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Assessment of the level of economic security of the dairy industry of Ukraine

Abstract

Object: The aim of the study is to assess the level of economic security of the Ukrainian dairy industry in order to identify threats in a timely manner. The object of the research is the economic security of the dairy industry in Ukraine. The subject of the research is the process of assessing the level of economic security of the dairy industry in Ukraine.

Methods: statistical and comparative analysis, taxonomic method and golden section method.

Findings: The article builds a fractal model of economic security levels. The resource, commercial and social components are allocated to assess the economic security of the supersystem of the enterprise, namely, the dairy industry of Ukraine.

To assess the economic security of the supersystem of the enterprise, namely, the dairy industry of Ukraine, it is proposed to single out the resource, commercial and social components. The stages of the methodology for assessing the level of economic security of the dairy industry in Ukraine, as well as its ranges, are determined. Trends and external threats can be identified on the basis of an assessment, which will allow the enterprise to adapt and develop appropriate measures.

Conclusions: The scientific and methodological approach to assessing the level of economic security of the dairy industry in Ukraine has been improved. It is calculated using the method of taxonomic analysis by a posteriori parameters within the individual components (resource, commercial, social).

It was stated that there is practically no inflow of investments into the country, and further reduction threatens domestic demand. All this actualizes the solution of the problem of ensuring food security not only at the industry level, but also at the country level. It also requires the development of mechanisms to support agriculture and domestic producers.

It has been determined that for the economic security of an enterprise, the supersystem is the economic security of the industry and the country as systems of a higher rank. They go their own way of development and are its external determinants. After all, in a country and industry with a low level of economic security, even a successful (at the beginning) enterprise will face bankruptcy if nothing changes in the surrounding meso- and macro-environment.

Keywords: economic security, dairy industry of Ukraine, assessment, resource, commercial, social components, enterprise supersystem.

Introduction

Accelerating the processes of Ukraine's integration into the world economic system is one of the priorities. This will raise the level of the processing and food industries to world standards.

Ensuring economic security is a priority task of the state. The economy is the foundation of society, since the production, distribution and consumption of material goods are primary in relation to other spheres of life and determine the level and degree of society's viability. At the same time, food security as a component of economic security is one of the vital aspects of the existence of society, the state, the individual, and has always had a basic meaning in its system (Goychuk, 2004).

The purpose of food security is to ensure the vital interests of the population, namely, guaranteeing by the state an unhindered economic access of a person to food to maintain his normal life, as well as control over healthy and environmentally friendly food. In turn, the satisfaction of the internal needs of the population contributes to the growth of well-being, economic, social and environmental development. All this determines the relevance of managing economic security and its component — food.

Literature Review

A powerful methodological foundation for further study of the issues of economic security of the enter-

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prise was built by such leading Ukrainian scientists as: V. G. Alkema, Z. B. Zhivko, S. V. Kavun, G. V. Kozachenko, N. V. Kurkin, V. A. Lipkan, O. M. Lyashenko, I. P. Migus, G. A. Pasternak-Taranushchenko, Yu. S. Pogorelov, E. M. Rudnichenko, G. G. Savina, V. I. Franchuk, L. G. Shemaeva, A. M. Shtangret, as well as foreign researchers: L.F. Kozhenevsky, D. Lambert, V. P. Mak-Mak, S. Moril, T. Hanausek.

Foreign scientists devoted their works to theoretical and applied aspects of food security management: M. Andreus, J. Beghin, S. Carlson, O. Flaten, B. Hall, A. Keiji, S. Lee, M. Nord and Ukrainian scientists: S. O. Belaya, O. I. Hoichuk, O. V. Kochetkov, B. I. Paskhaver, N. V. Stezhko.

The problems and patterns of development of the dairy industry are studied by such scientists as T. A. Govorushko, V. Yu. Grinchuk, T. A. Gutsul, M. M. Kaletnik, V. M. Marchenko, A. I. Maslak, S. N. Nikolaenko, A. P. Osadchuk, M. K. Parkhomets, V. I. Radko, P. T. Sabluk, E. I. Khodakovsky.

Methods

The degree of validity and reliability of the obtained results, conclusions is confirmed by: using official data of the Food and Agriculture Organization of the United Nations (FAO); application in the study of materials from the Ministry of Agrarian Policy and Food of Ukraine; Ministry of Economic Development and Trade of Ukraine; statistical and analytical data of the State Statistics Service of Ukraine.

The methodological base is represented by analysis, synthesis, a systematic approach, as well as the taxonomic method and the golden section method.

Results

The science of synergy testifies: a large system dominates small systems included in it as subordinate elements of the hierarchy (the idea of co-evolution of systems). The direction of movement of the "super" system determines and allows predicting the direction of movement of the included microsystems. In other words, the channel (Malinetsky, 2012) of supersystem development dominates the trajectory of changes in lower-level systems. The supersystem projects its direction of development on the systems, suppressing trajectories that were not agreed with the development trajectory of the supersystem (Malinetsky, Potapov, 2000).

A fractal model of levels of economic security has been constructed, where it is clear that for the economic security of an enterprise as a system, the supersystem is the economic security of a country, industry, region as systems of a higher rank that go their own way of development and are its external determinants (Fig. 1). Indeed, in a country and industry with a low level of economic security, even a successful (at the beginning) enterprise will face bankruptcy if nothing changes in the surrounding meso- and macro-environment. Therefore, the assessment of the economic security of the macrosystem is very relevant.

In our study, the economic security of the dairy industry was chosen as a system. Therefore, the result of self-organization is a system of coherent or coordinated relationships that provide a cooperative effect:

- 1) internal coherent relationships in a separate subsystem (relationships between employees of the enterprise);
- 2) internal coherent relationships between subsystems of one system (relationships between the functional divisions of the enterprise, teams and work groups);
- 3) external coherent relationships between different systems (relationships between competitors (dairy processing enterprises, holdings, corporations), between suppliers (agricultural producers and households), between consumers, the state, the banking system, the stock market, international business).

Vertical and horizontal cooperation are considered as ways of integrating enterprises, as well as a tool for their adaptation (Prokopenko, 2020).

Scientists in the field of management conditionally divide the external environment into the environment of direct impact and the environment of indirect impact.

According to A. Elbing, the direct impact environment includes factors that directly affect the organization's operations and are directly affected by the organization's operations. These factors include suppliers, workforce, government laws and regulations, customers, and competitors. The environment of indirect impact is understood as factors that may not have a direct immediate impact on operations, but nevertheless affect them. Here we are talking about such factors as the state of the economy, scientific and technological progress, socio-cultural and political changes, the influence of group interests and events that are significant for the organization in other countries (Elbing, et al., 1974).

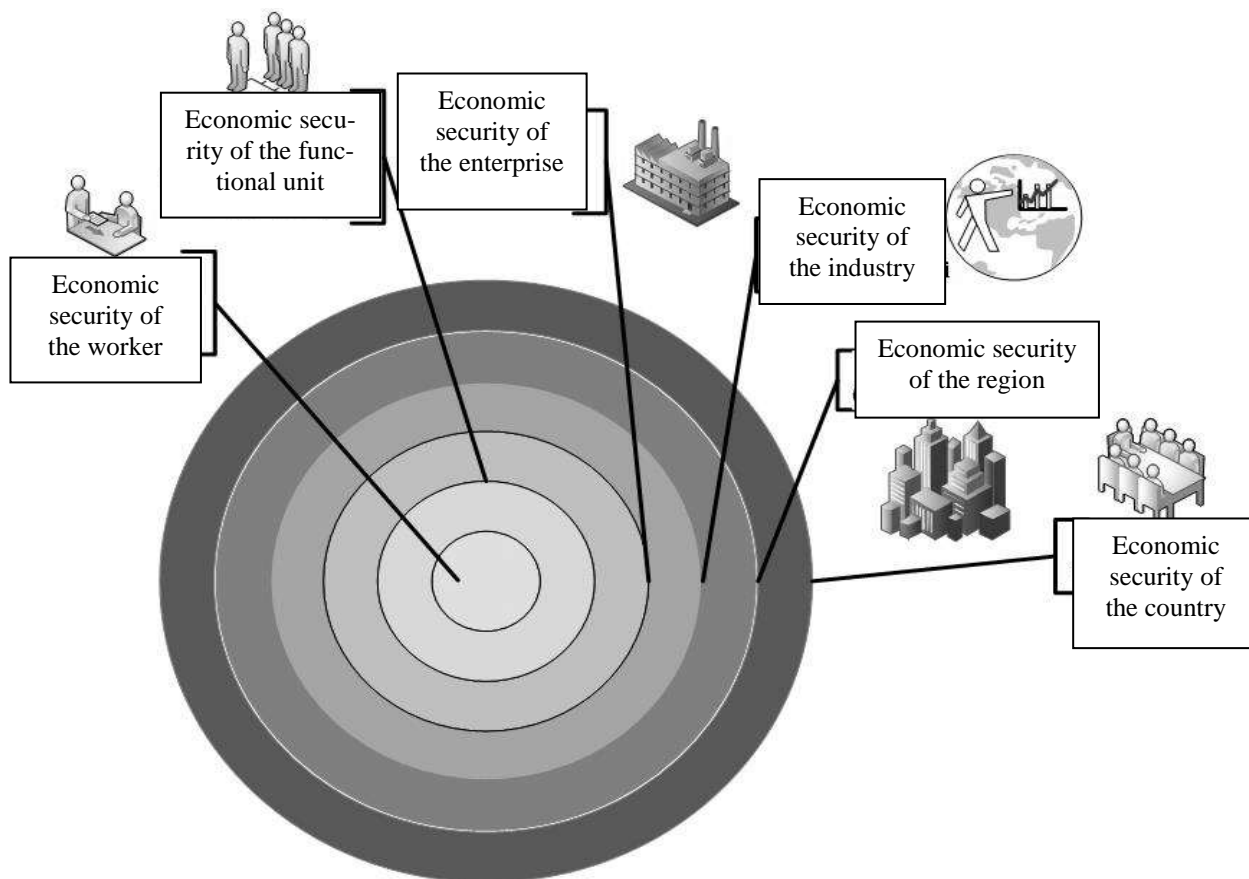


Figure 1. Fractal model of levels of economic security.

Note – compiled by the authors.

For entities engaged in foreign trade operations one of the main subjects of such interaction is customs. It is customs that control the movement of goods through the country customs border, perform part of the state fiscal functions and directly affect the economic security of enterprises subjects of foreign economic activity (Rudnichenko, et al., 2019).

In the literature, PEST analysis is used to analyze the factors of indirect environmental impact. The following areas: political (P), economic (E), social (S) and scientific and technical (T) are distinguished (Kotler, Keller, 2018).

It is important to explore the traditional program-target approach in enhancing the country's innovative development; identify the features, functional nature and macrostructural priorities of various country options for state programs for innovative development (Gordeeva, et al., 2017).

Obviously, there is a need to limit the analysis of the external environment only to those aspects on which the economic security of the enterprise depends decisively. Therefore, when assessing the economic security of the enterprise supersystem, namely the dairy industry of Ukraine, it is proposed to single out the resource, commercial and social components.

“The resource component” is the first component of the proposed assessment methodology. It is divided into two components: “The market of raw materials” and “The market of production resources”. “The market of raw materials” includes 11 parameters: the volume of milk production by all types of farms; the volume of milk sales to processing enterprises by all types of farms; profitability of milk in agricultural enterprises; price index of agricultural enterprises for milk; household price index for milk; number of cows; productivity of cows; purchase price of milk; fodder sales price index; the size of the agricultural enterprise (ha); index of capital investment in agriculture.

Parameters — the volume of milk production and the volume of milk sales to processing enterprises represent the capacity of the raw material market. This is the amount of raw milk in natural terms per year, which can be provided by agricultural enterprises and households to enterprises.

The milk price index characterizes changes in the ability of enterprises to purchase raw materials, and

the feed price index characterizes the ability to provide farms with feed. The purchase price reflects the ability of farms to sell their agricultural products.

The development of the raw materials market of dairy enterprises is influenced by the development of agriculture in the country, especially the reproduction of cattle (number of cows) and the quality of its milk yield (productivity of cows). The market for raw materials is also influenced by the size of agricultural enterprises (ha), which is closely related to the process of concentration of production. The larger the size, the more the fixed assets and labor force are concentrated in order to increase agricultural production.

The index of capital investments in agriculture reflects the change in their volumes, namely the change in the value of invested tangible and intangible assets in agriculture by economic entities.

“The market of production resources” includes 27 parameters. They characterize the efficiency of the use of labor, financial and material resources.

The parameters characterizing the labor market of dairy products producers include: employers' need for workers to fill vacant jobs (vacancies); staff turnover; average monthly salary; professional development of personnel; the index of the physical volume of labor productivity (a generalizing indicator of labor productivity that characterizes the effectiveness of its costs in the production of dairy products); the number of employed workers; personnel costs.

Financial resources characterize the potential for the development of the financial market, that is, parameters that affect the possibility of investing in scientific, technical and innovative activities of dairy industry enterprises. This concerns the possibilities of attracting investments, lending (average annual interest rate on loans, short-term bank loans), as well as the use of equity, current assets, current accounts payable and receivable, value added for expenses. This also includes the profitability of the operating activities of enterprises and the share of enterprises that have received a loss.

The parameters characterizing the efficiency of the use of material resources include: depreciation of fixed assets; index of the physical volume of capital productivity (generalizing indicator of labor productivity, calculated on the basis of indices of industrial production and fixed assets); the number of introduced new technological processes, including low-waste, resource-saving ones.

It is very important to implement the “Green Economy”, that is, an environment conducive to sustainable growth due to the dominance of clean production, the use of alternative energy sources, resource conservation technologies, where ecological progress and development of ecological culture are actively encouraged (Karibayeva, et al., 2022).

“The commercial component” is the second component of the valuation methodology. It includes 12 parameters: the volume of sold dairy products; consumption of milk and dairy products per capita and consumption fund; consumer price index for milk and the average value of the world price index for milk; export and import of milk and dairy products; retail turnover of milk and dairy products; the share of their sales through the trading network of enterprises; the number of food shops and markets; the degree of concentration of enterprises in the dairy industry.

The actual market capacity is the volume of dairy products sold by all enterprises operating in the market. It corresponds to the current market demand.

Consumption represents the ability of the market to purchase a certain amount of products, that is, for companies, it is a benchmark for optimal satisfaction of demand. It can be noted that demand is not the whole need, but only the solvent part, consumed not by a potential buyer, but by a real one. The consumption fund is an indicator of the capacity of the domestic market, calculated as the product of the annual average per capita consumption of dairy products and the total population (potential consumers). It is an important component for developing supply and demand balances and determining food security for a particular product. The difference between production and consumption shows the part of the market not occupied by dairy producers.

Changes in market conditions occur in accordance with certain supply and demand ratios, and the price is the determining general factor for shifts. The dynamics of the consumer price index for milk characterizes changes in the ability of consumers to purchase goods. In this context, it is also necessary to take into account the index of world prices for products.

The sales market is characterized by parameters that determine its potential and contribute to the sale of products. Among them, these are foreign trade (export of dairy products) and domestic trade (retail turnover of milk and dairy products; the share of their sale through the trade network of enterprises; the number of food stores and markets).

To quantify competition in the dairy industry, the degree of concentration of enterprises is calculated based on the Herfindahl-Hirschman index. Or the ratio of the volume of sales in the market to the number of

enterprises in the industry.

Competition is not static. It develops under the influence of various factors; the forms and methods of competitive relations are being transformed, the criteria for competitive advantages, competitiveness, etc. are changing (Syzdykova, et al., 2020).

“The social component” is the third component. It includes 10 parameters: the population of the entire country and the population in rural areas; the number of agricultural service cooperatives; unemployed population of working age; total resources on average per month per household; index of real monthly salary of employees; consumer price index; consumer price index for housing, water, electricity, gas and other fuels; population with average per capita total expenditures per month below the subsistence level; total household spending on milk and cottage cheese.

The purchasing power of the population is the amount of savings and money that potential buyers can use to purchase goods. Of course, it depends on the price level. The consumer price index for housing, water, electricity, gas and other fuels shows, firstly, the possibility of providing the population with them (the depreciation of money negatively affects the purchasing power of consumers), and secondly, it shows the possibilities of providing producers with them (rising the price level affects the cost of production).

Also, purchasing power is affected by the level of income of the population, which is characterized by such parameters as: the index of real monthly wages of employees and total resources on average per month per household. The following parameters reflect the low solvent demand of a significant part of the population: total household expenditures on milk and cheese and the number of people with average per capita total expenditures per month below the subsistence level.

The demographic crisis is a non-monetary factor in the decline in purchasing power. Naturally, the population of the entire country characterizes potential consumers, while the population in rural areas and the number of agricultural service cooperatives characterize the labor and material resources of the agro-industrial complex.

To obtain an assessment of the level of economic security of the dairy industry in Ukraine, the author proposed the use of the taxonomic analysis method, which was developed by the Polish mathematician V. Pluta (Pluta, V., 1980).

The stages of the methodology for assessing the level of economic security of the dairy industry in Ukraine are shown in Fig. 2.

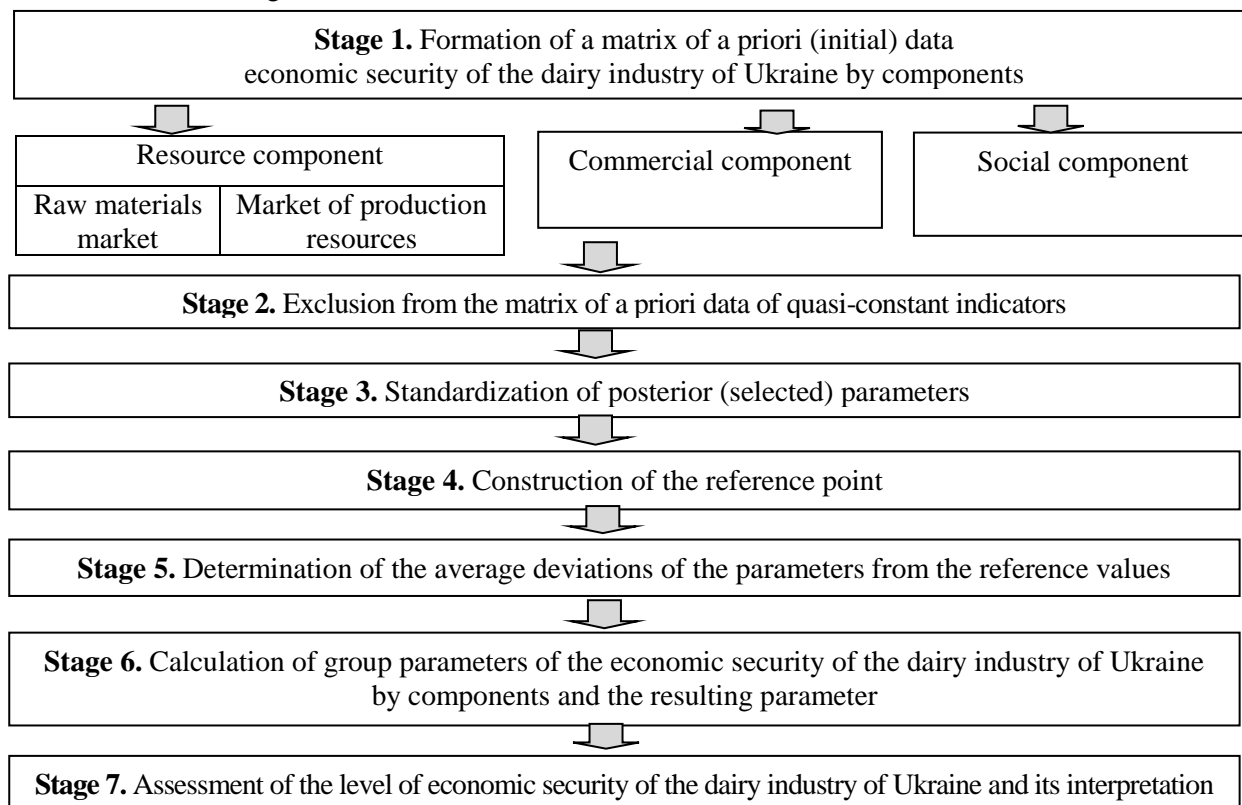


Figure 2. Stages of the methodology for assessing the level of economic security of the dairy industry in Ukraine
Note – compiled by the authors.

To assess the level of economic security of the dairy industry in Ukraine, the main issue is to determine the parameters. On their basis, it can be characterized using the available statistical data for 2016–2021.

Stage 1. Formation of a matrix of a priori (initial) data.

The assessment of the level of economic security of the dairy industry in Ukraine is carried out according to three components: resource, commercial and social. For each component of the economic security of the dairy industry and for their components, initial data matrices are also built. They make up a common matrix, which includes n-parameters. They cover various aspects of the economic security of the industry.

The raw data in the form of a matrix make it possible to study changes in the values of parameters describing the level of economic security of the dairy industry of Ukraine over time.

The matrix of initial (a priori) data can be represented as follows:

$$X = \begin{pmatrix} x_{11} & \dots & x_{1k} & \dots & x_{1n} \\ x_{21} & \dots & x_{2k} & \dots & x_{2n} \\ \cdot & \cdot & \cdot & \cdot & \cdot \\ x_{i1} & \dots & x_{ik} & \dots & x_{in} \\ \cdot & \cdot & \cdot & \cdot & \cdot \\ x_{\omega 1} & \dots & x_{\omega k} & \dots & x_{\omega n} \end{pmatrix}, \tag{1}$$

where

ω — number of periods ($i = 1, 2, \dots, \omega$);

n — number of parameters ($k = 1, 2, \dots, n$);

x_{ik} — value of the k -th parameter for the i -th period.

Stage 2. Exclusion from the matrix of a priori data of quasi-constant indicators. This is the removal from the composition of the formed (from theoretical considerations and at the expert level) a priori set of those parameters that do not play a decisive role in calculating the level of economic security of the industry. To do this, the coefficient of variation (V_k) is calculated by formula (2):

$$V_k = \frac{S_k}{x_k}, \tag{2}$$

moreover:

$$\bar{x}_k = \frac{1}{\omega} \sum_{i=1}^{\omega} x_{ik}, \tag{3}$$

$$S_k = \left[\frac{1}{\omega} \sum_{i=1}^{\omega} (x_{ik} - \bar{x}_k)^2 \right]^{1/2}, \tag{4}$$

where

S_k — mean square deviation of the k -th individual indicator;

\bar{x}_k — the average arithmetic value of the k -th individual indicator;

x_{ik} — the value of the k -th indicator for the i -th period;

ω — number of periods (6 years).

If the value $V_k \leq \varepsilon$, where ε — some given small value (example, $V_k < 0,1$), then the indicator is considered quasi-constant (low-informative) and is excluded from further research (Pluta, 1980). The rest of the indicators are equivalent.

Thus, the set of a posteriori data consists of the values of 38 parameters for 2016–2021, that is, the matrix of the selected parameters is characterized by the following dimension: $n = 38$. The results of a posteriori selection of parameters are given in (Korchevska, 2016).

Stage 3. Standardization of posterior (selected) parameters.

The parameters that form the posterior data matrix have different measurement units, which require their reduction to a one-dimensional form based on the mathematical standardization procedure according to the formula:

$$z_{ik} = \frac{x_{ik} - \bar{x}_k}{S_k},$$

where

z_{ik} — standardized value of the k -th separate indicator for the i -th period;
 S_k — mean square deviation of the k -th individual indicator;
 \bar{x}_k — the average arithmetic value of the k -th individual indicator;
 x_{ik} — the value of the k -th indicator for the i -th period.

An important stage in the construction of the z_{ik} indicator is the distribution of indicators of the standardized matrix into stimulators. Their growth leads to an increase in the level of economic security of the dairy industry, and disincentives reduce it.

Stage 4. Construction of the reference point. The reference values of each parameter form the coordinates of the reference point (Pluta, 1980).

The reference point is the best indicator for the studied period, which is characterized by the highest value among stimulators and the lowest among destimulators. The standard is a point $P0$ with coordinates:

$$(z_{01}, z_{02}, \dots, z_{0k}).$$

The maximum values are selected among the stimulating indicators, and the minimum values are selected among the destimulating indicators:

$$z_{0k} = \begin{cases} \max z_{ik} & \text{for stimulators} \\ \min z_{ik} & \text{for destimulators} \end{cases} \quad (6)$$

where

z_{0k} — coordinate of the reference point (the best indicator for the studied period).

Stage 5. Determination of the average deviations of the parameters from the reference values.

The average distance between specific parameters for the i -th period and the corresponding coordinate of the reference point ($P0$) is calculated by the formula:

$$C_{i0} = \left(\sum_{k=1}^{\omega} (z_{ik} - z_{i0})^2 \right)^{1/2} \quad (7)$$

After determining the average distance of the values of all indicators from the corresponding reference values, we obtain the distance matrix:

$$C = \begin{pmatrix} 0 & c_{12} & \dots & c_{1\omega} \\ c_{21} & 0 & \dots & c_{2\omega} \\ \cdot & \cdot & \cdot & \cdot \\ c_{\omega 1} & c_{\omega 2} & \dots & 0 \end{pmatrix} \quad (8)$$

Stage 6. The calculation of group parameters of the economic security of the dairy industry of Ukraine by components and the resulting parameter of the economic security of the dairy industry of Ukraine is performed according to the formula:

$$d_i = 1 - C_{i0} / C_0 \quad (9)$$

$$\text{where } C_0 = \bar{C}_0 + 2S_0, \quad (10)$$

$$\bar{C}_0 = \frac{1}{\omega} \sum_{i=1}^{\omega} C_{i0}, \quad (11)$$

$$S_0 = \left(\frac{1}{\omega} \sum_{i=1}^{\omega} (C_{i0} - \bar{C}_0)^2 \right)^{1/2} \quad (12)$$

The economic interpretation of the d_i indicator is as follows: the closer the value of the integrated assessment is to one, the higher the level of economic security of the dairy industry of Ukraine.

Stage 7. Determination of the level of economic security of the dairy industry of Ukraine and its interpretation. Let us assume that the range of values of the resulting parameter of the economic security of the dairy industry of Ukraine is linearly subordinated. Then in the range of 0–0.200 there will be a low level, in the range of 0.201–0.400 — lower than average, in the range of 0.401–0.600 — average, 0.601–0.800 — higher than average, 0.801–1.00 — high level.

Changes that occur in the real world under the conditions of homeostasis grow exponentially, not linearly at the same rate. Therefore, it is necessary to rely on the concepts of the “golden ratio” and the oscillations of the “golden pendulum”. The first term in architecture is called the “golden ratio” or the Fibonacci number, which is 1.618. That is, the division of any value in the proportion of 62% and 38%. The second term “golden pendulum” maintains its stability under conditions of oscillation amplitude no more than 60–65 % of the maximum. In the opposite case, the system goes into a non-linear mode, in which its violation begins.

Since the range of values of the resulting parameter of economic security is in the range from zero to one, the linear range of changes is in the range of 0–0.621. Table 1 shows the results of using two methods and their average arithmetic value.

Table 1. Determination of ranges of the level of economic security of the dairy industry of Ukraine

Level of economic security	Low	Below average	Average	Higher than average	High
Based on the linear subordination of the series	0–0,200	0,201–0,400	0,401–0,600	0,601–0,800	0,801–1,00
Based on the ratio of the “golden section” and the “golden pendulum”	0–0,140	0,141–0,240	0,241–0,380	0,381–0,620	0,621–1,00
Averaged data	0–0,170	0,171–0,320	0,321–0,490	0,491–0,710	0,711–1,00

Note – calculated by the authors.

The result is an assessment of the level of economic security of the dairy industry of Ukraine (Table 2).

Table 2. Assessment of the level of economic security of the dairy industry of Ukraine

The name of the components	Years					
	2016	2017	2018	2019	2020	2021
1. Resource	0,1310	0,1459	0,3889	0,1689	0,1331	0,1411
<i>Level</i>	<i>Low</i>	<i>Low</i>	<i>Average</i>	<i>Low</i>	<i>Low</i>	<i>Low</i>
2. Commercial	0,2289	0,2619	0,5549	0,2452	0,1749	0,1461
<i>Level</i>	<i>Below average</i>	<i>Below average</i>	<i>Higher than average</i>	<i>Below average</i>	<i>Below average</i>	<i>Low</i>
3. Social	0,2712	0,2495	0,6508	0,2834	0,2621	0,1612
<i>Level</i>	<i>Below average</i>	<i>Below average</i>	<i>Higher than average</i>	<i>Below average</i>	<i>Below average</i>	<i>Low</i>
The assessment is general	0,1785	0,1890	0,4738	0,2067	0,1654	0,1407
<i>General level</i>	<i>Below average</i>	<i>Below average</i>	<i>Average</i>	<i>Below average</i>	<i>Low</i>	<i>Low</i>

Note – calculated by the authors.

The analysis showed that the resource component in the period 2016–2021 has a low level. Only in 2018 did it reach the average level. It can be said that this component is the most “bottleneck” of the dairy industry of Ukraine. Commercial and social components have the same levels. Thus, they reached a higher than average level in 2018, a lower than average level in 2016–2017 and 2019–2020, and a low level in 2021.

It can also be noted that in 2022, as a result of Russia's armed aggression and the implementation of the worst-case scenarios for the development of Ukraine, entropy trends intensified, which negatively affected the functioning of the dairy industry.

Therefore, the dairy industry as a system with its own behavior, a set of components and relationships has an internal potential, its own inconsistencies, which in conditions of imbalance become accumulators of further changes, as well as regular and random trends in its development.

According to the results of the evaluation of the economic security of the dairy industry of Ukraine, it

can be noted that its level has decreased in all components. This indicates the presence of internal contradictions and inconsistencies between subsystems of the dairy industry.

In general, assessing the level of economic security of the enterprise supersystem allows making a cross-section of the state of economic security of the dairy industry. This is a necessary condition for determining the bifurcation points of the economic security of a dairy enterprise. Also, on the basis of the assessment, emerging trends and external threats can be determined, which will enable the enterprise to adapt or develop appropriate measures.

Discussion

An assessment of the level of economic security of the enterprise's supersystem should be based on the main provisions of the taxonomic analysis method within the resource, commercial and social components of the economic security of the dairy industry. This is a necessary condition for identifying bifurcation points.

Conclusion

It was found that resource threats are the most acute for dairy enterprises. They can be conditionally divided into raw (material) and production (labour, technical, financial, etc.). The problem of the quantity and quality of raw milk is very relevant today, because the competitiveness of the finished product in any market depends on it.

It has been proven that in order to achieve success, dairy enterprises need radical reconstruction and modernization of the production base of food enterprises, equipping them with modern equipment, introducing the latest resource-saving and environmentally friendly technologies, transitioning the industry to an innovative development model, increasing the competitiveness of products, etc.

The food industry, as part of the agro-industrial complex of Ukraine, has always been attractive for investment and promising for further development. But the war, the fall in the income level of Ukrainians and the influx of imports can fundamentally change this situation. In modern conditions, when the inflow of investments into the country is almost non-existent, and domestic demand is threatened with further decline, it is necessary to find mechanisms to support agriculture and the domestic producer. Therefore, the problem of milk should be solved not only at the level of the industry, but at the level of the country, because it is about ensuring food security and health of the nation, because human life begins with the consumption of milk.

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Украинаның сүт өнеркәсібінің экономикалық қауіпсіздік деңгейін бағалау

Аңдатпа:

Мақсаты: Зерттеудің мақсаты — қауіптерді уақтылы анықтау үшін Украинаның сүт өнеркәсібінің экономикалық қауіпсіздік деңгейін бағалау. Зерттеу нысаны — Украинаның сүт саласының экономикалық қауіпсіздігі. Зерттеу пәні — Украинаның сүт өнеркәсібінің экономикалық қауіпсіздік деңгейін бағалау процесі.

Әдісі: Статистикалық және салыстырмалы талдау, таксономиялық талдау және алтын кима әдісі.

Қорытынды: Мақалада экономикалық қауіпсіздік деңгейлерінің фракталдық моделі құрастырылған. Кәсіпорынның ішкі жүйесінің, атап айтқанда Украинаның сүт саласының экономикалық қауіпсіздігін бағалау үшін ресурстық, коммерциялық және әлеуметтік компоненттерді бөлу ұсынылған. Украинаның сүт өнеркәсібінің экономикалық қауіпсіздік деңгейін бағалау әдістемесінің кезеңдері, сондай-ақ оның ауқымдары анықталды. Бағалау негізінде пайда болатын тенденциялар мен сыртқы қауіптерді анықтауға болады, бұл кәсіпорынға бейімделуге және тиісті шараларды жасауға мүмкіндік береді.

Қорытынды: Украинаның сүт өнеркәсібінің экономикалық қауіпсіздік деңгейін бағалауға ғылыми-әдістемелік тәсіл жетілдірілді, ол жеке компоненттер шегінде (қайта, коммерциялық, әлеуметтік) постериорлық параметрлер бойынша таксономиялық талдау әдісін қолдана отырып есептелген; ол қолда бар тәсілдерден айырмашылығы, жеке компоненттер арасындағы байланыстың интеграциялық сипатымен ерекшеленеді.

Елге инвестиция ағыны іс жүзінде жоқ екені, ішкі сұраныстың одан әрі қысқару қаупі бар екені айтылды. Осының барлығы салалық деңгейде ғана емес, сонымен қатар елдік деңгейде азық-түлік қауіпсіздігін қамтамасыз ету мәселесін шешуді өзекті етеді, бұл ауыл шаруашылығы мен отандық тауар өндірушілерді қолдау тетіктерін әзірлеуді талап етеді.

Кәсіпорынның экономикалық қауіпсіздігі үшін жоғары жүйесінің — өз даму жолынан өтетіні және оның сыртқы детерминанттары болып табылатын жоғары дәрежелі жүйелер ретінде саланың және елдің экономикалық қауіпсіздігі екені анықталды. Шынында да, экономикалық қауіпсіздік деңгейі төмен елде және өнеркәсіпте, егер қоршаған мезо- және макроортада ештеңе өзгермесе, табысты (бастапқыда) кәсіпорын да банкроттыққа ұшырайды.

Кілт сөздер: экономикалық қауіпсіздік, Украинаның сүт өнеркәсібі, бағалау, ресурстық, коммерциялық, әлеуметтік компоненттер, кәсіпорынның жоғары жүйесі.

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Оценивание уровня экономической безопасности молочной отрасли Украины

Аннотация:

Цель: Целью исследования является оценка уровня экономической безопасности молочной отрасли Украины, чтобы своевременно выявить угрозы. Объект исследования — экономическая безопасность молочной отрасли Украины. Предметом исследования является процесс оценивания уровня экономической безопасности молочной отрасли Украины.

Методы: Статистический и сравнительный анализ, таксономический анализ и метод золотого сечения.

Результаты: В статье построена фрактальная модель уровней экономической безопасности. Для оценки экономической безопасности надсистемы предприятия, а именно, молочной отрасли Украины предложено выделить ресурсный, коммерческий и социальный компоненты. Определены этапы методики оценки уровня экономической безопасности молочной отрасли Украины, а также его диапазоны. На основе оценки можно определить тенденции, которые зарождаются и внешние угрозы, что позволяет предприятию адаптироваться и разработать соответствующие меры.

Выводы: Усовершенствован научно-методический подход к оценке уровня экономической безопасности молочной отрасли Украины, который рассчитан с использованием метода таксономического анализа по апостериорным параметрам в пределах отдельных компонентов (ресурсного, коммерческого, социального); который, в отличие от имеющихся подходов, отличается интегрирующим характером взаимосвязи отдельных компонентов. Констатируется, что приток инвестиций в страну практически отсутствует, а внутреннему спросу грозит дальнейшее сокращение. Все это актуализирует решение проблемы обеспечения продовольственной безопас-

ности не только на уровне отрасли, но и на уровне страны, что требует разработки механизмов поддержки сельского хозяйства и отечественного производителя. Определено, что для экономической безопасности предприятия надсистемой является экономическая безопасность отрасли и страны как систем более высокого ранга, которые проходят свой собственный путь развития и являются ее внешними детерминантами. Ведь в стране и отрасли с низким уровнем экономической безопасности даже успешное (в начале) предприятие ждет банкротство, если ничего не изменится в окружающей мезо- и макросреде.

Ключевые слова: экономическая безопасность, молочная отрасль Украины, оценивание, ресурсный, коммерческий, социальный компоненты, надсистема предприятия.

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