DOI: https://doi.org/10.30525/2256-0742/2024-10-1-145-152

KEY ASPECTS AND PROCESS OF FORMATION OF THE MECHANISM FOR ENSURING ECONOMIC SECURITY OF AGRICULTURAL ENTERPRISES

Nataliia Kotvytska¹, Ihor Bohdaniuk², Oleksandr Kukhar³

Abstract. The subject of the study is the digital process of ensuring the economic system of agricultural enterprises. Methodology. In the course of the study, the methods of analysis and synthesis, generalisation, classification, formalisation, comparison, as well as abstract-logical and monographic methods were used. The aim of the paper is to study the key aspects and the process of developing a mechanism for ensuring the economic system of agricultural enterprises. Research results. Summarising the results, it is determined that ensuring the economic security of enterprise plays a crucial role in its overall functioning. Effective implementation of the mechanism of economic security of enterprise requires attention of managers to such aspects as integration into the global information space, corporate interests, rational use of resources, and clear organisation of activities. The basis of the mechanism of ensuring economic security is a systematic combination of various tools, methods, means and processes of providing information based on objective principles and needs of economic security management subjects to achieve and protect the financial interests of the enterprise. In addition, the dualism of the economic security system of agricultural enterprises is important: ensuring the proper functioning of an agricultural enterprise is achieved through the coordinated work of internal and external security mechanisms. The developed mechanism for ensuring the economic security of agricultural enterprises can be implemented at any enterprise and serve as a basis for improving its financial and economic activities to achieve the main goal of the entity. It is emphasised that economic security is formed through a set of economic measures aimed at protecting the economic system from the negative impact of the external and internal environment. This system of measures should ensure the formation of a capacity for sustainable operation, competitiveness in the relevant market and further development based on the effective use of existing potential.

Keywords: economic security of enterprises, security mechanism, internal security mechanism, external security mechanism, food security.

JEL Classification: F52, B49, L86, D83

1. Introduction

In the current conditions of the dynamic economic space, taking into account the impact of the global and domestic crisis deformations, as well as the uncertainty of the business environment, the trend of the influence of unexpected impulses on the activities of agricultural enterprises becomes relevant, which leads to fluctuations in their primary business processes and the destruction of strategic development goals. An essential response of agricultural enterprises

to these trends is the creation of a system of economic security, which will ensure the stability of their functioning. This determines the relevance and arouses scientific interest in the study of the theoretical, methodological and practical foundations for the formation of a high-quality economic security system based on the development of new approaches to risk management of agricultural enterprises, whose activities are conditioned by the peculiarities of the current stage of economic development.

E-mail: red.edit.10@gmail.com

ORCID: https://orcid.org/0000-0003-4897-9636



This is an Open Access article, distributed under the terms of the Creative Commons Attribution CC BY 4.0

¹ Private Higher Education Establishment "European University", Ukraine (corresponding author) E-mail: nakot@i.ua

ORCID: https://orcid.org/0000-0003-0864-1470

 $^{^2}$ Livestock Farming Institute of the National Academy of Agrarian Sciences of Ukraine, Ukraine E-mail: itanimalnaan@gmail.com

ORCID: https://orcid.org/0000-0003-4782-9986

³ State Biotechnological University, Ukraine

The development of modern agricultural enterprises is accompanied by the influence of various factors of the internal and external economic environment. This impact can both open up new opportunities for successful operation and create potential threats and risks. This is reflected in the state of various functional components of the economic security of agricultural enterprises, among which the information, financial, human resources, innovation and investment subsystems are critically important. As a result, the balance of the system of economic security of enterprises and agricultural their sustainable functioning is disturbed.

The main activities of agricultural enterprises should ensure a high level of economic efficiency and competitiveness. The imperfect realisation of the economic interests of such enterprises, as well as fierce competition in agricultural markets and problems in the institutional environment in which they operate, underline the importance of maintaining economic security and protecting the results of their operation. However, when the management of an enterprise focuses mainly on protecting economic results, this may limit the potential of economic security management systems and the implementation of relevant measures. It is necessary to improve the systematic management of measures to ensure the economic security of agricultural enterprises, given the growing complexity of economic and market relations. This requires scientific substantiation of mechanisms, tools and systems for ensuring economic security, which is the main problem addressed in the study.

2. Key Aspects and Orderliness of the Components of the Enterprise Economic Security Concept

Economic security has become an integral part of scientific research and practical use as a property and function of the economic system. Over the years, this concept has evolved to expand the scope of functions aimed at neutralising threats that pose a danger to the company's operations. This research has resulted in publications, monographs and dissertations by leading international and domestic scholars.

The diversity of interpretations of economic security has led to increased ambiguity and a departure from the logical ordering between the factors of influence, the substantive essence and the final results. The concept of "economic security" in economic science has gradually developed in parallel with the development of economic theory and the evolutionary formation of its concepts. The concept has been significantly developed by such scholars as Adam Smith, Alfred Marshall, John Maynard Keynes, William Euken and Douglas North.

The attribution of economic security to different areas of scientific research (security studies, management, economics) has led to the formation of different scientific approaches to the interpretation of the essence of the concept of "economic security of enterprise". The variety of interpretations of this concept indicates the need for a common understanding of its essence in the scientific community, which requires a semantic analysis of existing definitions and clarification of the concept for this scientific study.

A generalisation of existing scientific publications shows that today there are different interpretations of the concept of "economic security of an enterprise". In foreign and domestic studies, the most common interpretation is the one that considers economic security as a state of protection of an enterprise from external and internal threats. From the point of view of this group of authors, the object of economic security is an enterprise (Orlyk, 2014; Parfentij, 2019; Sosnovs'ka, 2015; Tiutchenko, 2021, Volyk et al., 2023, Podsokha et al., 2023, Lagodiienko et al., 2022, Hnylytska et al., 2021, Kukhar et al., 2023). The concept of an enterprise's economic security as a state of use of resources and available entrepreneurial opportunities that protects against the negative impact of threats is also common in economic science (Dub, 2017; Kovalenko, 2017; Lebedko, 2015). Among the authors' interpretations of the concept of economic security of an enterprise, its understanding as a state of protection of economic interests of an enterprise from threats is clearly expressed (Danilova, 2020; Panchenko, 2017). The concept of economic security as a condition of functioning is widely used in scientific research (Sytnyk et al., 2020). The most common definition of economic security is its understanding as a system of protection against negative influences of the external and internal environment (Britchenko et al., 2022). This understanding is based on the protective characteristics of the set of tools, methods and means used to ensure the achievement of the set goals, as well as on the identification of threats, hazards and risks and the determination of the direction of their impact on the enterprise's activities. The directions of interpretation of the concept of economic security of an enterprise are shown in Figure 1.

In summarising the research of many authors, some define the functional purpose of the economic security system very specifically or too broadly. Researchers have not yet fully agreed on the individual components of economic security. Thus, the internal components of the economic security system include raw materials and resources, energy, financial, military-economic, technological, food, social, demographic, environmental, informational,

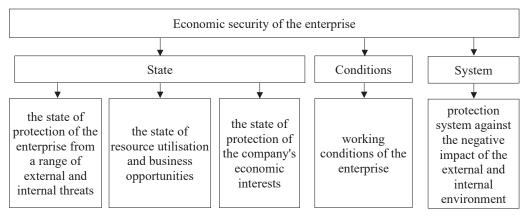


Figure 1. Directions of interpretation of the concept of "economic security of an enterprise"

innovative and technological, investment, scientific and technological, industrial, political, military and law enforcement, criminal, institutional, macroeconomic, foreign economic, and so forth (Pravdiuk, 2021).

The economic security of an enterprise should be considered as a complex concept that characterises the state of development of an enterprise, which is determined by the ability to ensure stable functioning in the face of economic risks and hazards. A logical scheme of ordering the components of the concept of "economic security of an enterprise" is presented in Figure 2.

In this scheme, the economic security of an enterprise is an object. It is considered as such a condition, the prerequisites of which are the effects of various types of risks, dangers and threats, and the enterprise with the necessary level of economic security can ensure the stability of its functioning, the consequences of which are stability, development potential and the ability to adapt to changes in the economic environment. That is, the state of economic security of the enterprise is its level of economic security and its ability to defend its interests in the face of economic risks and threats.

The application of the cybernetic approach to the study of economic security allows to clarify the distinction between concepts related to economic security or its components. Thus, economic security can be considered in the context of such concepts as "protection", "resilience", "stability", "development", "potential" and "competitiveness" (Danilova, 2020) (Figure 3).

In the context of economic security of enterprises, protection is seen as a set of legal, social, economic and organisational measures to ensure security; resilience is defined as the ability to maintain its characteristics and withstand external influences; stability means the unchangeability and long-term preservation of a certain state; development is the process of change and emergence of something qualitatively new; potential is a set of economic opportunities; competitiveness is the ability of an enterprise to produce goods and services that meet the needs of consumers.

Thus, economic security is formed by a set of economic measures aimed at protecting the economic system from the negative impact of the external and internal environment. This system of measures should ensure the formation of the capacity for sustainable functioning, competitiveness in the relevant market and further development based on the effective use of the existing potential.

In the context of economic security, the functional component is a set of main areas classified by purpose and resources used.

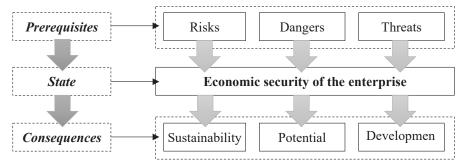


Figure 2. Orderliness of the components of the concept of "economic security of an enterprise"

The economic security of agricultural enterprises differs from that of other industries due to several key features: First, they are highly exposed to natural conditions, such as weather and natural disasters, which can significantly affect their yields and costs. The second feature is the seasonality of their operations, which leads to an uneven distribution of income and expenses throughout the year. The third feature is dependence on market price fluctuations, which can be caused by various economic factors. In addition, agricultural enterprises often require significant capital investments in equipment, land, seeds and other resources; finally, they are susceptible to political decisions and legislative changes that may affect the conditions of production, export and import of products (Stepanenko, et al., 2023). The role of digitalisation and its impact on economic systems has also been traced in publications (Irtyshcheva, 2022; Kramarenko, 2022). Given these features, the development of mechanisms to ensure the economic security of agricultural enterprises requires special attention and an integrated approach.

3. The Process of Developing a Mechanism for Ensuring Economic Security of Agricultural Enterprises

The need for continuous economic security is explained by the task faced by every business entity – to ensure stable functioning and achieve its main goal. The current economic and political situation in Ukraine has highlighted significant challenges in the organisation of business activities, especially during the crisis, when many agricultural enterprises showed their inability to respond to internal and external threats, resulting in significant losses and bankruptcy of some of them, threatening food security.

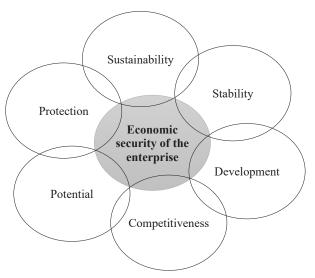


Figure 3. Main concepts of the economic security system

A security management system is the key to the sustainable development of enterprises. However, most of them still need to develop and implement a comprehensive security management mechanism, as they believe that it is only an additional cost that will negatively affect their profits. Identification of threats to economic and financial security allows timely application of appropriate tools to minimise risks and maximise positive factors in the agricultural sector.

Nevertheless, the effectiveness of activities largely depends on the efficiency of the mechanism for managing the economic security of enterprises. The problems of business entities can be solved only by creating a certain mechanism that guarantees sustainable development. The effectiveness of the economic security mechanism is determined by the elimination of possible threats and losses from negative impacts on all aspects of economic security.

The economic security management system should monitor the internal state and conditions of the external environment to ensure its functioning. It should also have a mechanism for ensuring economic security at the appropriate level.

The term "mechanism" implies the "movement" of its parts, so it is advisable to consider it in statics and dynamics in its functioning.

According to the research results, any enterprise with a strategic goal of further development of production activities on the basis of an innovative trajectory needs a stable and continuous application of a system mechanism for managing its economic security. In order to achieve progressive development in conditions of uncertainty and ever-increasing external and internal threats, a mechanism for managing and ensuring the economic security of enterprises has been proposed (Figure 4).

This mechanism is formed by the system of management activities in financial relations, which uses certain principles, financial levers, tools, legal and informational research methods to achieve the main goals of the enterprise. In the work of (Guryanova et al., 2018), some elements of the system for ensuring economic security are presented. Among the main components of the mechanism for managing the economic security of agricultural enterprises, the main stages of the entire mechanism can be distinguished.

At the initial stage, it is necessary to determine the scope and specifics of the company's activities, analyse its key performance indicators and assess its market position. The scope and specifics of the company's activities are formed on the basis of an assessment of its property status and financial goals: increasing market value and maximising profits, sufficiency of fixed and working capital, availability of the required amount of investment resources,

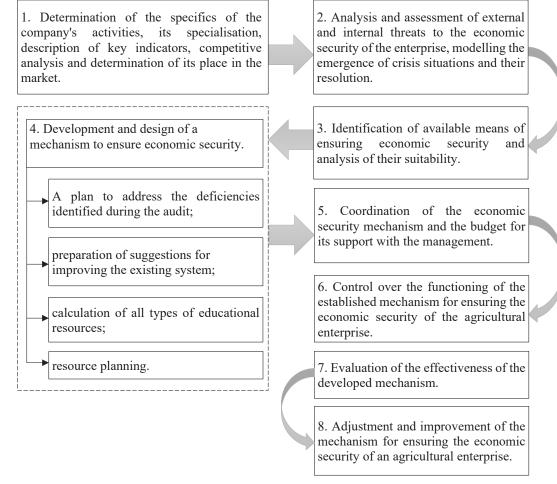


Figure 4. Sequence of development of a mechanism for ensuring economic security of agricultural enterprises

optimisation of payments to the budget and other aspects. At the second stage of developing a mechanism for ensuring economic security, it is necessary to analyse external and internal threats and structure the process of modelling the emergence of crisis situations and ways to overcome them. The next stages of developing a mechanism for ensuring the economic security of an enterprise include identification of means and their analysis, development and design of the mechanism, its coordination, control, evaluation of efficiency, correction and improvement of the mechanism based on the specifics of the enterprise's activities.

The developed mechanism for ensuring the economic security of agricultural enterprises can be implemented at any enterprise and serves as a basis for improving its financial and economic activities, which, in turn, contributes to the achievement of the main goal of the business entity.

The mechanism for managing the economic security of agricultural enterprises involves the implementation of a set of measures aimed at protecting their economic sustainability and ensuring optimal functioning. The carried out research has

shown that, taking into account the specifics of agricultural enterprises, it is advisable to allocate the following most important components of economic security management measures:

- 1. Financial management. Effective financial planning, budgeting, financial statement analysis, working capital and fixed asset management help to ensure the stability of the company's financial position.
- 2. Risk management. Identification, assessment and management of risks associated with changes in commodity prices, weather conditions, currency fluctuations and other factors that may affect the profitability of the agricultural business.
- 3. Production and raw material management. Optimisation of production processes, use of raw materials and resources, labour efficiency and the introduction of the latest technologies help to reduce costs and improve product quality.
- 4. Marketing management. Analysing market conditions, studying consumer needs, developing pricing and sales strategies help to increase the company's competitiveness.
- 5. Legal regulation and safety policy. Compliance with legal requirements, quality standards and

relevant safety standards helps to avoid fines, sanctions and other negative consequences for the company's operations.

- 6. Logistics management. Optimisation of logistics processes, including the supply, storage and delivery of products, helps to reduce costs and increase the speed of working capital turnover.
- 7. Human resources management. Developing human resources, motivating employees, and creating comfortable working conditions increase productivity and reduce the risk of internal conflicts.

Only careful consideration of these components of the mechanism for managing the economic security of agricultural enterprises, which interact with each other and complement each other to achieve the main goal – ensuring the economic security of an agricultural enterprise, which is aimed at the stability and development of an agricultural enterprise.

The basic idea of managing any complex system is to create different levels, at each of which the subject and object of management are defined. According to this principle, the economic security management system should have several relatively independent components at the top level, with well-defined functions and links between them. Subsequent levels are then detailed according to similar principles until a certain level of specificity is reached. In this way, the control system forms a hierarchy with several levels of abstraction, each level representing essential aspects of the system's operation at different levels of detail.

When solving the problem of ensuring the economic security of agricultural enterprises in the course of the study, two mechanisms can be distinguished: an external security mechanism and an internal protection mechanism built into the system. The external protection mechanism should organise the interaction of the economic security system of an agricultural enterprise with the external environment. The main task of this mechanism is to create safe conditions for the existence of the agricultural enterprise. Therefore, it is necessary to ensure the following:

- 1) Minimisation of the level of external turbulence that threatens the existence of the agricultural enterprise or may lead to unacceptable deviations of the economic security indicator from the set value;
- 2) ensuring that the state of the agricultural enterprise that meets the first requirement does not restrict its movement towards the goal, i.e. does not limit the performance of the economic security system of its functions.

Thus, apart from maintaining the integrity of the farm as an economic system, the main task of the external security mechanism is to function successfully, i.e., to fulfil the tasks set when the farm was established. It can be considered

- a higher hierarchical level than the internal mechanism, since it interacts directly with the environment and is essentially a supersystem. Its effective functioning presupposes that the administrative apparatus has reliable information about the external economic environment, on the basis of which appropriate adjustments can be made. The external mechanism needs additional information, including to perform its tasks effectively:
- Information about the goal or requirements for the dynamics of goal achievement;
- data on the current state to take into account possible inconsistencies and deviations in the process of achieving goals.

For the internal security mechanism to function effectively, the external loop must transmit generalised information about its activities, including conclusions about the state of the economic environment and measures taken. The diagram (Figure 4) shows the interaction between the protection mechanisms.

The internal security mechanism is aimed at solving the following tasks:

- Reflects the impacts of the external environment that have passed the external protective mechanism of economic security;
- overcoming structural disturbances that arise in the system, in particular through the protection mechanism itself;
- promotion of the development of an agricultural enterprise to achieve its goals.

The effectiveness of an agricultural enterprise in the face of external influences that threaten its economic security is facilitated by the existence of an external security mechanism that prevents the negative impact of threats from "distant approaches". In this context, the main task of the internal security mechanism is to neutralise the negative consequences of these influences. This is achieved through the synthesis of an adaptive security-oriented system.

The balance between external and internal safety mechanisms is based on the principle of negative feedback, which mitigates the effects of perturbations and compensates for this effect by implementing specific measures. However, the difficulty of achieving such a state is determined by the difficulty of obtaining information on specific changes within the farm. In addition, it is necessary to determine whether the state of the agricultural holding has changed as a result of a reaction to expected influences or as a result of unforeseen deviations or threats of an external or internal nature. In other words, it is necessary to distinguish between external influences and internal changes and to determine the directions and points of influence of internal changes and the specific nature of these disturbances.

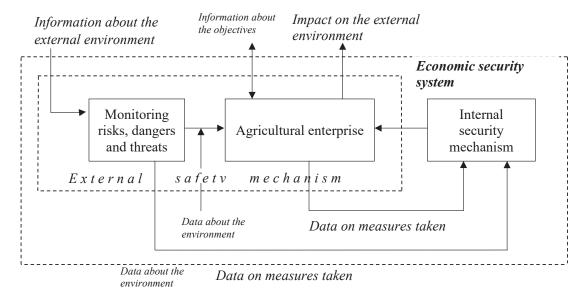


Figure 5. Scheme of interaction of internal and external protective mechanisms of the system of economic security of agricultural enterprises

In addition to the development of general recommendations for improving the reliability of the elements of the system of economic security of an agricultural enterprise and the stability of its work, it is necessary to develop proposals for obtaining reliable information on changes in this system. It is necessary to have information monitoring the maintenance of the parameters of the system of economic security of an agricultural enterprise within the permissible values.

The next task is to determine the effective use of the corrective information received. The provision of specific information support to management bodies in the development of an economic security strategy, taking into account emerging problems, will contribute to the monitoring of economic security. Economic security monitoring is a scientifically based system of periodic collection, generalisation and analysis of economic and social information used to make strategic and tactical decisions.

4. Conclusions

Ensuring the economic security of the enterprise plays a crucial role in its overall functioning. Effective implementation of the economic security mechanism of the enterprise requires managers to pay attention to such aspects as integration into the global information space, corporate interests, rational use of resources, and clear organisation of activities. The basis of the economic security mechanism is a systematic combination of various tools, methods, means and processes of information provision based on objective principles and the needs of the subjects of economic security management in order to achieve and protect the financial interests of the enterprise. In addition, the duality of the economic security system of agricultural enterprises is essential: ensuring the proper functioning of an agricultural enterprise achieved through the coordinated work of internal and external security mechanisms.

References:

Danilova, E. I. (2020). Methodical approach to assessing the economic security of the implementation of the system of economic interests of air transport enterprises. Biznes Inform, Vol. 3, p. 217-222. DOI: https://doi.org/10.32983/2222-4459-2020-3-217-222

Danilova, E. I. (2020). The concept of a system approach to the management of the economic security of the enterprise: a monograph. Vinnytsia: Yevropejs'ka naukova platforma.

Dub, B. (2017). The concept of economic security of the enterprise in the context of the development of modern Ukrainian economic science. *Cherkasy University Bulletin: Economics Sciences*, p. 63–72.

Guryanova, L., Milevskiy, S., Polyanskiy, V., Bogachkova, L., & Lytovchenko, I. (2018). Models of Assessment and Analysis in Security Management Systems. *Proceedings of International Scientific-Practical Conference on Problems of Infocommunications*. Science and Technology (PIC S&T) held in Kharkiv, Ukraine, 9-12 October, p. 202–208.

Irtyshcheva, I., Pavlenko, O., Boiko, Y., Stehnei, M., Kramarenko, I., Hryshyna, N., & Ishchenko, O. (2022). Evaluation of efficiency of regional public governance in the context of achieving goals of sustainable development. *Management theory and studies for rural business and infrastructure development*, Vol. 44, Issue 4, p. 497–505. DOI: https://doi.org/10.15544/mts.2022.49

Hnylytska, L., Melnychuk, D., Boguslavska, S., Pidvalna, O., & Chechetova-Terashvili, T. (2021). Security priorities in assessing the effectiveness of domestic enterprises. *Financial and credit activity: problems of theory and practice*, Vol. 2, No. 37, p. 374–385.

Kovalenko, O. V. (2016). Approaches to defining the concept of economic security of the enterprise. *Economic Bulletin of the Zaporizhzhia State Engineering Academy*, Vol. 1, p. 65–72.

Kukhar, O., Kravchyk, Y., & Brechko, O. (2023). Digital transformation as a factor in ensuring economic security of enterprises. *Baltic Journal of Economic Studies*, Vol. 9, No. 5, p. 143–152. DOI: https://doi.org/10.30525/2256-0742/2023-9-5-143-152

Kramarenko, I., Irtyshcheva, I., Stehnei, M., Boiko, Y., Nadtochii, I., Pavlenko, O., Rakipov, V., Hryshyna, N., Sirenko, I., & Ishchenko, O. (2022). Socio-economic development in conditions of digital transformations: regional features, strategic analysis, and prospects 2022 7TH International conference on mathematics and computers in sciences and industry. MCSI, p. 175–182 DOI: https://doi.org/10.1109/MCSI55933.2022.00035

Lagodiienko, V., Samoilenko, V., Pasko, M., Ovod, L., & Matsulevych, Y. (2022). The Mechanism of Labor Motivation as a Determinant of Economic Security of Enterprises in Competitive Conditions. *International Journal of Computer Science and Network Security*, Vol. 22, No. 2, p. 385–393.

Lebedko, S. A. (2015). Systematization of theoretical approaches to the definition of the concept of "economic security of the enterprise". *Efektyvna ekonomika*, Vol. 11. Available at: http://www.economy.nayka.com.ua/?op=1&z=4512

Orlyk, O. V. (2014). System of threats to the economic security of economic entities. Visnyk sotsialno-ekonomichnykh doslidzhen, Vol. 1(52), p. 250–257.

Panchenko, V. A. (2017). Systematization of approaches to the interpretation of the concept of "economic security of enterprises". *Efektyvna ekonomika*, Vol. 11. Available at: http://www.economy.nayka.com.ua/?op=1&z=6512

Parfentij, L. A. (2019). Upravlinnia finansovoiu bezpekoiu pidpryiemstv v umovakh ekonomichnoi nestabil'nosti: a monograph. Sumy: vydavnycho-vyrobnyche pidpryiemstvo "Mriia".

Podsokha, A., Havrylchenko, O., & Cherednyk, A. (2023). The potential for ensuring food security in Ukraine in the context of the ongoing military conflict. *Baltic Journal of Economic Studies*, Vol. 9, No. 5, p. 215–222. DOI: https://doi.org/10.30525/2256-0742/2023-9-5-215-222

Pravdiuk, A. L. (2021). Peculiarities of legislative provision of economic security of Ukraine. *Informatsiia i pravo*, Vol. 2 (37), p. 170–182.

Sosnovs'ka, I. M. (2015). The concept and significance of economic security of production and economic activity of enterprises. *Efektyvna ekonomika*, Vol. 9. Available at: http://nbuv.gov.ua/UJRN/efek 2015 9 34

Stepanenko, S., Kryukova, I., Khalin, S., & Podsokha, A. (2023). Iinclusive investment in the sustainable development of the agricultural sector and rural areas of Ukraine. *Collection of papers new economy*, Vol. 1, p. 75–88. DOI: https://doi.org/10.61432/CPNE0101075s

Stepanenko, S., Kuzoma, V., & Tymoshenko, K. (2023). Current state and directions of further circular agricultural economy development in ukraine. *Baltic Journal of Economic Studies*, Vol. 9, No. 4, p. 223–233. DOI: https://doi.org/10.30525/2256-0742/2023-9-4-223-233

Sytnyk, H. V., Blakyta, H. V., & Huliaieva, N. M. (2020). Economic security of the enterprise in Ukraine: a monograph. Kyiv.

Tiutchenko, S. M. (2021). Ensuring the economic security of enterprises in the conditions of transformational changes in the economy: a monograph. Dnipro: Bila K.O.

Volyk, S., Kukhar, O., & Bril, M. (2023). Management of the agricultural enterprises' competitiveness in the context of food security. *Baltic Journal of Economic Studies*, Vol. 9, No. 4, p. 88–95. DOI: https://doi.org/10.30525/2256-0742/2023-9-4-88-95

Volyk, S., Orel, A., & Senchyk, I. (2023). The role of economic security in ensuring competitive economic development of agricultural enterprises. *Baltic Journal of Economic Studies*, Vol. 9, No. 5, p. 73–80. DOI: https://doi.org/10.30525/2256-0742/2023-9-5-73-80

Zinenko, K., & Kobielieva, T. (2022). Economic security of the enterprise: methodological essence and components of formation. *Bulletin of the National Technical University "Kharkiv Polytechnic Institute"* (economic sciences), Vol. 4, p. 9–16.

Received on: 07th of February, 2024 Accepted on: 19th of March, 2024 Published on: 05th of April, 2024