

ДРОБЯЗКО

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УДК 368.212:629.33

## ECONOMIC SECURITY MODEL OF ENTERPRISES

## МОДЕЛЬ УПРАВЛІННЯ ЕКОНОМІЧНОЮ БЕЗПЕКОЮ ПІДПРИЄМСТВ

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*The economic security management model of enterprise was constructed based on the principles of the theory of systems and its varieties and scientific approaches to the definition of the components of economic security and approaches to its formation on the theoretical level and in real practice. The principles, requirements, components, properties of this model are singled out. Thus, the epistemological basis for the emergence of the theory of social systems security is the recognition of the existence of two basic functions in social systems: development functions*

*and security functions. The development function is associated with the realization of interests that leads to the emergence of qualitatively new states of the system. The security function is associated with actions to protect the development function from threats. That is, the desire for safe development is a systemic property of any social system. The peculiarities of approaches to economic security management of enterprises are grounded. In order to provide the most capable system for economic security management of enterprises, it is proposed to consider the economic security management of enterprise as a process for the implementation of functional components of economic security in order to prevent possible losses and to achieve maximum levels of economic security at present and in the future. The main purpose of the economic security management of enterprise is to ensure its stable, efficient operation and high potential for future development. It has been determined that the economic security management of enterprise is interpreted as a process involving hierarchically interconnected levels: nanolevel (consumer security); microlevel (enterprise security) that makes it possible to increase the effectiveness of preventive management measures to improve the economic security of enterprise.*

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*Побудовано модель управління економічною безпекою підприємства, побудована на засадах теорії систем та їх різновидів і наукових підходів до визначення складових економічної безпеки та підходів до її формування на теоретичному рівні й у реальній практиці. Виокремлено принципи, вимоги, компоненти, властивості цієї моделі. Отже, гносеологічною основою появи теорії безпеки соціальних систем є визнання наявності двох базових функцій у соціальних системах: функції розвитку та функції безпеки. Функція розвитку пов'язана з реалізацією інтересів, що зумовлює появу якісно нових станів системи. Функція безпеки пов'язана з діями щодо захисту функції розвитку від загроз. Тобто, прагнення до безпечного розвитку є системною властивістю будь-якої соціальної системи. Обґрунтовано особливості підходів до управління економічною безпекою підприємств. З метою забезпечення найбільш дієздатної системи управління економічною безпекою підприємств запропоновано розглядати управління економічною безпекою підприємства як процес реалізації функціональних складових економічної безпеки з метою запобігання можливих збитків і досягнення максимального рівня економічної безпеки в даний час і в майбутньому. Головна мета управління економічною безпекою підприємства полягає в тому, щоб гарантувати його стабільне максимально ефективне функціонування і високий потенціал розвитку в майбутньому. Визначено, що управління економічною безпекою підприємства сфери послуг трактується як процес, що охоплює ієрархічно взаємопов'язані рівні: нанорівень (безпека споживачів); мікрорівень (безпека підприємств), що дає можливість підвищувати ефективність превентивних управлінських заходів з підвищення економічної безпеки підприємства.*

**Keywords:** економічна безпека, модель управління, система, стратегія, загрози

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## INTRODUCTION

Each set of components of economic security affects the overall security of the enterprise. We propose that the study focus on financial security. Since the security of enterprise, primarily, is ensured by the state of the economy and protection from threats to financial security, we consider in more detail the financial component of the state security the level of which is also in the danger zone. Economic theory justifies the special importance of finance in the economy placing the main responsibility for them on the state.

The **PURPOSE** of the article is to determine the theoretical and methodological aspects of the economic security management of enterprises.

## RESEARCH METHODS

The methodological and informational basis of the research is professional works, materials of periodicals, Internet resources.

## RESULTS

The economic security management of enterprise must be constructed in accordance with certain requirements [1-4].

First, this is the requirement of ensuring managerial independence and economic independence. This requirement determines not only the availability of own resources, freedom to choose goals, decision-making, forms of control, and the like. Such independence also causes a certain interdependence of the subjects of economic security.

Secondly, this is the requirement to create stable conditions for a stable and predictable work of an enterprise with the containment of destabilization factors. This requirement determines the status of the economic security of enterprise as a supporting component of the enterprise management as a whole. The third requirement concerns the ability of the economic security system of enterprise to self-development and progress in changing conditions.

It is practically impossible to ensure the management

of the economic security of an enterprise at once with the desired level of performance.

From the point of view of understanding the functioning principles of the economic security of enterprise, the properties of robustness, symmetry (asymmetry) and equifinality are important.

The property of symmetry (asymmetry) of economic security should be interpreted from the standpoint of the general theory of systems of Yu.A. Urmantsev [7]. A feature of this property is that economic security can be both symmetrical and asymmetrical depending on the generating factor on the basis of which this system is built. In the case when the forming factor is the goal, economic security is asymmetric, that is, economic security changes signs in the way of achieving the goal. The manifestation

of changes the signs can be a change in the composition and structure of components that are carriers of signs. In order to achieve the final desired result of functioning, economic security can change the composition and structure of the components, without prejudice to either the goal or the homeostat of the system. Otherwise, the process of achieving the goal will be meaningless – without changing signs, the system will not move from the initial phase. The other is the situation when the forming factor of economic security is a function or behavioural stereotypes. Such a system must preserve the nature of functioning in all conditions. Therefore, with such system-forming factors, economic security is symmetrical, the set of system features should be maintained for any changes [7].

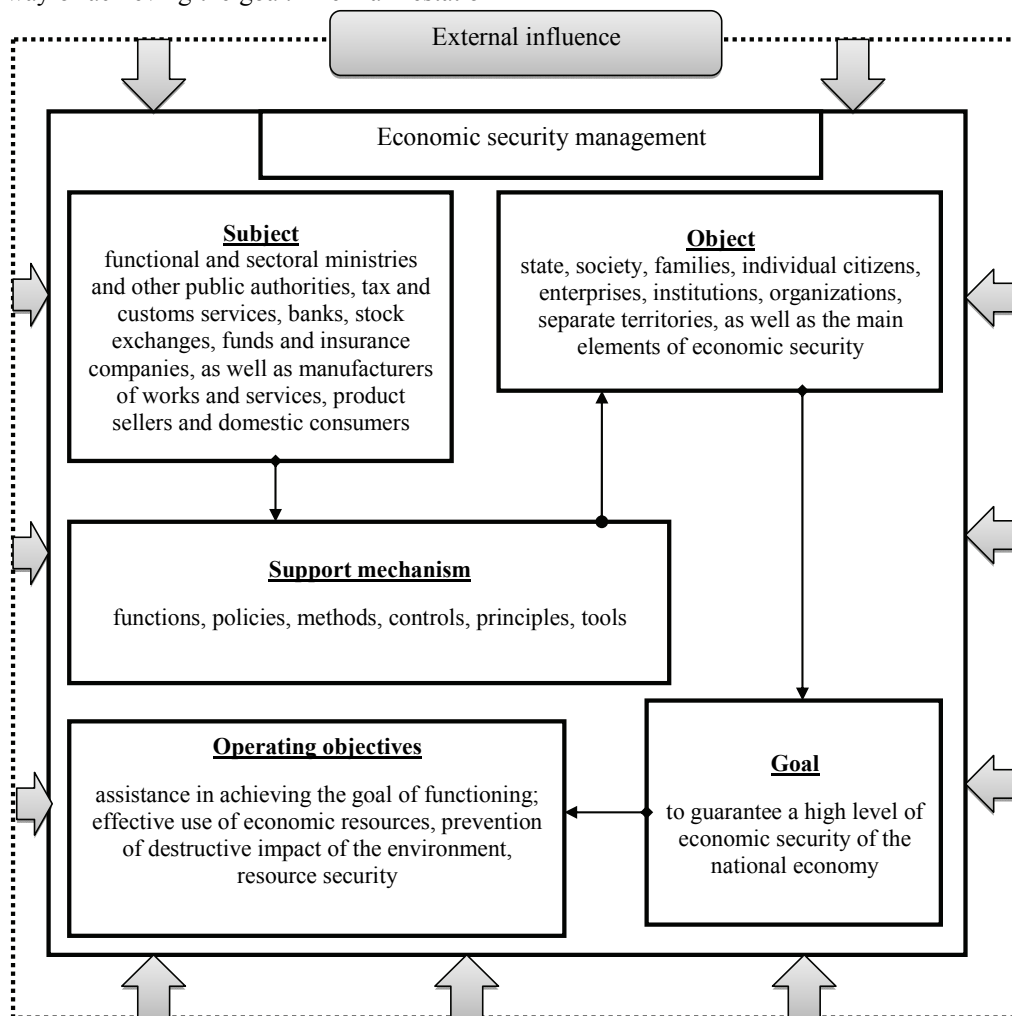


Fig. 1. The model of economic security management of enterprises built on the theory principles of systems and its varieties and scientific approaches to the definition of the components of economic security and approaches to its formation at the theoretical level and in practice [author's development]

So, the epistemological basis for the emergence of the security theory of social systems is the recognition of the presence of two basic functions in social systems: development functions and security functions. The development function is associated with the realization of interests leading to the emergence of qualitatively new system states. The security function is linked to actions to protect the development function from threats. That is, the desire for secure development is a systemic feature of any social system. As an object, it is necessary to use the social system as a whole and to develop and improve function

implementation of protection of this system. Only in this way a balanced organization and functioning of all components of security, such as economic or informational, or any other, will be ensured.

The listed properties predetermine the features of homeostasis in the economic security of enterprise the main of which is that homeostasis is determined by the essence of the processes, and not by the essence and functions of the sets of components. The same components of the economic security of enterprise can take part both in the processes of development of the enterprise and in the processes

of ensuring the security of this development. The role of a component is determined by the phase in which the economic security of enterprise is located at a certain point in time.

The theory of functional systems explains the root causes of the robustness of a social system by the fact that the vision of a future result is possible only after the accumulation and processing of a certain empirical experience of the functioning of the system. The goal of the system can be formulated only in the process of the functioning of the system, and not at the moment of creation. Therefore, it is very difficult for a person to model such a system as economic security and to formalize its mathematical model.

In our opinion, the economic security of an enterprise should be considered not only from the position of a systematic approach, its manifestation – an attributive approach, but also from a resource perspective. The decrease in the level of economic security of enterprise occurs due to the insufficient level of the qualitative and quantitative composition of resources (information, material, labour, financial), and as a result, the quantitative and qualitative composition of its products (services, works) [6].

In this, there are external threats to economic security  $D$ , both potential ( $D^p$ ) and real ( $D^r$ ). The external environment should be considered as a system of economic security in order to identify its mutual influence. After the introduction of the mechanisms for economic security management, there are plenty of solutions ( $S$ ): necessary ( $S^n$ ) and recommended ( $S^{rec}$ ) to ensure an adequate level of economic security.

Then the economic security system of enterprise in a formal way can be described as follows:

$$ESM = \{T, I_t^l, I_t^{ESM}, D_t^p, D_t^r, S_t^n, S_t^{rec}\}, \quad (1)$$

where  $T$  – set of moments of time  $t$ ;  $I_t^l$  – set of local indicators of economic security at time  $t$ ;  $I_t^{ESM}$  – integral index of economic security at time  $t$ ;  $D_t^p, D_t^r$  – set of corresponding real and potential threats to economic security at time  $t$ ;  $S_t^n, S_t^{rec}$  – set of necessary and recommended managerial decisions to ensure an adequate level of economic security of the enterprise at time  $t$ .

In determining the components of economic security of the national economy, it should be determined that Ukraine has Methodical recommendations for calculating the level of economic security of Ukraine approved by Order of the Ministry of Economic Development and Trade of Ukraine on October 29, 2013 № 1277 [5]. In accordance with these recommendations, the economic security components of enterprise are: industrial, demographic, energy, foreign economic, investment-innovation,

macroeconomic, food, social, financial security.

Then we propose that the set of components of the economic security of national security  $\chi$  consists of elements of nine subsets:

$$\chi = In \cup D \cup E \cup Fe \cup Ii \cup M \cup Fo \cup S \cup Fi, \quad (2)$$

where  $In$  – set of industrial security;  $D$  – set of demographic security;  $E$  – set of energy security;  $Fe$  – set of foreign economic security;  $Ii$  – set of investment-innovation security;  $M$  – set of macroeconomic security;  $Fo$  – set of food security;  $S$  – set of social security;  $Fi$  – set of financial security.

### CONCLUSIONS

The economic security strategy, when formulating goals and indicating objects, should include the characterization of external and internal threats; definition of criteria and parameters (threshold values) of indicators characterizing the interests of the enterprise and meet the requirements of its economic security; development of economic policy including mechanisms of actions influencing the state of economic security; the direction of the implementation of the strategy.

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