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## MECHANISM FOR ENSURING FOOD SECURITY UNDER GLOBALIZATION

*The article specifies the essence and the contents of food security, studies the national peculiarities of food supply, offers the mechanism for ensuring food security under the conditions of globalization.*

*Keywords:* food; food security; food supply; consumption; globalization.

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## МЕХАНІЗМ ЗАБЕЗПЕЧЕННЯ ПРОДОВОЛЬЧОЇ БЕЗПЕКИ В УМОВАХ ГЛОБАЛІЗАЦІЇ

*У статті уточнено сутність та зміст продовольчої безпеки, досліджено національні особливості продовольчого забезпечення, запропоновано механізм забезпечення продовольчої безпеки в умовах глобалізації.*

*Ключові слова:* продовольство; продовольча безпека; продовольче забезпечення; споживання; глобалізація.

*Табл. 2. Рис. 1. Літ. 12.*

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## МЕХАНИЗМ ОБЕСПЕЧЕНИЯ ПРОДОВОЛЬСТВЕННОЙ БЕЗОПАСНОСТИ В УСЛОВИЯХ ГЛОБАЛИЗАЦИИ

*В статье уточнены сущность и содержание продовольственной безопасности, исследованы национальные особенности продовольственного обеспечения, предложен механизм обеспечения продовольственной безопасности в условиях глобализации.*

*Ключевые слова:* продовольствие; продовольственная безопасность; продовольственное обеспечение; потребление; глобализация.

**Problem statement.** Global and regional integration processes worldwide, growing economic problems in most countries are becoming the objective prerequisites for reviewing the state of national security as a whole and its component – food security in particular. New economic conditions, geopolitical dynamics require fundamentally different approaches to food security.

Under globalization the problem of food security demands a qualitatively new solution with regard to revealing the nature of this economic category, research methodology and mechanisms for solution. The issue of food security also concerns the national economy. Ukraine's integration into the world and European Community makes it vital, since only under the conditions of guaranteed food supply the state can pursue an independent policy.

**Literature review.** Among the works of national researchers who dealt with multiple-aspect problems of food security, it is necessary to emphasize the monumental studies by O.H. Bilorus et al. (2009), V.I. Vlasov (2001), which contain information on generalized regularities of food production development under the conditions of globalization. The monographs by O. I. Hoychuk (2004) and O.S. Reznikova (2011) are dedicated to the improvement of food security system based on the efficient operation of the national agrifood sector. The publications by P.T. Sabluk et al. (2011), B.I. Paskhaver (2014), O.V. Skydan (2010) are also of strategic importance

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here. Furthermore, the regulations by the Ministry of Economy of Ukraine (Decree #60, 2.03.2007) are important to be referred to.

**Research objectives and methodology.** The research objectives are: specifying the nature and the contents of food security as an economic category and important component of the country's socioeconomic development under globalization; studying the national peculiarities of food security; improving the existing mechanism for ensuring food security taking into consideration the processes of integration and globalization. To meet the research challenges we have applied the dialectical method of cognition and the systematic approach, which makes it possible to comprehensively investigate the issue of food security and to justify the mechanism for its implementation under globalization. To sum up the scientific opinions on the issues of food security the studies by national and foreign scholars as well as legal regulations of Ukraine's governmental bodies have been used. The methods generally accepted in economic theory have become the methodical basis for the research, in particular the methods of analysis and synthesis and the statistical one as well.

**Key research findings.** There are many definitions of "food security" in economic literature. We consider that there is no need to review them because they do not differ essentially, but in fact they complement one another. Summarizing these definitions, we can identify the basic content of this category.

Food security is the state of country's economy, when, regardless of the world market condition, population is ensured with a consistent food supply to meet the scientifically justified dietary needs. The ongoing provision of processing industry with agricultural raw materials and population with foodstuffs without exposing to the impact of external and internal factors is the objective of food security. The most important conditions for achieving the objectives of food security are: potential availability of foodstuffs for every person; economic possibility for all social groups within population including the poor ones to purchase food, that is reached by raising the standards of living or implementing relevant measures on social welfare; consumption of high quality products of sufficient quantity for a balanced diet.

Summing up, food security is defined by the following factors: physical availability of food – availability of foodstuffs of the desired variety throughout the country at any time; economic access to food – the income level regardless social status and place of residence, that makes it possible to obtain food at least at the minimum level of consumption; food safety for consumers – preventing production, sale and consumption of poor quality foodstuffs that can harm people's health (Reznikova, 2010: 36).

Food security should be considered within the country as a whole and in the regional context in particular, it is specified by a variety of climatic conditions, social and economic state of certain territories, demographic situation as well. Meeting the needs for foodstuffs should be carried out with regard to every person in the place of residence. Moreover, the main burden while ensuring food security is laid on state's entities, which are directly responsible for adequate provision of population with high quality foodstuffs.

Thus, food security is considered to be a complex problem determined by physical and economic access to food, its quality and safety, the level and structure of food consumption by population, the stability and independence of food market, the

development of branches of the agroindustrial complex and the efficiency of natural resources use.

The level of food security is evaluated by means of the integral index, which contains the list of food security indicators, including food sovereignty indicators of the key products (Table 1).

**Table 1. Indicators and threshold values of food security indicators in Ukraine**

Indicator, measuring unit	Threshold value
Consumption of meat and meat products (per capita per year), kg	Not less than 83
Food sovereignty (meat and meat products), %	Not less than 80
Consumption of milk and dairy products, (per capita per year), kg	Not less than 380
Food sovereignty (milk and dairy products), %	Not less than 80
Egg consumption, (per capita per year)	Not less than 290
Food sovereignty (eggs), %	Not less than 80
Fish consumption, (per capita per year), kg	Not less than 20
Food sovereignty (fish and fishery products), %	Not less than 80
Sugar consumption, (per capita per year), kg	Not less than 38
Food sovereignty (sugar), %	Not less than 80
Consumption of oil and vegetable oil (per capita per year), kg	Not less than 13
Food sovereignty (oil and vegetable oil), %	Not less than 80
Potatoes consumption (per capita per year), kg	Not less than 124
Food sovereignty (potatoes), %	Not less than 80
Consumption of vegetables and melons (per capita per year), kg	Not less than 161
Food sovereignty (vegetables and melons), %	Not less than 80
Consumption of fruit, berries, nuts and grapes (per capita per year), kg	Not less than 90
Food sovereignty (fruit, berries, nuts and grapes), %	Not less than 80
Consumption of bread and bakery products (per capita per year), kg	Not less than 101
Food sovereignty (bread and bakery products), %	Not less than 80

Source: (Skydan, 2010; Ministry of Economy of Ukraine, Decree #60, 2.03.2007; Cabinet of Ministers of Ukraine, Decision # 1379, 5.12.2007).

The current state of Ukraine's food security is characterized by the following:

- the majority of population has a low purchasing power;
- income levels do not allow providing daily food intake according to scientifically based consumption standards;
- the deficiency of foodstuffs is partially covered by private farms;
- the lack of a unitary policy at agricultural markets in the regions;
- sales channels monopolization ("non-civilized" sales market leads to losses of a significant proportion of farmers' potential profit);
- regional demand for agricultural food products is much less than potential needs.

During the entire period of Ukraine's sovereignty the indicators characterizing food consumption by the population of this country and determining the level of food security were at the critical point (Table 2). Unvaried fat and carbohydrate nutrition of the greater part of population were observed. Caloric content of food ration for both adults and children was ensured by carbohydrates for 50–80% at the expense of bakery and confectionery products, potatoes and sugar. In 2012 meat and meat products were consumed significantly less than rational norms required – only 65.5% of the dietary norm, milk and dairy products – 56.6%, fish and fishery products – 68.0%, fruit and berries – 59.2%. Thus, taking into consideration these products, Ukraine does not exhibit food sovereignty.

Table 2. Consumption of basic foods by the population of Ukraine  
(per capita per year, kg)

	Standard level	Years							2012, % up to	
		1990	1995	2000	2005	2010	2011	2012	Standard level	1990
Meat and meat foods	83	68.2	38.9	32.8	39.1	52.0	51.2	54.4	65.5	79.8
Milk and dairy products	380	373.2	243.5	199.1	225.6	206.4	204.9	214.9	56.6	57.6
Eggs	290	272	171.0	166.0	238.0	290	310	307	105.9	112.9
Fish and fishery products	20	17.5	3.6	8.4	14.4	14.5	13.4	13.6	68.0	77.8
Bakery products	101	141.0	128.4	124.9	123.5	111.3	110.4	109.4	108.3	77.6
Potatoes	124	131.0	123.7	134.5	135.6	128.9	139.3	140.2	113.1	107.0
Vegetables and melons	161	102.5	96.6	101.7	120.2	143.5	162.8	163.4	101.5	159.4
Fruit, berries, grapes (without processing into wine )	90	47.4	33.4	29.3	37.1	48.0	52.6	53.3	59.2	112.4
Oil	13	11.6	8.2	9.4	13.5	14.8	13.7	13.0	100.0	112.1
Sugar	38	50.0	31.6	36.8	38.1	37.1	38.5	37.6	98.9	75.2

Source: State Statistics Service of Ukraine (2013).

Only bread and bakery products (108.3%), potatoes (113.1%) and eggs (105.9%) exceeded nutrition standards, thus indicating quality drawbacks of consumption, when the majority of people consumed unvaried foods to meet their dietary needs. These indices demonstrate an imperfect structure of food basket in this country: there is a deficiency of protein supply from animal foods, compensated by excessive consumption of bread and bakery products. Average consumption of vegetables and the produce of horticulture and viticulture, which are traditional ones for Ukraine, is also insufficient.

On the whole Ukraine has almost reached food security in terms of both physiological sufficiency of foods and scientifically based standards on most food products except meat and dairy products, fruits and grapes, fish and fishery products. At the same time the population is provided with food of domestic production by 70%, and large cities are 50% dependent on foreign supply. In this case, imported products are not always environmentally friendly. They contain preservatives and additives forbidden in countries-manufacturers. In this regard, forming the state's strategy and developing a conceptual model plan to resolve the problems of livestock production and horticulture on the basis of the strategy is currently getting timeliness. It is worth noting that using a certain part of exported grain for feeding livestock is more profitable for Ukraine than importing meat and meat products.

Food security can be understood as a complex of economic, technological and organizational measures undertaken by the state and other market entities at the level of country and regions to meet the needs of population for food products, the measures including the promotion of agricultural production and produce processing, the guarantee of proper quality and safety of food products and their price affordability.

The mechanism for ensuring food security demands a set of organizational forms and economic methods interconnected at international, national and regional levels which makes it possible to stabilize the level of food security in the country, to take

into account supply and demand for foodstuffs, to use economic incentives of extended reconstruction of agricultural production and to ensure the food availability for whole population of the country (Figure 1).

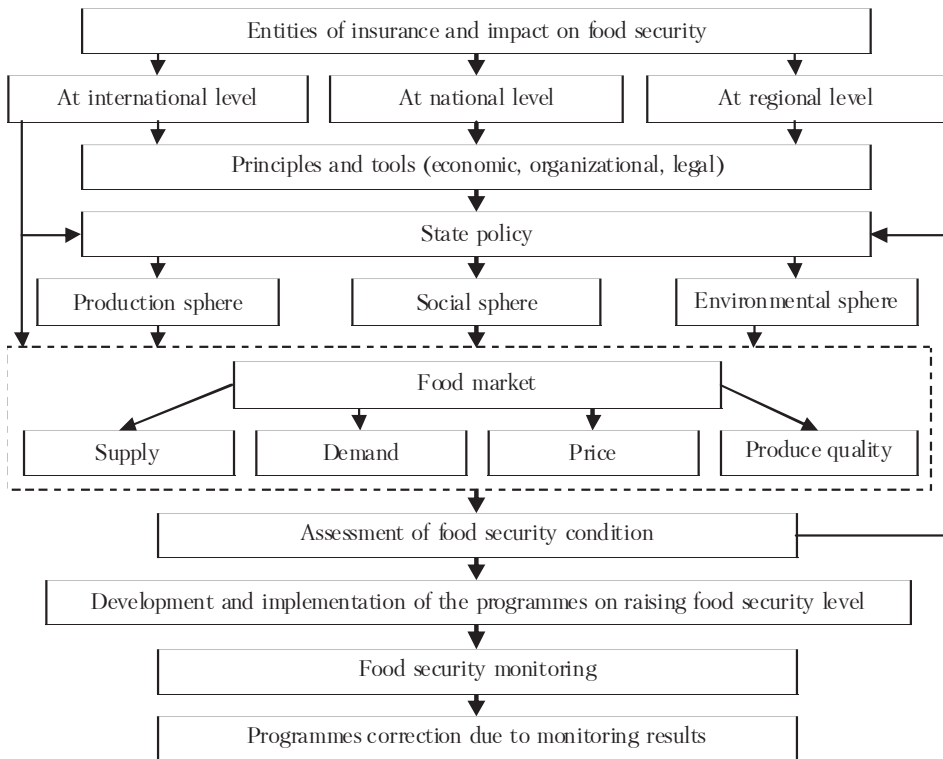


Figure 1. **Food security mechanism**, developed by the author on the basis of (Reznikova, 2010: 36)

Ensuring food security involves the stability of food supply for population, physical and economic access to food, biological value of the food obtained, food availability in sufficient quantity.

Besides the outlined components of the food security mechanism we can refer to them the following ones:

- maintenance of sustainable production growth and availability of crop growing produce and livestock products for consumers;
- necessity to harmonize activities of the entities of agro-food system;
- exchange of agro-food products;
- formation of the mechanism of regulatory impact on production and commerce of agro-food products at the international and national levels;
- introduction of legal extra charges for wholesale and retail enterprises in the sale of the first necessity products;
- consolidation of small collective farms into larger associations within districts and regions;
- introduction of guaranteed minimum purchase prices to provide high production profitability and its extension for producers;

- improvement of product quality and ecological compatibility by means of stimulating biological production of environmentally friendly food, development and implementation of biotechnologies, governmental control of product quality, product certification according to international quality standards.

Under the conditions of globalization the required level of food security is possible on the assumption of the following factors (components of the mechanism):

- ensuring through food markets a free movement of foods from producers to consumers, optimum interregional flows and development of competition at local markets, which can balance retail prices taking into account expenses and interests of producers on one hand, and incomes and demands of consumers on the other;

- financial and economic instruments (incentives, grants, subsidies) and political measures (protectionist support, product promotion at foreign markets etc.). At the domestic market the dependence of agro-food sector on fluctuations of world market conditions is minimized;

- governmental control of food supply to the regions, which under the conditions of disproportional distribution of agro-food production in Ukraine depends on various extraordinary situations;

- state quality control of food and insurance of its long-term safety for consumers, it particularly concerns genetically modified food.

The current mechanism of ensuring food security has the following drawbacks: low technical and technological level of agriculture, insufficient logistics and scientific, informational and marketing support of agro-food sector, the lack of systemacy in harvesting and marketing of agricultural products, which together determine low competitiveness of national agro-food products, so it makes it impossible to provide an adequate level of food security (Reznikova, 2010: 37). The main difficulty is low purchasing power of most of the population caused by general economic situation in the country.

At present the state of food supply in Ukraine affirms a high degree of vulnerability of domestic economy. To boost food security is possible provided the state which has all necessary regulatory impact tools to takes an active part in the process. Forms and methods of such participation depend on economic, environmental, social and other factors that determine the peculiarities of food system in the state. As R. Humerov says, "in comparison with medicine, the state of food security is considered to be the state of a healthy person, while the specific for every country threats to this security are forming certain symptoms of the disease that demand their special treatments" (Humerov, 2003). A set of "rehabilitation" methods of organizational, economic, social and cultural character constitutes a mechanism for ensuring the food security.

Creation of effective and efficient food security mechanism under the conditions of economy globalization is impossible without the country's control and regulation. State regulation of food supply is a system of economic, financial, legal, regulatory and social measures taken to ensure sustainable and efficient development of agricultural production and food processing as well as to supply people with quality foods of sufficient quantity and at affordable prices.

To achieve the required level of food security the following measures of governmental regulation must be implemented: to create conditions for increasing the pro-

duction of food products to a level that will provide population with food regardless the demand; to pursue an active social policy that can raise the solvent demand to a level which can provide a balanced diet. The implementation of the first criterion is possible on the basis of effective development of the agricultural sector and its state governance, the regulation of prices and income, fiscal financing, crediting, food market stabilization. Under the current conditions the government should assist in selling goods within the quotas and guaranteed prices, should subsidize the production of certain products, support the development of agricultural business, train specialists etc. This makes it possible to increase the production of foodstuffs and to expand the food market in Ukraine. The second criterion is the stabilization and the efficiency improvement of the entire economy, the pursuing of social policy to be favourable for income raise and the balance of demand for food products and their supply.

**Conclusions.** The country's effective food supply is of strategic importance, as it affects not only its food but also national security. Food security in the context of globalization should be considered comprehensively, including the 3 components: market, social and environmental. Taking into account the market component of food security, we focus on the market ability to supply a sufficient quality and variety of food necessary for vital functions of the population at any time. The competency of population of all social groups to purchase the food required in order to ensure rational nutrition standards at the minimum level under normal conditions and in the cases of emergency is the core of social component. The core of environmental component of food security is to provide high-quality food, i.e. food safe for people (free of genetically modified organisms and prohibited chemicals).

The mechanism for ensuring food security in Ukraine, as a part of an integrated dynamic system, includes: the directions for its development, the models of interaction of harmonization system components of the priorities of food market and food security development, methodological approaches and methods of analysis. The proposed mechanism for ensuring food security in Ukraine is based on the identification of the implementation results of alternative approaches and scenarios for integrated development of eco-socio-oriented food market, which creates the prerequisites for sustainable development of the country's food system.

The proposed mechanism for ensuring food security in the context of globalization involves successful solution of the 3 key tasks: 1) national indicators of the volume and structure of food consumption must meet the medical requirements of healthy nutrition; 2) fluctuations of these indicators for social groups should be negligible, and the correlation of incomes should be weak, which means the elimination of food poverty; 3) food import is not limited, but the need for it is minimized by high growth of domestic agro-food production.

**The prospects for future research** in this area should be associated with the development of agriculture in Ukraine on the basis of a cluster model. The appropriateness of forming food clusters is caused by geographical proximity of members: the enterprises of food and processing industry, mechanical engineering enterprises, farmers, research institutions, manufacturers of packaging.

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Стаття надійшла до редакції 15.07.2014.

### КНИЖКОВИЙ СВІТ



СУЧАСНА ЕКОНОМІЧНА ТА ЮРИДИЧНА ОСВІТА  
ПРЕСТИЖНИЙ ВИЩИЙ НАВЧАЛЬНИЙ ЗАКЛАД

## НАЦІОНАЛЬНА АКАДЕМІЯ УПРАВЛІННЯ

Україна, 01011, м. Київ, вул. Панаса Мирного, 26  
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**Фінансово-економічний розвиток України в умовах глобалізації: Колективна наукова монографія / За ред. Я.В. Белінської. – К.: Національна академія управління, 2008. – 212 с. Ціна без доставки – 25 грн.**

Монографія присвячена фінансово-економічним проблемам розвитку економіки України в умовах глобалізації. Викладені теоретико-методологічні питання розробки стратегії входження України у світове господарство та формування фінансово-економічного механізму цього процесу. В основу викладу матеріалу монографії покладені багаторічні дослідження науковців в галузі економічної теорії, фінансів та банківської справи, які були апробовані на сторінках авторитетного журналу "Актуальні проблеми економіки" в 2004–2007 роках. В монографії обґрунтовано шляхи забезпечення структурно збалансованого економічного зростання економічної системи України та її ефективного міжнародного співробітництва, визначені напрями вдосконалення всіх ланок господарської системи.