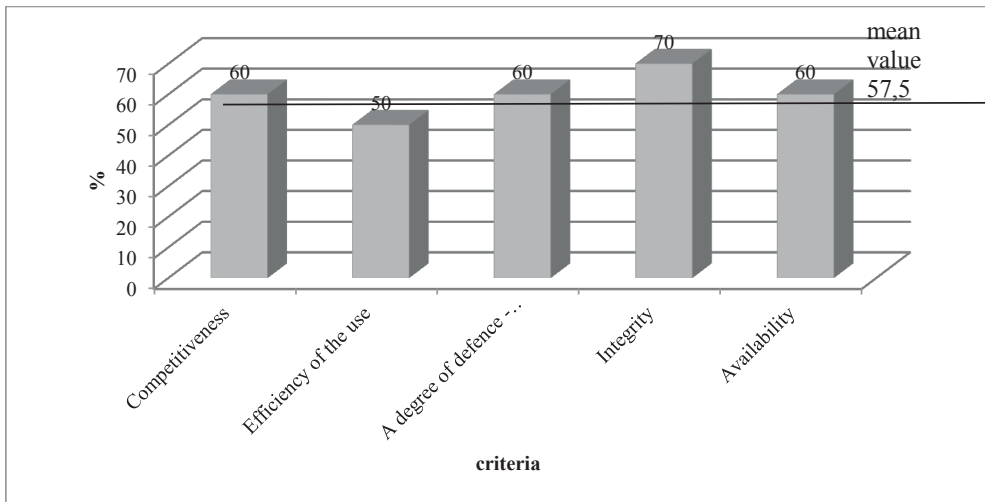
New requirements for the financial resources of domestic enterprises determine the use of new and advanced methods of assessment. Recently, in the practice of Ukrainian enterprises there emerged several methods aimed at establishing the real value and the efficiency of the capital deployment of the company. This rating puts together combined evaluation methods that are based both on the calculation of the required indicators, and on combining quantitative and qualitative parameters. New (non-traditional) methods of evaluating financial resources depend on the object and purpose of the evaluation, and support a comprehensive analysis of the effect of various factors on business performance.

In our opinion, the evaluation of components of economic security should be united with a common performance appraisal system in the enterprise. This merger will ensure the minimization of the collection, processing and use of information, as well as the costs associated with it. Also, in our opinion, given the current development of companies, assessing the resource component will be reinforced by introducing appropriate indicators of competitiveness by assessing the strengths of the whole enterprise, and its human resources and goods (works, services) in particular.

## **5. Improving the efficiency of resource assessment component of economic security of the company using quantitative methods**

When evaluating the effectiveness of the use, competitiveness and protection of the resource component of economic security, we believe that it is advisable to base it on clearly defined parameters. These parameters generally include: competitiveness, efficiency, security – confidentiality; integrity; reliability. Evaluation of these parameters is a difficult and laborious process that can be built on a system of calculating a number of indicators. However, the overall rating of the given parameters that should be done by the department of economic security, in our opinion, should be accessible, understandable and clear. Quantitative evaluation methods that have been introduced and have gained widespread use in the activities of foreign companies fully comply with the specified parameters. Analysts in the leading companies in the world focused not on theory, but on the development of reliable and

simple methods of assessment that would allow the maximum degree of clarity in one table to present the status of all cases and trends in the firm. Using this approach has led to the emergence of quantitative assessment methods that are using the graphical image of a certain scale and rate as a measure of enterprise performance and efficiency and protection of the individual types of resources. In domestic practice, due to the methods that are not new, however, they do not have widespread applications and are mainly used in evaluating the performance of personnel. It should be noted that quantitative methods are useful in the formation of information available for use, providing a visual representation that facilitates their perception.



**Fig. 4.** Evaluation of the resource component of economic security of the firm by given parameters

Source: own elaboration [www.ukrstat.gov.ua].

As seen in Figure 4, given the specificity of quantitative methods, we believe that their use is optimal in assessing such important parameters of the system of resource component of economic security, as competitiveness (assessment of competitive advantages of resources); efficiency of use (the ratio of resources to results of activities); security, confidentiality (evaluation of the protection of resources and information, which is information that cannot be obtained outside the user); integrity (a combination of assessing the economic security of the overall system analysis and control of the company); reliability (property evaluation that determines the degree of objective, accurate reflection of events and facts that occurred, simple and visualized of the system of resources evaluation).

## 6. Conclusions

Generalization of the methodology for assessing the resource component of economic security confirms the variety of approach, based on the definition of the concept

of “economic security”. In our view, the most appropriate types of approach are those that take into account not only the efficiency of utilization but also the degree of protection. The implementation of competitiveness indicators based on the assessment of the competitive advantages of the company as a whole, and its human resources and goods (works, services) will enable us to assess the use of resources businesses both in terms of market conditions and their efficiency. Today the index of competitiveness determines not only the positions on the market but also the degree of efficiency and protection. The use of quantitative methods in the evaluation of the components of economic security, in particular the resource component, will allow to simplify and visualize this process, and combine it with the general system of the business analysis of the firm. The quantitative methods of estimation are not only simple and accessible in use but also effective in the system of economic security.

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## OCENA SKŁADNIKA ZASOBOWEGO SYSTEMU BEZPIECZEŃSTWA EKONOMICZNEGO PRZEDSIĘBIORSTWA

**Streszczenie:** Celem opracowania jest przedstawienie metody oceny składnika zasobowego ekonomicznego bezpieczeństwa przedsiębiorstwa. W artykule opisano współczesne metody oceny składnika bezpieczeństwa ekonomicznego przedsiębiorstwa, a także wymagania dotyczące ich stosowania.

**Słowa kluczowe:** zasoby przedsiębiorstwa, bezpieczeństwo ekonomiczne, aktywa niematerialne, ilościowe metody oceny.