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# STRATEGIC DIRECTIONS FOR ENSURING FOOD SECURITY OF UKRAINE IN THE CONTEXT OF ECONOMIC INTEGRATION<sup>4</sup>

A methodological approach to assessing the stability of the agri-food sector based on a system of production stability indicators, food shortages, effective demand and balanced diet has been justified in order to identify threats to food security related to the instability of agro-industry and market imbalance. The methodology for assessing the sustainability of the country's agri-food market makes it possible to quantify the threats to food security associated with the instability of agricultural production and market balance and to substantiate the directions of stabilising the functioning of the agri-food markets in Ukraine.

It has been defined that the key measures include an adaptation of the regulatory framework in accordance with the requirements of the WTO and the EU in the field of product quality and safety, consumer protection, mandatory audit of food industry enterprises for the compliance with safety and quality requirements, mandatory control of imported food products and import restrictions in accordance with sanitary and phytosanitary measures. It is supposed to use the mechanism of tariff quotas within the framework of bilateral trade agreements and also bans and restrictions on imports on the basis of sanitary and phytosanitary measures.

The directions of strengthening the role of Ukraine in ensuring international food security are to increase quotas for food imports to the EU on the basis of amendments to existing trade agreements, expand foreign sales markets for Ukrainian exporters, stimulate exports and attract small and medium-sized agricultural enterprises to participate in exports.

Keywords: food security strategy, strategic priorities, food security, economic integration, food import and export, a system for monitoring the quality and safety of agricultural products and food

JEL: Q10; Q18; Q17; O13; O21

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#### 1. Introduction

Recent years have seen the processes of globalisation to increasingly affect the food security of the state. The dependence of Ukraine's food security on the development of integration processes is due to both the geopolitical position and the significant potential of the agricultural sector of the economy. Therefore, the food security strategy should be implemented through effective government policy and the establishment of priorities for mutually beneficial cooperation with developed countries and the introduction of interstate standards. Integration of Ukraine with the countries of the European Union is especially important to ensure food security. European standards in the food sector serve as an example of the modernisation of public administration mechanisms and the development of the agricultural sector in Ukraine (Mostova, 2019). However, in recent years, despite significant shifts in the direction of European integration, the state management of the domestic agricultural sector is still characterised by insufficient coordination with European states and a lack of consistency in addressing strategic food security issues. The consequences of the issues identified include isolation of the European market from the products of the domestic agricultural sector, the lack of a comprehensive increase in the quality standards of Ukrainian production, increased import dependence on certain food products, which poses threats to the food security of Ukraine.

Therefore, the key strategic direction to ensure food security in the context of European integration of the agricultural sector should be the interstate coordination in the management of the industry within the framework of common European standards. It is the experience of the EU that is indicative of reforming the domestic agricultural sector and solving strategic issues of ensuring food security at the level of the member states and at the supranational level. When concluding the Association Agreement with the EU and the further acquisition by Ukraine of the full membership in the EU, the emphasis of ensuring food security should be set precisely on guaranteeing food independence, self-sufficiency and food quality and safety.

### 2. Background Paper

The scientific category "food security" in world practice reflects the state of the world food market, the food supply of the state or the union of states. The initial principles and approaches to define food security have been related to the food problem and global eradication of hunger. The Universal Declaration of Human Rights, adopted by the Resolution 217 A (III) of the UN General Assembly on 10 December 1948, testifies that everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services (Universal Declaration of Human Rights, 1948).

The right to adequate nutrition was enshrined in the Universal Declaration of Human Rights, adopted by the UN in 1948, which became the basis for further UN international legal instruments in the field of human rights.

The International Covenant on Economic, Social and Cultural Rights, adopted by UN General Assembly Resolution 2200 A (XXI) of 16 December 1966, defines food security as the right of everyone to an adequate standard of living for himself and his family, including adequate nutrition, clothing and housing, and the steady improvement of living conditions, and characterises the fundamental right of everyone to be free from hunger (International Covenant on Economic, 1966).

The introduction of the "food security" concept into international practice has been caused by the problem of food supply associated with the grain crisis in the World of 1972-1973. In 1974, the UN General Assembly officially declared the term "World Food Security", which meant ensuring stability in food markets and the availability of basic food products for all countries of the World (Universal Declaration on the Eradication of Hunger and Malnutrition, 1974, pp. 175-176). Later, in the 80s of the XX century, food security was not only about ensuring the availability and stable availability of food in the World, but also the sufficiency of food to enable people to lead an active and healthy life.

The "Food Security" concept was introduced into international scientific and political circulation in 1974, after the grain crisis of 1972-1973, by the UN General Assembly in the Universal Declaration on the Eradication of Hunger and Malnutrition (Universal Declaration on the Eradication of Hunger and Malnutrition, 1974) and the Resolution "International Commitments to Food Security in the World".

The Rome Declarations on World Food Security (1996, 2009) have established an international legal framework to ensure the right of everyone to have physical and economic access to safe and nutritious food sufficient to maintain and restore health, to lead an active and healthy life (Declaration of the world summit, 2009).

FAO enshrines a modern approach to defining national food security, which means state policy aimed at achieving the maximum level of food self-sufficiency by increasing its production, improving food supply, ensuring balanced consumption, protecting consumer rights, eradicating malnutrition and hunger (FAO, 1996; Voluntary guidelines to support, 2004).

The studies of Western economists often consider the problem of food security only at the international level, not counting the national or regional aspects (Policy and development, 2001, p. 23). Food security is defined as the state of the economy, which ensures the achievement by all residents at any time of the guaranteed access to food in the amount necessary for an active healthy lifestyle (Conway, Barber, 1990, p. 52). Scientists consider food security in the context of the dependence of a person, family, social group on what they can acquire to meet their nutritional needs (Sen, 1981, p. 131). Other scientists have studied food security from the point of view of public administration and the relationship between the influence of the country's natural and climatic conditions on the physical and economic availability of food (Peacock, 2012; Roberts, 2021; Rosegrant, 2015). It is worth to separately concern a number of scientific studies devoted to the formation of the strategy and policy of food security of the EU countries. The Common Agricultural Policy provides balanced regulation and support of the food market at the national and supranational levels, aimed at maintaining an adequate level of food security through an effective system of methods and mechanisms to protect against cheap imports and support agricultural production and food

exports (Candel, et al., 2014). The strategic directions of state regulation to ensure food security in the EU, cover the creation of a single food market (Keane, 2016; Quiroga, et al., 2017; Candel, Daugbjerg, 2020).

Researchers Aiyar A., Pingali P., Béné C. and others (Aiyar, Pingali, 2020; Béné, 2020) have studied modern challenges and threats to food security in the context of globalisation of economic processes and a pandemic. The issues of population food supply in the context of strengthening innovative development have been considered in the scientific works by Stephens, E. C., Jones, A. D., Parsons, D., Candel, J., Daugbjerg, C. (Stephens et al., 2018; Candel, Daugbjerg, 2020).

Foreign experts have not fully disclosed the issues related to the essence of food security as an object of strategic planning, as well as the ways to solve the problem of its unsatisfactory state, which is explained by the approach to the study of this phenomenon at the world level and the failure to take into account the specifics of the formation of economic development strategies and national agricultural production in individual countries.

Thus, foreign scientists mainly study the issues of food security and food availability on a global scale, focusing mainly on its state and not on dynamics and factors of influence; and they leave open the issue of national food security and its strategic security.

However, scientific literature and international legislative documents do not indicate the possibility of strategic provision of food security of the state in the long term, taking into account external economic factors and integration processes. The formation of a food security strategy in Ukraine shall be linked to the corresponding development strategy of the agrarian economy sector and integration processes; it shall organically fit into the process of forming a model of socio-economic development in Ukraine and be implemented within the framework of its economic development strategy (Mostova, 2019).

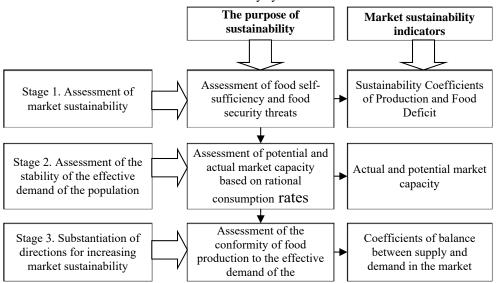
## 3. Methodology

The priority areas for ensuring food security include the achievement of an agri-food market balance in terms of supply and demand, which will ensure an adequate level of food consumption by the population. An important condition for a balanced market as a factor in ensuring food security is sustainability, which should be understood as the ability of market subjects to maintain the strategic level of production compliance and the infrastructural availability with the needs of the population for food in the context of changing environmental factors.

To identify threats to food security, associated with the instability of agricultural production and market imbalance, it has been proposed to use a methodology for assessing the agri-food market sustainability based on a system of indicators of the production sustainability, the magnitude of the threat (food shortage), the level of effective demand and balance, which makes it possible to carry out a comparative analysis of the sustainability of the market in terms of food products, regions, and identify the factors of stabilisation of the country's agrifood market.

The developed methodology for assessing the sustainability of the agri-food market is carried out in 3 stages and is based on determining the conditions for its formation and functioning and the actual level of sustainability according to the system of indicators (Figure 1).

Figure 1 A methodological framework for assessing the sustainability of the agri-food market in the food security system



Source: developed by the author on the basis of Rosegrant, 2015; Aiyar and Pingali, 2020.

Threats to food security associated with the instability of the dynamics of agricultural production shall be identified at the first stage. The coefficient of sustainability of agricultural and food production shall be determined:

$$K_i = \frac{P_{\min i}}{P_i} \cdot 100\%, \tag{1}$$

where:

 $K_i$  is the stability coefficient of the *i*-type food production, %;

 $P_{\min i}$  – the minimum volume of the *i*-type food production for the period;

 $\overline{P_i}$  – the average volume of food production for the researched period.

There is no normative value for this coefficient, however, if the stability of the food market is assessed on a 100 percent scale, and the greater the value of the stability coefficient in percentage, the higher the stability of the *i*-type food market will be.

The size of threats to food security due to the unstable dynamics of each type of food production shall be determined by the formula:

$$P_{i} = \frac{(P_{\min i} - \overline{N_{i}})}{N_{i}} \cdot 100\%, \qquad (2)$$

where:

 $P_i$  is the level of food shortages of the *i*-type, %;

 $\overline{N_i}$  – the average volume of demand for the *i*-type food on the market in accordance with the rational level of consumption (potential market capacity) for the period.

We shall consider the level of food shortage threatening in terms of value  $P_i \le 1$ .

Further, the assessment of effective demand shall be carried out in accordance with the volume of food production and consumer demand. The potential level of effective demand shall be estimated as the average potential food market capacity for the period under research, i.e., the product of population size and rational consumption of the *i*-type food. The actual level of demand shall be defined as the actual market capacity on average over the period researched.

Strategic directions for the development of the agri-food market shall be substantiated on the basis of the actual and potential capacity of the agri-food market and the ability of producers to maintain the supply and demand balance at the market in the long term. The next step is to assess the balance of the market based on the coefficients:

of potential demand and supply balance according to the formula:

$$K_{3_i} = \frac{(N_i)}{P_i},\tag{3}$$

where  $N_i$  is potential market capacity,

and of actual supply and demand balance according to the formula:

$$K_{3_i}^* = \frac{\left(N_i^*\right)}{P_i},\tag{4}$$

where  $N_{i}^{*}$  is the actual market capacity.

The food market of the *i*- type shall be considered unbalanced at  $K3_i \ge 1$  and at  $K3_i^* \ge 1$ , because the demand for food exceeds the volume of production in the period researched.

#### 4. Results

The main strategic directions for ensuring food security in Ukraine should be ensuring food independence and self-sufficiency. Food independence for certain types of food is equal to the ratio of the volume of imports and the capacity of the domestic market in physical terms and has a limiting maximum criterion at the level of 30% (Lozynska, 2007, p. 154). Food self-sufficiency is the ratio of production volumes to the domestic use of food in the territory of Ukraine. Food independence and food self-sufficiency are separate indicators of food security, showing how sensitive domestic demand is to imports and domestic production, respectively.

Analysis of food independence for all agri-food products based on the balances of food resources (Table 1) has shown that two trends can be identified in recent years:

- 1) decreased food independence and increased import expansion (2010-2015);
- 2) increased food independence and reduced level of import dependence (2016-2019).

Table 1 Food independence by main types of food in Ukraine, %

T CC 1	Years									
Types of food	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Meat and meat products	15.88	10.45	17.11	13.04	8.21	7.26	8.31	10.63	11.42	10.18
Milk and dairy products	2.89	2.75	4.20	5.47	3.54	0.87	1.18	1.56	1.86	3.53
Eggs	0.91	0.37	0.50	0.62	0.86	1.59	0.76	1.05	0.72	0.73
Sugar	5.30	2.73	0.59	0.65	0.43	0.26	0.35	0.54	0.22	0.31
Oil and other vegetable fats	47.08	39.86	39.09	49.05	37.62	30.42	43.95	48.19	34.13	35.51
Potatoes	0.51	0.65	0.36	0.37	0.63	0.29	0.45	0.39	0.88	8.78
Vegetables, melons and gourds	4.73	3.84	2.87	3.20	3.05	1.38	1.95	1.91	4.18	7.07
Fruits, berries and grapes	51.42	48.49	48.34	45.88	36.17	27.02	34.59	36.60	45.68	52.30
Bread and bread products	3.43	5.42	4.59	4.92	5.36	4.31	5.58	5.97	6.67	7.14
Food independence	7.66	6.98	7.30	7.67	5.88	3.87	4.94	5.60	7.14	9.54

Source: calculated by the author according to the information provided by the State Statistics Service of Ukraine.

Analysis of the table allows to conclude that food independence exceeds 30% for such food products as oil and other vegetable fats and fruits, berries and grapes. In general, it can be argued that food independence in Ukraine has been ensured for almost all types of food at a high level in recent years. The satisfaction of the needs of the population in vital food products is carried out at the expense of domestic production.

When analysing external economic aspects of the formation of food security of the state, it should be noted that one of the important factors to ensure and maintain it at the strategic level is Ukraine's participation in international trade. The development of foreign trade of the state requires its liberalisation. At the same time, the solution of the strategic task of

ensuring food security in the context of globalisation and reducing trade barriers has led to the fact that Ukraine has become a major importer of food. For certain types of food products, the level of food security has become a threshold. Food imports constitute currently 25-35%, while the share of imports in large cities of the country is about 50-60% (Zalizniuk, 2019, p. 33).

The balance of foreign trade in food using trade balance indicators, defined as the difference in the value of exports and imports of food, and the ratio of imports coverage by exports (balance state index), determined by the ratio of exports of food to imports, shall also be analysed (Lozynska, 2007, p. 120).

The results of the dynamics analysis and the structure of foreign trade in basic food products indicate that the coverage ratio of imports by exports of sugar in 2019 amounted to 62, eggs - 39.6, bread and bread products - 199.1, butter and other vegetable fats - 26.6, milk and dairy products - 1.8 (Table 2).

Table 2 Food foreign trade balance in Ukraine

	Trade balance, thousand tons						Import-export coverage ratio					
Types of food	2014	2015	2016	2017	2018	2019	2014	2015	2016	2017	2018	2019
Meat and meat products	17	87	121	118	116	226	1.1	1.6	1.7	1.5	1.4	1.9
Milk and dairy products	170	386	329	703	627	256	1.5	5.9	4.1	6.3	4.5	1.8
Eggs	140	115	107	148	182	193	21.0	11.5	22.4	22.1	46.5	39.6
Sugar	33	149	500	610	591	244	5.7	38.3	101.0	88.1	198.0	62.0
Oil and other vegetable fats	4355	4093	4885	5749	5727	6394	20.5	26.6	23.3	25.1	23.1	26.6
Potatoes	-23	-2	-22	-6	-6	-272	0.4	0.9	0.2	0.8	0.8	0.0
Vegetables, melons and gourds	69	117	88	315	246	-29	1.3	2.2	1.6	3.4	2.3	0.9
Fruits, berries and grapes	-506	-264	-449	-528	-547	-619	0.4	0.6	0.4	0.4	0.4	0.4
Bread and bread products	33160	38148	41211	42244	42660	57634	127.1	201.8	172.7	166.7	153.4	199.1

Source: calculated by the author according to the information provided by the (State Statistics Service of Ukraine).

The analysis of the independence of the food market is key in Ukraine's foreign trade in food, since, based on the results of calculations of its criteria, legal restrictions on the export and import of food or other restrictions on ensuring food security have been introduced without violating the international legal obligations of the state, in particular the WTO rules (Zalizniuk, 2019, p. 34).

Approbation of the developed methodology for assessing the stability of the food market for 2010-2019 has shown that there is a low level of stability in the production of sugar (67.8%), butter and other vegetable fats (64%), bread and bread products (65.2%) during the researched period.

Mostova, A. D., Kliuchnyk, R. M., Remizantseva, K. O. (2022). Strategic Directions for Ensuring Food Security of Ukraine in the Context of Economic Integration.

The level of threat to food security due to the shortage turned out to be the most threatening for meat and meat products (-41.4%), milk and dairy products (-42.1%), sugar (-24.3%), fruits, berries and grapes (-45.5%) (Table 3). This means that, for the specified types of food, on average, there was a shortage of domestic production volumes compared to consumption volumes over the period.

Table 3
Stability of the agri-food market of Ukraine for the main types of food and the level of food security threat in 2010-2019

Types of food	Sustainability ratio of food production, %	Level of threat to food security due to deficit, %
Meat and meat products	89.6	-41.4
Milk and dairy products	90.0	-42.1
Eggs	86.6	18.5
Sugar	67.8	-24.3
Oil and other vegetable fats	64.0	443.1
Potatoes	85.1	243.4
Vegetables, melons and gourds	87.9	25.5
Fruits, berries and grapes	85.3	-45.5
Bread and bread products	65.2	785.2

Source: calculated by the author according to the information provided by the State Statistics Service of Ukraine.

Table 4 shows the results of assessing the effective demand of the population and the balance of supply and demand in accordance with the actual and potential values of the indicators.

Table 4 Actual and potential level of effective demand and balance of the agri-food market of Ukraine in 2010-2019

Types of food	The actual level of effective demand	Potential level of effective demand	The ratio of potential supply and demand	The ratio of actual supply and demand
Meat and meat products	2311	3 514	1,53	1,02
Milk and dairy products	9138	16 691	1,55	0,84
Eggs	736	736	0,73	0,73
Sugar	1512	1 669	0,34	0,33
Oil and other vegetable fats	558	571	0,03	0,03
Potatoes	6038	5 447	0,54	0,60
Vegetables, melons and gourds	7036	7 072	2,80	2,78
Fruits, berries and grapes	2327	3 953	0,07	0,04
Bread and bread products	4738	4 436	0,04	0,04

Source: calculated by the author according to the information provided by the State Statistics Service of Ukraine.

The analysis has revealed that the potential demand for meat and meat products, milk and dairy products, vegetables and melons and gourds is not balanced in Ukraine, as well as the

actual demand for meat and meat products, vegetables and melons and gourds, since the balance coefficients exceed 1. This means that it is necessary to increase the volume of production of these types of food, or compensation through imports in order to meet the consumer demand of the population.

#### 5. Discussion

The economic integration provides that it is important to assess and strengthen food self-sufficiency. One of the means for increasing food independence is to increase the volume of domestic production. Analysis of food independence and self-sufficiency in previous years has shown that the potential of the agricultural sector of Ukraine can meet the domestic needs of the state for food. Even the actual share of agri-food imports can be replaced by domestic production. Import-substituting should be primarily food products for final consumption, sold directly to the population through a network of retail trade enterprises. At the same time, it is necessary to replace imported raw materials with Ukrainian counterparts at equal price and of the same quality. Imports of commodities, without which domestic food production is unprofitable or impossible, should be carried out with a minimum processing degree in order to create maximum value-added within the state. It is necessary to establish priority sectors in terms of import substitution, as well as constant monitoring of imports and sales of imported food products in the domestic market.

The analysis conducted has revealed that meat products, fish products, fruits, berries, grapes and the like have the greatest potential for domestic production. State support is carried out through the application of tariff and non-tariff protection mechanisms at the maximum level permitted by agreements with the WTO and the attraction of investments for the modernisation and development of strategically important sectors of the agricultural sector (beet growing, vegetable growing, livestock, fish farming, sugar production and others).

An important strategic task in the context of integration into the international economy is to improve the commodity structure of Ukrainian exports. It is predominantly of raw material nature with a large share of crop production. Significant volumes of agricultural raw materials are exported to the EU countries, then processed at foreign enterprises and imported into Ukraine in the form of finished products. Ensuring food security requires an increase in the volume of products processing by domestic food industry enterprises and in the export of products with higher added value. Now the investment climate within Ukraine does not facilitate international capital import. The main strategic directions for its improvement should be the trade policy mechanisms, stimulation of the joint ventures creation and joint investment projects development with the EU in the trade and economic sphere (Ostashko, 2016).

The strategic direction to ensure food security in the context of Ukraine's integration into the world economy should be the improvement and development of the food quality and safety control system.

The EU-Ukraine Association Agreement prescribes that the state has pledged to create conditions for the development of trade and economic relations with the aim of stage-by-

stage integration of Ukraine to the EU market through a free trade zone, accelerate economic reform based on market principles and adapt legislation in the food sector to EU legal norms. The State Service of Ukraine for Food Safety and Consumer Protection has been established in response to the requirements established.

Sanitary and phytosanitary measures are aimed at protecting consumers, animals and plants from pathogens and pests (hazardous organisms) that may be found in goods imported. The WTO rules prescribe that a state has the right to create its own system of protection, which shall be scientifically well-founded, based on international standards and recommendations and not contain hidden obstacles to food imports (Agrarian and rural development, 2018, p. 106). Ukraine shall adapt more than 250 EU acts into national legislation in such areas as state control in the field of sanitary and phytosanitary measures, food and feed safety, animal health and welfare, plant health, etc., in accordance with the action plan for the implementation of the Association Agreement in the field of sanitary and phytosanitary measures by the end of 2021 (Ostashko, 2016).

A European model of the food safety and quality assurance system has been introduced in Ukraine in order to achieve the objectives set at the legislative level (Ostashko, 2016).

A clear and transparent system of registration of certification bodies, market operators and organic seeds has been introduced, a mechanism of state control (supervision) over the activities of subjects of the organic market has been determined and establishes their responsibility for violation of legislation in this area. The procedures for certification of organic production and circulation of organic products have been regulated, and requirements for certification bodies and their functions have been established.

The norms of the current legislation have been adapted to the requirements of the EU in the field of trade in plants, as well as plant seeds, products derived from plants, fruits and vegetables, and also in the field of animal health and welfare, private veterinary practice, the circulation of veterinary drugs (Candel et al., 2014).

A large-scale work has been carried out in the direction of Ukraine's integration into the EU economy, aimed at developing the regulatory framework and its adaptation to international standards in order to ensure food security of the state by ensuring the safety and quality of agricultural products and food.

An important strategic direction to ensure food security is strengthening the competitive position of Ukraine in the international food market and using the opportunities of the Free Trade Zone with the EU for the development of domestic exports.

Thus, ensuring food security in the context of integration into the world economy, including the EU economy, requires Ukraine to take both justified measures to reduce imports of goods, the production of which is more expedient within the country, and to make an increase in exports to EU countries in order to strengthen the role of the state in the world markets and ensure global food security. To increase exports, it is necessary to increase quotas for duty-free import into the EU of goods produced primarily or at least partially by small and medium-sized producers (honey, mushrooms, processed tomatoes, grape and apple juice, etc.). It is necessary to promote these products in the EU markets under their own brands, which will allow them to be sold at a price favourable for export outside of zero-tariff quotas.

Strengthening the role of Ukraine in solving the world food problem lies in the implementation of mechanisms for increasing the competitiveness of domestic goods in international markets and increasing food exports. Government regulatory mechanisms should be flexible enough to protect domestic producers and at the same time comply with WTO requirements, in particular when applying protective measures such as duties and import tariffs on food. It is also necessary to strengthen state control over monitoring the balance of food to prevent losses from export restrictions.

Strengthening the food security of the state based on the protection of the internal market is based on a system of mechanisms for integrating the agricultural and food sectors and the domestic market of agricultural products and food into the global economic system and adapt the means of quality control and safety of products and food to the international standards.

Ensuring Ukraine's national interests in the international agricultural market and food independence requires the creation of an optimal structure for export-import operations. For this, within the framework of the food security and implementation strategy, it is necessary to continuously monitor the dynamics and structure of imports, track and analyse important export-oriented goods and establish indicative indicators for limiting their imports, and adopt the national concept of food independence as a component of the state food security strategy.

The system of strategic priorities for ensuring food security of the state is subject to a common strategic goal – strengthening the food independence of Ukraine through the mechanisms of protecting the domestic agri-food market and strengthening the international position in solving the global food problem, maximising the potential of domestic agro-industrial production. As a result, this makes it possible to take into account external and internal threats to food security within the context of intensification and deepening of economic integration processes and substantiate the appropriate mechanisms for the formation and implementation of a food security strategy in order to most effectively use the internal potential and obtain strategic advantages from foreign trade and interstate cooperation in the food sector.

#### 6. Conclusions

Achieving the stability and balance of the agri-food market in terms of supply and demand is a priority for ensuring food security and an adequate level of food consumption by the population. Methodological provisions have been developed to assess the stability of the agri-food market based on a system of indicators of production stability, the magnitude of food shortages, and the level of effective demand and balance. Based on the calculations, it has been found that there is a low level of sustainability in the production of sugar (67.8%), butter and other vegetable fats (64%), bread and bread products (65.2%) in 2010-2019. The level of threat to food security due to a deficit in domestic production turned out to be the most threatening for meat and meat products (41.4%), milk and dairy products (42.1%), sugar (24.3%), fruits, berries and grapes (45.5%). Therefore, in order to meet consumer demand, it is necessary to increase the production of these types of food or to compensate for them through imports, which threatens food independence in the long term and will contribute to the further degradation of agro-industrial production.

The strategic directions for ensuring the food security of the state in the context of Ukraine's integration into the world economy is the improvement and development of the system of control over the quality and safety of agricultural products and food in accordance with international standards, increasing food independence and self-sufficiency in products with a high rate of surplus-value, strengthening the role of Ukraine in ensuring international food security and increasing exports of food and organic agricultural products. To do this, it is necessary to harmonise the regulatory framework in accordance with the requirements of the WTO and the EU in the areas of product quality and safety, consumer protection, conduct a mandatory and regular audit of food industry enterprises for compliance with safety and quality standards, as well as strengthen control over the imported products.

It is reasonable to ensure food independence and self-sufficiency through mechanisms for protecting the internal market based on import restrictions, government incentives for the production of certain types of food products, the use of the mechanism of tariff quotas within the framework of bilateral trade agreements, bans and restrictions on imports based on sanitary and phytosanitary measures. In addition, the strategic directions for increasing the role of Ukraine in international food security are an increase in quotas for food imports to the EU member states, the development of external sales markets for Ukrainian exporters, government stimulation of exports and the participation of small and medium-sized businesses in it.

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