

## MANAGEMENT OF ECONOMIC SECURITY OF ENTERPRISES BASED ON THE INTEGRATED USE OF RESOURCE POTENTIAL

**Introduction.** The development of integration processes requires an increase in the level of economic security of enterprises and becomes a necessary condition for their functioning. Issues related to economic security are becoming relevant in the current conditions of rapid development of production and foreign economic relations and require further research not only on the scale of states or regions, but also at the level of individual enterprises.

### 1. Raising of a problem in a general view and connection of it with the major scientific or practical tasks

The theoretical and applied foundations of the organization of economic security, the development of new and adaptation of existing mechanisms of environmental and economic instruments, a wide range of urgent problems of environmental and economic security at all levels of the system (state - region - business - person) are examined in the works of Andriychuk V.G.<sup>1</sup>, Varnalia Z.S.<sup>2</sup>, Kirichenko A.A.<sup>3</sup>, Kleiner G.B.<sup>4</sup>

For the first time, the term "security" was used at the end of the 12th century, in the dictionary of the English scholar-philosopher (Robert Grosseteste) G. Grosseteste as "a calm state of the spirit of a man who considered himself protected from any danger." In the XVIII century, the point of view according to which the main goal of the state is general welfare and safety was confirmed. In this connection, the term "security" gets a new interpretation: the state, the situation of tranquility, which appears as a result of the absence of real danger, as well as material, political conditions, relevant bodies and organizations that contribute to the creation of this situation<sup>5</sup>. In 1974, M. Taylor issued a publication entitled "Legitimate National Security Requirements," where he noted that the main threats to US national security are developing in the non-military area. L. Brown identified among the most important non-military threats, along with the energy crisis, inflation and population migration, environmental threats (soil erosion, forest shrinking and climate change). This led to the introduction of the terms "economic security" and "environmental security". B. Kleiner considered ecological and economic security at the level of four components: law, economics, ecology and management<sup>6</sup>.

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<sup>1</sup> Андрійчук, В. Г. (2010) Економічна безпека України: стан, критерії виміру та превентивні заходи її зміцнення: *Економіка, фінанси, право*. 6, 12–17. [http://www.nbuv.gov.ua/portal/soc\\_gum/uazt/2010\\_2k.pdf](http://www.nbuv.gov.ua/portal/soc_gum/uazt/2010_2k.pdf).

<sup>2</sup> Варналій, З. С. (2001) Проблеми та шляхи забезпечення економічної безпеки України: *Економіка та управління*. 3, 3-12.

<sup>3</sup> Кириченко, О. А., Лаптев, С. М., Пригунов, П. Я. & Захаров, О. І. (2010) *Управління фінансово-економічною безпекою*. Київ, 480.

<sup>4</sup> Клейнер, Г. Б. (2016) *Системная экономика как платформа развития современной экономической теории* <http://spkurdyumov.ru/uploads/2016/02/sistemnaya-ekonomika.pdf>

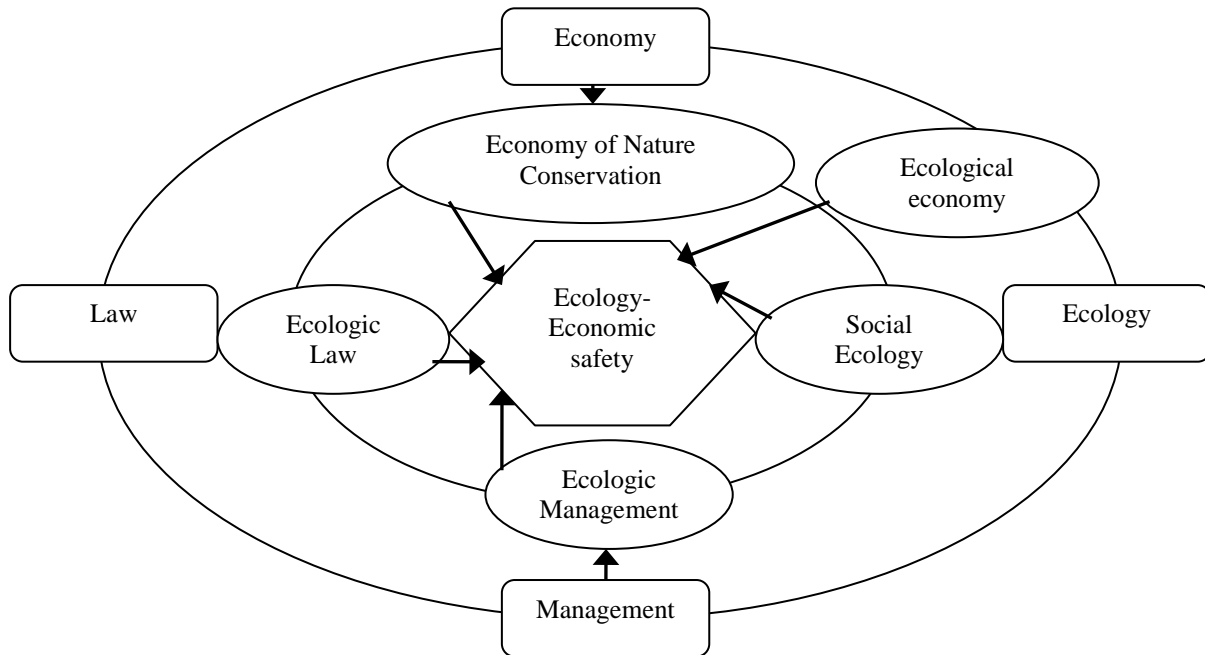
<sup>5</sup> Козаченко, А. В., Пономарев В. П. & Ляшенко А. Н. (2013) *Экономическая безопасность предприятия: сущность и механизм обеспечения*. Київ, 280.

<sup>6</sup> Клейнер, Г. Б. (2016) *Системная экономика как платформа развития современной экономической теории* <http://spkurdyumov.ru/uploads/2016/02/sistemnaya-ekonomika.pdf>

## 2. Exposition of basic material of research with the complete ground of the scientific results.

Based on these developments, we built a tetrad of the system, formed on the principles of sustainable development. It is a more extensive system and contains the connection of all components, such as: the economics of nature management, social component, management, ecology, law, economics (Fig. 1).

Fig. 1. A tetrad of the ecological and economic system by G.B. Kleiner



## 3. Security of the enterprise

Analyzing the enterprise as a unified socio-economic system of the lowest level, its economic security means a state of global stability and dynamic equilibrium in which reliable existence, reproduction and development are ensured. This approach to understanding economic security allows us to consider it as a function of the system aimed at achieving maximum efficiency, minimal disruption of equilibrium, due to external influences, increasing resistance to them, maintaining the ability to self-regeneration and self-organization. Economic security should ensure such an internal interaction of elements of the socio-economic system, in which high rates of expanded reproduction of production, economic growth and welfare, are accompanied by the preservation and improvement or conservation of the environment and natural resources. On this basis, the study of economic security can be carried out in two ways, as:

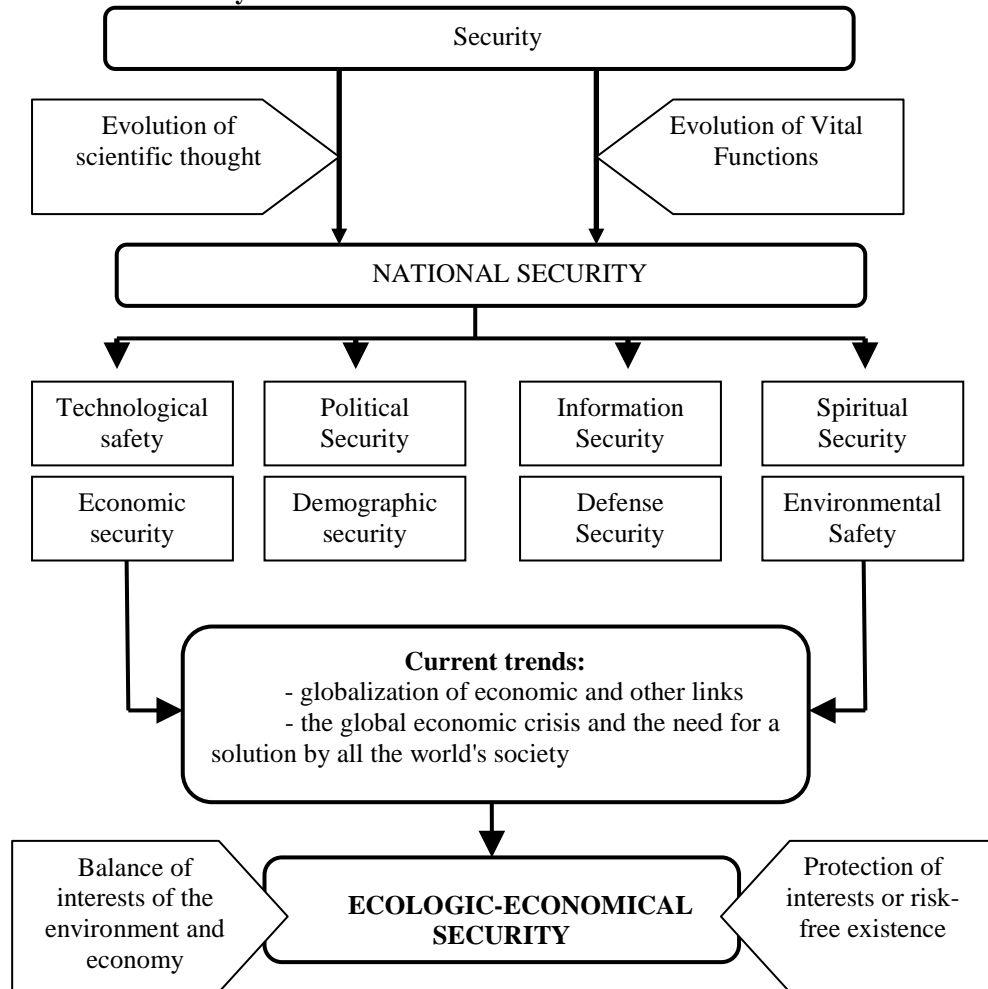
- the impact of the socio-economic system on the environment;
- the perception of the socio-economic system and the reaction of market players on the nature of its operation.

The indicated directions correspond to the following methodological approaches:

- 1) on the basis of studying the level of the socio-economic system's load on the environment, that is, by the indicators of the level of security;
- 2) on the basis of analysis and assessment of indicators of the state of the socio-economic system.

In order to demonstrate at what level the security of the enterprise is, a logical scheme of the connection between the security levels is constructed, and contains an example of types of security and modern trends, where environmental and economic security takes place (Fig. 2).

**Fig. 2. Connection between security levels**



The management of the enterprise, as an element of the socio-economic system, is built on the basis of a balanced solution of economic, social and environmental problems, finding the optimal balance between ensuring the safety and expediency of industrial enterprises<sup>7</sup>.

For the development of modern enterprises, the generalization of socio-ecological and economic processes and their introduction into economic activity is significant. Table 1 presents the elements that determine the benefits of applying the social, environmental and economic components.

**Table 1: Advantages of using components of sustainable development in enterprises**

Social component	Ecologic component	Economic component
Reducing the threat to public health, improving living conditions	Reducing the negative impact of enterprises on the environment, rational use of natural resources	Efficient use of raw materials, materials, energy, minimizing the cost of resources
Ensuring safe work with sufficient payment	Improving the quality and environmental safety of products, ensuring state security	Minimizing risks. Taking measures to prevent fines and sanctions
Acquisition of professional skills and skills, professional	Preservation and improvement of the ecological environment in	Increase of the company's innovative and market

<sup>7</sup> Качинський, А. Б. (2011) *Екологічна безпека України: системний аналіз перспектив покращення*. Київ, 200.

development, confidence in the availability of a workplace	workplaces and location of enterprises.	attractiveness, additional attraction of investments
	Ensuring the environmentally friendly development of economic activities, in which growth in output is not accompanied by an increase in environmental pollution and industrial waste	Increased level of motivation and productivity of employees due to improved working conditions
		Mastering of new internal and external commodity markets, development of environmentally oriented markets

Source: Proposed by the author.

Let us consider in detail the three components of sustainable development that are implemented, which can be used to direct the activities of enterprises into the mainstream of eco-oriented activities.

The social component will ensure not only the safe condition of employees working on the enterprise, but will also provide employment opportunities for the population, as well as implement approaches to overcome unemployment. The environmental component is aimed at improving the external environment of the enterprise, producing eco products, implementing the principles of environmental safety. The economic component is oriented to the receipt of the enterprise's income taking into account the implementation of the first two.

Considering the enterprise as an ecological and economic system of the lowest level, its ecological and economic security means such a state of global stability and dynamic equilibrium, in which perspective operation, stable activity and further development are provided. This approach to understanding environmental and economic security allows us to consider it as a function of a system aimed at achieving maximum efficiency, minimizing the imbalance due to external influences and increasing stability, maintaining the capacity for self-regeneration and self-organization. Ecological and economic security should provide such an internal interaction of elements of the ecological and economic system, in which high rates of expanded production reproduction, economic growth and welfare, including, is accompanied by the preservation and improvement of the environment. Proceeding from this, studies of environmental and economic security can be carried out in two ways: the impact of the ecological and economic system on the environment and the perception of the ecological and economic system reaction of market subjects on the nature of its operation. The two lines follow the following methodological approach:

1) the study of economic and economic systems of the environment, it is based on environmental safety;

2) analysis and evaluation of indicators of the economic system.

Based on these approaches, research was carried out at a machine-building enterprises in Ukraine, which included: engineering enterprises (group A) electrical and electronic equipment enterprises (group B); production of machinery and equipment (group C).

The quality of the main parameters to be studied is based on the following factors: atmosphere temperature; discharges volumes of pollutants into water bodies and the costs of their cleaning; volume of industrial waste and the costs of environmental protection. To analyze and assess the availability of indicators, characteristics of the population as a whole; the number of unemployed and labor-intensive groups living in the region; total revenue and total revenue. For this reason, the results obtained in this report are as follows (Table 2).

**Table 2: Analysis of socio-ecologic and economic parameters**

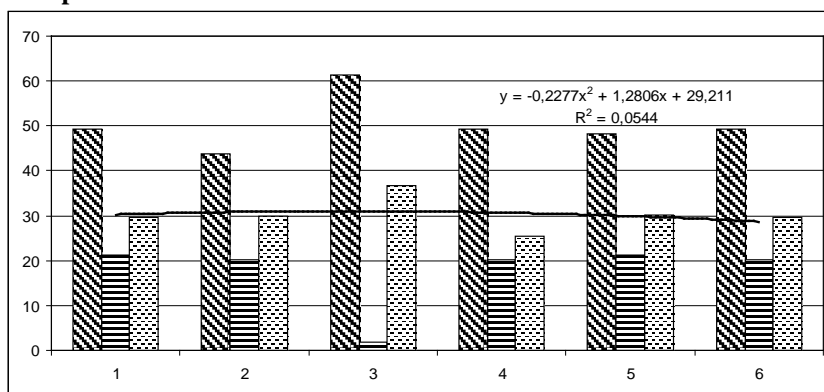
Parameters	Machine-building enterprises		
	Group A	Group B	Group C
Average total emissions of			

pollutants into the atmosphere, thousand tons	2659,00	1139,57	1595,40
In percentage terms, %	49,30	21,13	29,58
Costs for cleaning atmospheric pollutants, thousand euro/m3	7926,25	3396,97	4755,74
In percentage terms, %	43,82	20,18	30,01
Average volumes of discharges of pollutants into water bodies, million m3	29,17	0,93	17,50
In percentage terms, %	61,28	1,95	36,76
Average costs for cleaning pollutants in reservoirs, thousand euro/m3	23101,02	9900,43	13860,62
In percentage terms, %	49,29	20,12	25,37
Average volumes of industrial waste, thousand tons	17952,63	7693,99	10771,58
In percentage terms, %	48,90	21,15	30,12
Average costs of industrial waste disposal, euro/ton	23649,15	10135,34	14189,49
In percentage terms, %	49,30	20,25	29,60
Morbidity of the population living in the zone of location of the enterprises, people	181,53	77,64	108,92
In percentage terms, %	50,01	20,51	30,12
The number of unemployed people living in the region, thousand people	1086,3	1086,3	1086,3
In percentage terms, %	26,66	26,66	26,66
The number of employed people living in the region, people	167,93	167,93	167,93
In percentage terms, %	0,93	0,93	0,93
Average volume of sales, thousand euro	54200000	68970000	93590000
In percentage terms, %	25,00	31,82	43,18

Source: Created using the data of the State Statistics Service of Ukraine.

The possibility of using regression analysis is justified, because In the cases presented, the dependent variable is a normally distributed quantity.

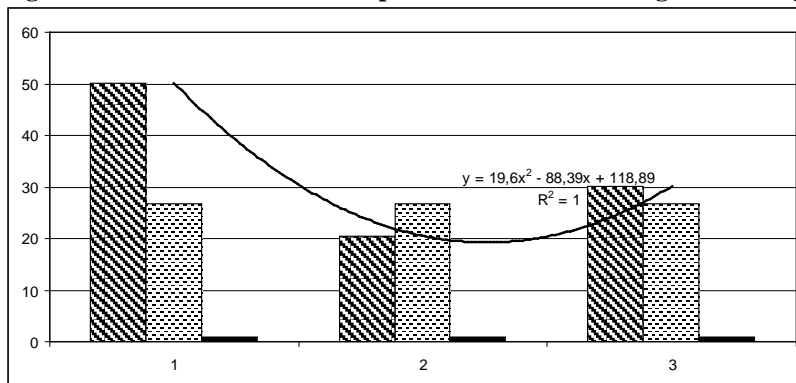
**Fig. 3. The state of the ecological component under the existing functioning of machine-building enterprises**



Analyzing the values graph of the main components of the ecological component for the enterprises under study, the general trend can be replaced: with an increase in costs of 1 million euros, emissions are reduced by an average of 228 tons; with an increase in the

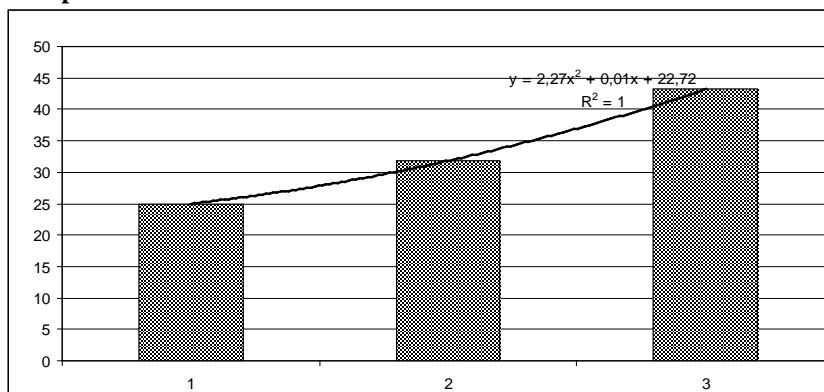
volume of the substance coming to clean up 1 thousand m<sup>3</sup> - increase by 1.28 thousand m<sup>3</sup>, and for the recycling of 1 ton of industrial waste, an average of at least 30 euros is needed.

**Fig. 4. The state of the social component under the existing functioning of machine-building enterprises**



The Analysis of the graph of the values of the main components of the social component for the enterprises under study indicates that the incidence of the population living in the zone of location of enterprises will decrease with an increase in costs by an average of 19.6 euros; the number of unemployed people living in the region will decrease by 88% when implementing programs for the development of machine-building enterprises and investments of not less than 1 thousand euro; accordingly, the share of the employed population will increase by 119%.

**Fig. 4. The state of the economic component under the existing functioning of machine-building enterprises**



The analysis of the graph using the values of the main components of the economic determines this feature: with an increase in the average volumes of products sold, the cost of innovation should be at least 23%.

Thus, the results of the study show that significant capital investments are required that can improve the efficiency of the enterprise, provide employment for the population and stabilize the environmental situation in the zone of action of the machine building enterprises.

**Conclusion.** The presence of enterprises of various organizational and legal forms based on different forms of ownership with the emergence of all possible ways of competition, as well as the imperfection of the legislative framework and the inertness of state structures designed to create normal conditions for the development of business, were put by business entities under conditions when they are forced to pay considerable attention issues of ensuring their economic security.

#### References

1. Андрійчук, В. Г. (2010) Економічна безпека України: стан, критерії виміру та превентивні заходи її зміцнення: *Економіка, фінанси, право*. 6, 12–17. [http://www.nbu.gov.ua/portal/soc\\_gum/uazt/2010\\_2k.pdf](http://www.nbu.gov.ua/portal/soc_gum/uazt/2010_2k.pdf).

2. Варналій, З. С. (2001) Проблеми та шляхи забезпечення економічної безпеки України: *Економіка та управління*. 3, 3-12.
3. Кириченко, О. А., Лаптев, С. М., Пригунов, П. Я. & Захаров, О. І. (2010) *Управління фінансово-економічною безпекою*. Київ, 480.
4. Клейнер, Г. Б. (2016) *Системная экономика как платформа развития современной экономической теории* <http://spkurduumov.ru/uploads/2016/02/sistemnaya-ekonomika.pdf>
5. Козаченко, А. В., Пономарев В. П. & Ляшенко А. Н. (2013) *Экономическая безопасность предприятия: сущность и механизм обеспечения*. Київ, 280.

## SUMMARY

Market relations significantly intensify the competition between economic entities, directly affect their economic and security status, and in some cases even lead to bankruptcy. Therefore, at the present stage of enterprise development, the issue of organization of the enterprise management process for the prevention and neutralization of all types of hazards, as well as actualization of the enterprise's potential to ensure economic security, as well as increasing the efficiency of its operation in market conditions, is extremely important.