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**UDK 631.1:330.131.7:338.24**

### **DIAGNOSIS OF THE STATE OF ECONOMIC SECURITY OF AGRICULTURAL ENTERPRISES IN THE CONTEXT OF CHALLENGES AND EXTRAORDINARY CIRCUMSTANCES**

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The components of economic security form the general attributes of effective production and expansion of own resources, which ensure the activation of economic potential based on the use of the latest IT technologies with temporal and spatial dynamics. This necessitates the use of measurable indicators that allow for the assessment of exogenous (external economic conditions of agricultural enterprises) and endogenous (internal) factors of economic efficiency (the structure of the property complex, productivity, and profitability of agricultural enterprises). Therefore, the priority of our research is to increase the level of economic security of agricultural enterprises as a system that embodies a state of stable equilibrium of components in the trajectory of resource flow when the environment in which they operate changes, taking into account the restructuring of the factors affecting the security system.

The modern scientific approach to ensuring the economic security of agricultural enterprises under the influence of extraordinary circumstances is adapted to conducting a comprehensive diagnosis of its stability in relation to EU requirements and involves identifying ways to prevent or mitigate the impact of threat factors, challenges, and extraordinary circumstances in economic activity. Economic theory offers well-known approaches to diagnosing the criteria for ensuring the

stability of the economic security of agricultural enterprises, with the mitigation of threat factors, major dangers, and challenges [4, p. 47].

When establishing criteria for identifying threat factors, challenges, and extraordinary circumstances for diagnosing the state of economic security stability of agricultural enterprises, it is advisable to classify them by identifying the object of danger or the object of protection and to develop a system for measuring them that is not exhaustive and definitive, but takes into account all the defining elements of classical economic theory of value, marginal utility theory, and security theory [5].

From the perspective of ensuring the economic security of agricultural enterprises under the influence of European integration processes, several interrelated functions are being developed, namely: the use of EU resources (grants) to improve the economic activities of enterprises in both exogenous and endogenous environments; identification of threat factors, challenges, and extraordinary circumstances of European integration processes in terms of timing and scale of action; activation of diagnostic tools to minimize threat factors, challenges, and extraordinary circumstances of European integration processes in the economic activities of enterprises; elimination of threat factors, challenges, and extraordinary circumstances of European integration processes on the stability of economic security of enterprises in the current and future periods. These functions allow stabilizing the state of economic security of enterprises and adequately responding to undesirable events of European integration processes [2].

A methodological approach is presented that harmonizes and balances the indicators of the components of ensuring the stability of economic security for agricultural enterprises, allowing the state of the constraints in the exogenous and endogenous environment of development of entities to be determined in order to achieve the desired result (fig. 1).

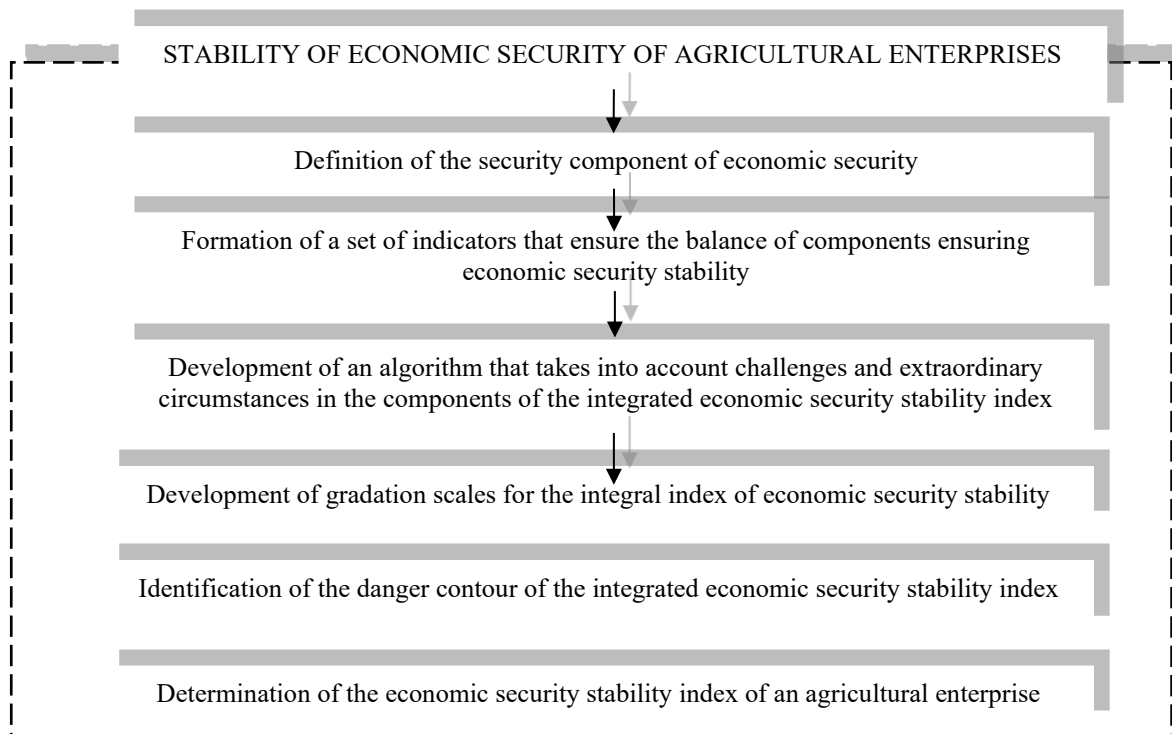


Fig. 1. Stages of implementation of a methodological approach to diagnosing the state of economic security of an agricultural enterprise when identifying challenges and extraordinary circumstances in terms of timing and scale of action

*Source: constructed based on data [3]*

At the first stage, priority indicators are determined to balance the components of ensuring an integrated system of economic security for agricultural enterprises based on the specifics of the industry and the constraints of a sustainable development environment: by degree of technology

stability – stable, variable, productive; by the significance of production factors – capital-intensive, labor-intensive, material-intensive.

At the second stage, a matrix of pairwise comparisons of top-level indicators is compiled for the components of ensuring an integrated level of economic security stability in the face of challenges and extraordinary circumstances in terms of timing and scale of action, in relation to each bottom-level indicator.

The third stage involves determining priority indicators for ensuring an integrated level of economic security in challenging and emergency situations in terms of timing and scope.

At the fourth stage, using fuzzy set theory, the model for the integral assessment of the integral index of economic security stability of agricultural enterprises in conditions of challenges and extraordinary circumstances is optimized in terms of time and scale of action. The application of this fuzzy model allows for the ranking of agricultural enterprises according to their integral level of economic security stability.

An important direction in diagnosing the state of ensuring the stability of economic security of agricultural enterprises in conditions of challenges and extraordinary circumstances in terms of timing and scale of action is to determine the effect of the time trend of regularity and dynamism of growth of absolute indicators (profit, sales volume, cash flows, sources of financing, market value of the enterprise, etc.). Usually, the effects of time trends are linked to similar periods in the past: day to day, week to week, month to month, etc., taking into account weekends and holidays.

Time trends allow for short- and long-term assessment of agricultural enterprises' activities and identification of events that have negatively (positively) affected economic security, since in the system of distribution of the cost of funding sources, in the event of challenges and extraordinary circumstances in terms of timing and scale, the relationship between the level of threat and profitability is of fundamental importance. There is a constant direct proportional relationship between profitability and threats: the higher the expected return on invested own sources of financing, the higher the level of threat of not receiving it. Conversely, a lower level of profitability always corresponds to a lower level of threat. This necessitates the constant search for a compromise between profitability and threats [1]. At the same time, the chain “financing threat – profitability threat – solvency threat” is perhaps the only option for influencing the formation of the real value of sources of financing for agricultural enterprises, and therefore the manifestation of a crisis in the economic security of economic entities can be realized in quite different sequences.

Thus, the economic activity of agricultural enterprises is threatened by profitability issues. This threat subsequently turns into a threat to asset security, as the seasonal nature of production requires economic entities to incur expenses in the following period when the significant amount of resources accumulated in the previous period is insufficient to cover the expenses of the future period. Gradually, economic security declines and a threat to solvency emerges. Therefore, when determining the optimal amount of resources for generating income, as the main criterion for the stability of the economic security of agricultural enterprises, it is necessary to increase the maneuverability of own sources of financing and reduce the destabilizing effects of challenges and extraordinary circumstances in terms of timing and scale.

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