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TRENDS IN THE DEVELOPMENT OF THE ORGANIC AGRICULTURAL MARKET AS A RESULT OF SOCIO-ECONOMIC INTERACTION IN SECTORAL ENTREPRENEURSHIP

ТЕНДЕНЦІЇ РОЗВИТКУ ОРГАНІЧНОГО АГРАРНОГО РИНКУ ЯК РЕЗУЛЬТАТ СОЦІАЛЬНО-ЕКОНОМІЧНОЇ ВЗАЄМОДІЇ У ГАЛУЗЕВОМУ ПІДПРИЄМНИЦТВІ

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Левкіна Р.В., Уразгільдяєв С.А. Тенденції розвитку органічного аграрного ринку як результат соціально-економічної взаємодії у галузевому підприємстві. Науково-методична стаття.

Метою статті є обґрунтування комплексного підходу до аналізу органічного аграрного ринку як результату складної соціально-економічної взаємодії. У результаті дослідження автори дійшли висновку про вирішальну роль соціально-економічної взаємодії у сучасному світі, її актуальність в умовах економічної нестабільності та невизначеності підкріплюється всебічним дослідженням органічного аграрного ринку, що забезпечує економічне зростання і сприяє соціальному розвитку країни. Світовий ринок органічної продукції стикається з викликами інфляції, геополітичних факторів, проте обсяги споживання зростають. Комплексний підхід до аналізу органічного аграрного ринку як результату складної соціально-економічної взаємодії означає дослідження і аналіз тенденцій його розвитку у розрізі економічної складової із супутніми соціальними питаннями, насамперед, базових потреб людства у здоровому харчуванні, належній якості життя, відтворення населення.

Ключові слова: органічний аграрний ринок, соціально-економічна взаємодія, механізм взаємодії, суб'єкти підприємництва, якість органічної продукції, світовий ринок

Levkina R.V., Uraghildiaiev S.A. Trends in the Development of the Organic Agricultural Market as a Result of Socio-Economic Interaction in Sectoral Entrepreneurship. Scientific and methodical article.

The purpose of the article is to substantiate an integrated approach to the analysis of the organic agricultural market as a result of complex socio-economic interaction. As a result of the study, the authors concluded that socio-economic interaction plays a crucial role in the modern world, its relevance in the context of economic instability and uncertainty is supported by a comprehensive study of the organic agricultural market, which ensures economic growth and contributes to the social development of the country. The global organic market is facing challenges from inflation and geopolitical factors, but consumption is growing. An integrated approach to analyzing the organic agricultural market as a result of complex socio-economic interaction means researching and analyzing trends in its development in terms of the economic component with related social issues, primarily the basic needs of humanity for healthy nutrition, proper quality of life, and reproduction of the population.

Keywords: organic agricultural market, socio-economic interaction, mechanism of interaction, business entities, quality of organic products, world market

Undoubtedly, the issues of socio-economic interaction are of utmost importance today, as they essentially define the mechanisms that allow joint efforts to solve problems that neither enterprises of any industry, nor public organizations, nor government authorities can handle individually. Only through stable cooperation can social entrepreneurial initiatives, community restoration programs, and the production of socially important and non-commercial goods be successfully implemented. However, there is a different point of view on the issue of socio-economic interaction and its consequences in sectoral entrepreneurship. Taking into account the principles of sustainable development and their connection with the peculiarities of socio-economic interaction, it is logical to draw a certain analogy between them, namely in the context of production and sales activities of enterprises in the organic market. In other words, as a result of socio-economic interaction in sectoral entrepreneurship, the organic agricultural market is being formed and is actively developing. Thus, the topic of this publication is relevant not only in the context of the economic crisis and martial law, but will remain so in the years of post-war reconstruction. The main provisions form the basis (theoretical, methodological and practical) for the implementation of socio-economic interaction in the context of simultaneously solving economic and social problems in rural areas and large settlements. Given the conditions of uncertainty and risk faced by domestic enterprises and rural residents caused by the destruction of enterprises, lack of financial resources for the restoration of production, and the need for self-sufficiency, the able-bodied population has the opportunity to solve their own problems based on similar experiences in other countries. This experience

includes the development of organic agricultural production and, consequently, market relations. The economic component of such interaction is determined by the focus on high profitability of agrarian entrepreneurship, and the social component is determined by the possibility of employment of economically active people of different qualifications, age, gender and social characteristics. The latter not only allows everyone to participate in production and sales processes and earn income, but also to maintain a full life and health, and be provided with quality food. And the fact that the agri-food market is in fact an institution of socio-economic interaction gives grounds to assert that the organic agricultural market as its structural component is the result of such interaction. Applying this logical statement in the context of the above paradigm and conducting further research on the state and trends of the organic agricultural market, its geographical and product structure, while improving certain conceptual and categorical definitions, will allow us to emphasize the structuredness of the scientific research, its logical and methodologically correct construction.

Analysis of recent research and publications

In the context of globalization, economic crisis, social restrictions (pandemic, military conflicts), there is a need to address issues, primarily those related to the maintenance of life and health, food supply, equal access to essential goods, because these social issues can be a catalyst for economic relations and a provocateur for social protests, stoppages of production and transportation. As a rule, most studies are limited to the economic interaction that takes place in the market between producers within the framework of production cooperation, between producers and intermediary companies for efficient and quick sale of goods, between the state and business entities to create favorable financial conditions for production, market support, and formation of start-up capital. However, the social aspects of interaction are no less important, and their manifestations concern not only the supply of high-quality, organic food to the market and the refusal or minimal use of chemicals harmful to consumer health. Socio-economic interaction also takes place at the micro level or at the enterprise level, which is no less important for employees, since it is the enterprise and its management that implements its economic and social policy at the enterprise level, which is approved at the level of the constituent assembly and the labor collective meeting. Despite the obviousness of our arguments, scholars use different approaches to defining the concept of "interaction". For example, N.M. Bogdan [1], L.S. Lisovska [2], G.V. Ortina [3], O.S. Telletov [4] and other scholars in their own studies demonstrate the limited nature of approaches. For example, L.S. Lisovska uses a systematic approach and considers economic interaction as a system that includes a common goal, a single result, joint actions, motivation and understanding of value [2]. From the point of view of the process approach, the author considers interaction to be a process consisting of system elements (subjects, contacts), joint actions (relationships, connections) and the result – mutual

understanding. N.O. Yevtushenko defines interaction as a form of interconnection between enterprises, which involves constant socio-psychological influence to ensure organizational and economic development, i.e., uses a socio-psychological approach [5]. The analysis of publications allows us to conclude that the approach that considers the subjects of interaction as the primary elements of the system is of practical importance, since in this way it is possible to analyze the relations between market participants. Thus, the study of socio-economic interaction is relevant and important for the development of effective mechanisms for solving social and economic problems, especially in conditions of instability and uncertainty.

Unsolved aspects of the problem

First of all, it should be noted that the authors of the article have conducted scientific research, the results of which have already been published and tested at various international and national events [6-8]. They are directly related to the subject of this article. Thus, in [8], we investigated the theoretical and methodological foundations of socio-economic interaction of business entities and proved that the issues raised are extremely relevant for the formation of innovative mechanisms for their further development. The thesis about the inseparability and interdependence of economic interaction with social issues confirms the conclusion that the concept of "socio-economic interaction" should not only reflect the mutual economic interests of the parties, but also correspond to the intellectual level of the subjects of interaction, their attitude to the conditions of existence and activity characterized by risk and uncertainty [8]. Interaction is influenced by certain internal aspects and limitations, including those that are formed spontaneously or deliberately within the enterprise within the team or between employees and management. They themselves have limitations caused by the organizational structure of the enterprise and the structure of its business processes. Such restrictions affect interaction with government agencies by harmonizing interests and developing integration. The publication also tests the mechanism of socio-economic interaction, which, according to the author, should be based on the organizational or business structure of the enterprise with its vertical and horizontal links, with a clear definition of innovation, production and sales, personnel, management, marketing and other components. Each enterprise is influenced by the external environment, including factors of scientific and technological progress, demographic, immigration, social, natural and geographical, political and legal, market and other aspects, thus forming an effective matrix of socio-economic interaction.

An extremely important component of this mechanism is the motivational component, which is supported by moral and ethical principles, social responsibility, principles of sustainable development and overall social progress [9, 10]. The scheme for implementing socio-economic interaction and its further development requires supplementation and clarification of interactions within business processes, taking into account the subject composition, intensity,

place and direction of interaction of each of them. The external component describes the interaction between market participants, including producers, infrastructure corporations, and consumers, each of which enters into external socio-economic interaction, has internal interaction, and is influenced by the state through direct and indirect methods of regulation. This creates conditions for ensuring the interests of market participants, realizing mutual economic and social benefits, maintaining living standards and public health, and ensuring an adequate level of labor reproduction. On a global scale, such interaction contributes to solving the food problem, which includes providing the population with food, producing quality products and making products available through the trade infrastructure. Thus, socio-economic interaction is seen as mutually beneficial socio-economic cooperation and bilateral dialogue, which should result in consensus [8].

In publication [6], we considered the agri-food market as an institution for the development of socio-economic interaction and developed its model accordingly. This research scheme, problem statement and objectives are based on generalization of the characteristics of the agri-food market as an institutional structure, analysis of the concepts of "interaction" and "socio-economic interaction" in terms of interaction theories and concepts of socially responsible enterprise, formalization of theories of interpersonal relations in business and trade.

In this publication, we try to prove the feedback between the market and socio-economic interaction, which is based on the concepts of social responsibility and theories of interpersonal relations, which we have described in detail in [6].

The aim of the article is to substantiate a comprehensive approach to the analysis of the organic agricultural market as a result of complex socio-economic interaction. To achieve this goal, it is necessary to solve the following tasks: to prove that socio-economic interaction is a key factor in the development of the organic agricultural market; to identify trends in the development of the global organic agricultural market in terms of production, processing and export-import operations; to study the advantages of organic products over traditional products in the context of analyzing the social component of interaction in the market; to analyze changes in the functioning of organic agricultural production in Ukraine, its gender component.

The main part

First of all, it is necessary to pay attention to the theories of behaviorism, neo-behaviorism, exchange, and justice, as they form the basis for formal models of

interpersonal relations in the internal and external environment. In combination with the theory of symbolic interactionism, when interaction occurs at the level of transmitted and received information (the so-called "stimulus-response"), they allow us to consider the links between the mechanism of socio-economic interaction and the market in the opposite direction.

Thus, we have concluded that the agri-food market and the organic agrarian market as its structural element are the result of a complex socio-economic interaction that includes the social aspect, as it takes into account the needs of society for healthy food and environmentally friendly products; promotes job creation and income generation for the population, especially in rural areas; supports health and quality of life by providing access to quality food.

Among the results of the economic component of such interaction, the following should be noted: stimulating the development of agricultural entrepreneurship and rural areas; development of market relations, where organic producers themselves are engaged in the sale of their products; orientation of producers towards economic profitability.

Thus, socio-economic interaction is a key factor in solving micro- and macro-level problems that cannot be solved by actors alone. The organic agricultural market is considered as an institution of socio-economic interaction that emerged as a result of the interaction of economic and social factors and contributes not only to economic growth but also to improving the quality of life and health of the population. Therefore, we will continue to study the state and trends of the organic agricultural market.

The latest global data for 2022, covering 188 countries, demonstrates extraordinary trends in organic agriculture. The unprecedented surge has led to an expansion of organic farmland to more than 96 million hectares, largely driven by an increase in Australia. The total number of farmers and other producers has also increased significantly, exceeding 4,5 million, an increase of more than 20%. Despite the slowdown, stagnation, and even decline in some European countries, retail sales of organic products reached almost 135 milliard EUR.

Almost 96,4 million hectares of organic agricultural land are used for organic production: In 2022, almost 96,4 million hectares of agricultural land were certified as organic, including areas in the process of transition to organic production, compared to 2000, when only 0,3% of agricultural land or 14,9 million hectares was recognized as organic (Table 1).

The regions with the largest area of organic farmland were Australia and Oceania (53,2 million hectares, accounting for 55% of the world's organic farmland) and Europe (18,5 million hectares, or 19%).

Table 1. Area of organic farmland in the world (dynamics and trends) in 2000-2022

Indicators	Years					
	2000	2005	2010	2015	2020	2022
Area, million hectares	14,9	29,3	35,9	50,3	74,7	96,4
Share in the total area of agricultural land, %.	0,3	0,6	0,8	1,1	1,5	2,0

Source: compiled by authors on materials [11]

This is followed by Latin America (9,5 million hectares, 10%), Asia (8,8 million hectares, 9,2%), North America (3,6 million hectares, 3,8%) and Africa (2,7 million hectares, 2,8%).

Thus, Australia is the leader among countries in terms of the area of organic agricultural land (53,0 million hectares). Other countries include India (4,7 million hectares) and Argentina (4,1 million hectares).

In 2022, 2,0% of the world's agricultural land was classified as organic. The highest rates of organic share of the total area of agricultural land were observed in Australia and Oceania (14,3%), Europe (3,7%). In the European Union, this area is 10,4%. In terms of EU countries, Liechtenstein has the highest organic share (43,0%) It and its individual countries show significantly higher organic shares than the global average: Liechtenstein, Austria (27,5%) and Estonia (23,4%) top the list. Twenty-two EU countries have 10

percent or more of their agricultural land under organic production.

Recent years have seen unprecedented growth in organic farmland globally, with a total increase of 20,3 million hectares (26,6 percent) in 2022, with many countries reporting significant growth. Thus, the largest increase in absolute terms was observed in Australia (more than 17,3 million hectares or +49%), India (almost 2,1 million hectares or +78%) and Greece (almost 390 thousand hectares or +73%). However, some countries are showing a decrease in the area of organic farmland, in particular in the Russian Federation (by almost 0,5 million hectares), although no superficial reasons for this have been identified. Thus, they have deep roots and require a detailed analysis of the factors and their impact.

In general, we can talk about an increase in the area of organic farmland on all continents in 2022 (Table 2).

Table 2. Area of organic farmland by continent in 2002-2022, million hectares

Continent	Years					Distribution of organic areas by region in 2022
	2002	2007	2012	2017	2022	
Africa	0,3	0,9	1,1	1,8	2,7	2,8
Asia	0,4	2,9	3,2	5,9	8,8	9,2
Europe	6,0	8,0	11,3	14,3	18,5	19
Latin America	5,8	5,6	6,9	7,5	9,5	10
North America	1,3	2,3	3,0	3,2	3,6	3,8
Australia and Oceania	6,3	12,1	11,4	35,9	53,2	55

Source: compiled by authors on materials [11]

The largest absolute increase was recorded in Australia and Oceania (+47,8%, +17,2 million hectares), followed by Asia (+35,9%, +0,39 million hectares), North America (+10,7%, +0,35 million hectares), Africa (+4,9%, +0,1 million hectares), Europe (+1%, +0,2 million hectares) and Latin America (+0,6%, +52,996 thousand hectares).

The analysis of statistics on the production of the main groups of crops using organic technologies allowed us to draw conclusions about the availability of open information on land use and yields on more than 92% of organic agricultural land. Some countries with large areas of organic production, such as Brazil and India, provided limited or no data.

A structural analysis of land use shows that more than two-thirds of organic farmland (67,6 million hectares) was occupied by pastures, with a 25,5% increase in 2022, indicating a growing focus on and increase in planned production of organic livestock products. Arable land, which covers almost 15,1 million hectares, accounts for 15,6% of organic farmland. Despite a slight overall decrease of 0,7% compared to 2021, this category of land is used mainly for growing cereals, including rice, as well as green fodder, oilseeds, textile crops and dry legumes. Perennial plantations occupy 6,6% of organic farmland, with a total area of over 6,2 million hectares. Compared to previous years' surveys, there was a slight increase of 48 thousand hectares or 0,8%. The most common crops in this category are nuts, olives, coffee, grapes and cocoa.

Organic citrus production is also experiencing a surge in production; in 2004-2022, the global area of

organic citrus grew by more than 86 thousand hectares, but in 2022 there was a 3,3% decrease. For many years, Europe, in particular Italy and Spain, has been the leader in citrus production, followed by Latin America and Africa. The decline is partly due to the spread of the Citrus Green disease, as well as problems with lower yields amid climatic trends, inadequate nutrition systems and the inability to build biological resistance to pests and diseases in such conditions. The main organic exports to the EU and the US are lemons, limes, and oranges, while South Africa, Mexico, and Colombia are the main exporters.

Analyzing trends in the production and trade of organic products requires a comprehensive approach and consideration of all statistical data that, at first glance, are not directly related, but provide the market with organic (as a synonym or additional name for such products, natural) products. That is, we are talking about the so-called other organic areas or areas not intended for organic agriculture. The largest part of them is occupied by areas for the collection of wild plants and beekeeping areas. Other organic non-agricultural areas include areas used for aquaculture production, forests and pastures on non-agricultural land. The total area of these areas is 34,6 million hectares, and the total area of all organic land reaches 132,4 million hectares, i.e., about 30% of it is other organic land. The data on the areas of organic wild plant collection and beekeeping indicate that they are concentrated in Africa, Europe, Asia and Latin America (Table 3).

Table 3. Area of the wild plants and bee products collection zone in 2021-2022

Region	Years		Changes in area, +/-	
	2021	2022	hectare	%
Africa	12693397	10711955	-1981442,6	-15,6
Asia	3815281	7053415	3238134,6	84,9
Europe	10585464	11305648	720183,9	6,8
Latin America	2377015	5338894	2961878,6	124,6
North America	7810	163942	156131,7	1999,0
Australia and Oceania	121794	60633	-61161,1	-50,2
Total	29600762	34634487	5033725,0	17,0

Source: compiled by authors on materials [11]

Among European countries, Finland stands out for its wild blueberries, blackberries, blueberries, cranberries, etc. India and Zambia are next in line. The areas where wild plants are harvested in terms of some types of products in 2021-2022 are presented in Table 4. Although the FiBL Report provides harvesting areas for a limited list of wild plants, it also presents harvesting areas for wild berries, fruits, nuts, rose hips,

seaweed, etc. In general, we can conclude that the total area for such products is almost unchanged (in 2021 – 29,6 million hectares, in 2022 – 34,63 million hectares) with significant fluctuations in certain types of products: berries, fruits, nuts, rose hips, and other plants. In our opinion, we are talking about certain areas where such plants were fruitful in a particular year or not.

Table 4. Harvesting areas of wild plants and bee products by crop groups in 2021-2022

Types of wild products	Area, hectares	
	2021 p.	2022 p.
Bee pastures	2514809	2506548
Berries, wild collection	258225	745604
Coffee, wild harvested	6442	7956
Forest products	2009	2000
Fruit, wild collection	2004982	178711
Marula, wild collection	10000	78349
Medicinal and aromatic plants, wild collection	3204305	3260144
Mushrooms, wild collection	lack of information	50088
Nuts, wild collection	1656674	5015535
Oil plants, wild collection	35877	1514
Palmita, wild collection	56699	56699
Permanent plantations, wild collection, other	15138	15139
Rose hips, wild collection	2425519	1042535
Seaweed	211328	325261
Total	29600762	34634487

Source: compiled by authors on materials [11]

In 2022, the number of organic producers in the world increased to 4,5 million, with the largest share in Asia - 61% of global producers, followed by Africa (22%), Europe (11%), and Latin America (6%). The three countries with the largest number of organic producers are India (2480859 producers), Uganda (404246) and Thailand (121540 producers). Ethiopia (121480 producers), the Democratic Republic of

Congo (118203), and Peru (107868) are the next in the list. Among European countries, Italy is the leader in terms of the number of producers (82593 producers). It is indicative that there has been a significant increase in the number of producers – by almost 919 thousand, which corresponds to an increase of 25,6% compared to 2021.

Table 5. Number of enterprises engaged in production and trade operations (including foreign trade) by region in 2022

Region	Producers	Processing companies	Importers	Exporters
Africa	975334	1595	21	1302
Asia	2728678	12969	676	940
Europe	480135	91776	7609	4885
Latin America	270217	9657	138	1178
North America	23948	1859	lack of information	lack of information
Australia and Oceania	24466	1756	1	130
Total	4502778	119612	8445	8435

Source: compiled by authors on materials [11]

Information on the number of manufacturing, processing, and foreign trade companies is interesting (Table 5). Among the latter, export-import companies in Europe are in the first place, exceeding the total number of similar ones in other regions.

Also interesting are the trends in organic trade and changes in the volume of export and import operations. In 2022, the EU and the US together imported almost 4,9 million tons of organic products, which is 197 thousand tons (4,2%) more than in the previous year. However, while the total volume of exports to the EU decreased by 146173 tons (-5,1%), exports to the US increased by 342867 tons (+18,8%). Ecuador became the leading exporter of such products, followed by Mexico and Peru. Significant export growth was observed in Mexico, Togo, and China, while imports from India, the United Kingdom, and Chile declined significantly. The top three imported organic products are bananas, soybeans, and sugar, accounting for 46% of total imports. The US, the Netherlands and Germany are the main importers, accounting for almost 74% of all organic imports. It should be noted that the data on US imports is not complete in [10] and requires some editing to the best of the researchers' ability.

According to FIBL, in 2022, the global market for organic products (food and beverages) reached almost

135 milliards EUR. The leaders of the organic market were the United States (58,6 milliards EUR), Germany (15,3 milliards EUR), and China (12,4 milliards EUR).

The United States remains the largest single market, accounting for 43% of the global market. Logically, the second place is occupied by the European Union (45,1 milliards EUR, 34%), and China (12,4 milliards EUR, 9,2%). Among the European countries - the largest markets for organic products are Germany (15,3 milliards EUR), France (12,1 milliards EUR), Switzerland (3,9 milliards EUR), Italy (3,7 milliards EUR), Great Britain (3,4 milliards EUR), Sweden (2,6 milliards EUR) and Spain (2,5 milliards EUR). In 2022, Switzerland topped the list of countries in terms of annual consumption of organic products per capita (437 EUR). The highest shares of organic consumption in total food consumption were recorded in Denmark (12,0%), Austria (11,5%) and Switzerland (11,2%). However, there was a decline in some markets, particularly in Europe, where retail sales of organic products decreased by more than two percent. At the same time, the North American market showed clear growth and prevails in terms of retail sales and per capita consumption of organic products (Table 6).

Table 6. Retail sales of organic products and their consumption per capita by region in 2022 (data for countries only: Belize, Brazil, Chile, Jamaica, Mexico, Peru, which have not been updated for several years)

Region	Retail sales, EUR million	Value of products consumed per capita, EUR
Africa	lack of information	lack of information
Asia	15032	3,3
Europe	53070	64,0
Latin America*	778	-
North America	64366	171,5
Australia and Oceania	1510	33,9
Total	134760	-

Source: compiled by authors on materials [11]

In Ukraine, the organic agri-food market continues to resume its work, despite the military events and changes in the market demand for such products. Thus, as of 31.12.2023, the total area of agricultural land under organic production and the transitional organic period in accordance with the requirements of Ukrainian legislation is 471,18 thousand hectares, of which 390,92 thousand hectares are agricultural land with organic status, and the total number of certified organic market operators is 481, including 383 agricultural producers. The largest areas of agricultural land where organic production is developing and the status of transitional land has been introduced are currently located in the central part of Ukraine: Cherkasy, Vinnytsia, Odesa, Zhytomyr, and Kyiv regions [18].

It is interesting to study the labor force in organic production in the world and in Ukraine and its gender profile [19]. It is well known that agricultural development is key to the well-being of the population, and in the context of high growth rates of the world's population, food availability remains an urgent global

problem. This is also reflected in the socio-economic interaction of agrarian entrepreneurship. Also, the agri-food sector continues to be the main place of work for 36% of working women and 38% of working men in the world and an important source of livelihood.

The study shows a significant share of women among landowners, but their average area is smaller than the average area owned by households with male owners. In 2021, only 20,8% of farms in Ukraine were headed by women, compared to 32% in the European Union (2020). The share of organic farms in the EU with female managers in 2020 was 26%, which is lower than in traditional (non-organic) farms. In terms of product specialization, organic farms run by women are mainly engaged in the cultivation of olives (13% of all organic farms run by women), arable crops (13%), keeping and fattening cattle (11%) and growing fruit (9%). The peculiarity of organic agriculture is its higher labor intensity. Organic and conventional (non-organic) production requires, on average, 4% more labor to produce the same amount of output, while conventional production requires 4% more labor. The

average ratio of men to women in organic business is 56% to 44%. The authors of the study suggest that women have less access or opportunities to start and run a business, and remain in lower management positions – specialist positions (47% of women) and temporary jobs (48%).

Their conclusions can be systematized and summarized as follows: there are main groups of interrelated and interdependent reasons that influence this situation and limit the participation of women in leadership positions in organic production in Ukraine:

1. Influence of gender stereotypes: prejudice that men are better suited for strategic management and aggressive competition, while women are better at executing orders; women's main role is in the family and raising children and they do not need to pursue a career. Such biases on the part of men and in the minds of women lead to low ambition (or the appearance of it) and inequality in the distribution of roles in business.

2. Socio-economic circumstances: limited access to education, unwillingness to study in "male" specialties; society's unwillingness to accept women professionals and women managers. Such circumstances are usually complemented by a small number of examples of successful organic agricultural business by women.

3. Physically and emotionally demanding work in the agricultural sector, requiring physical exertion, the ability to use agricultural machinery, take care of livestock, etc.

These reasons and circumstances are especially influential in regions remote from large cities, where traditional ideas about the role of women in society are still preserved.

These factors create a complex set of obstacles that limit women's participation in leadership positions in the agri-food sector and organic production [19].

Of course, various factors affect producers, since organic production requires more favorable climatic and market conditions, it has a higher degree of risk in the initial periods of transition to organic development and organic technologies. Scientists study such factors and are not limited to economic and climatic ones [12-14]. Most of them focus on trends and patterns in the development of organic production in Ukraine and other countries. We have also studied the problematic issues of participation of domestic vegetable producers in the organic market and the possibility of entering regional and global markets [15], but they are significantly different from the problems and challenges faced by producers in other countries in general, although upon closer examination, some of the reasons may be the same.

Thus, according to [11], the main challenges for the global organic food market were the rising food prices caused by inflation. Geopolitical factors that disrupt supply chains and increasingly create obstacles to trade routes have also proved to be important, while open protectionist measures affect the efficiency of producers, of which small farms are the most vulnerable. Geopolitical factors also include military operations on the territory of Ukraine, oversupply of agri-food products, and increased demand for organic products during the pandemic. The years of the

pandemic have demonstrated to the global community the link between the consumption of organic agri-food products and health, ethical and environmental concerns.

Consumers of organic products want to be absolutely sure that the goods are grown and processed in accordance with organic standards. Both the legislation governing organic production and the guidelines of the organic associations that unite organic producers include appropriate guarantees in their basic principles. Some organizations involved in organic production, in an effort to preserve the authenticity of organic products to the maximum extent possible, resort to laboratory tests to confirm the origin of their products. This is an additional measure to the mandatory certification of the production process provided for by the legislation in the field of organic production. Some labels may indicate the national origin of goods by means of special marks, such as the Bio Suisse label. Therefore, the function of food traceability plays a key role in ensuring its high quality and is mandatory under the legislation of the European Union [16]. Companies involved in the processing and sale of food products must be able to provide information about the suppliers of raw materials and the enterprises to which the goods were delivered within the supply chain.

The results of scientific research published in [16] show significant differences between organic and non-organic foods and which are superior in a direct comparison. Organic foods contain higher levels of substances of secondary origin and unsaturated fatty acids than non-organic foods, they consistently demonstrate the best nutritional performance, and their nutritional value is reduced by the presence of nitrates, pesticide residues and heavy metals. The data on comparison of organic and non-organic foods based on certain quality indicators are presented: the content of minerals, protein, vitamins, phytonutrients, unsaturated fatty acids, nitrates, pesticide residues, heavy metals and sensory profile (color intensity and firmness, for such products as vegetables, fruits, cereals, dairy products, meat. The vast majority of these indicators are better for organic products, some (the first three of the above indicators for individual products do not make a difference.

The Food Quality and Health Association (FQH), which has studied organic products by sensory characteristics, found that all parameters – color, smell, taste, flavor, shape and consistency – are of great importance to food consumers. Consumers appreciate natural flavor and color without flavors and colors. However, national traditions and taste preferences may differ slightly for certain products (bread, cookies, butter, tomato sauce, yogurt, some fruits and vegetables, vegetable oil, etc.) and manufacturers should take into account the specifics of the consumer market in a particular country [16, 17].

For domestic organic vegetable producers (and this problem remains to this day), an obstacle to consumer consumption is certain misconceptions that vegetables grown in the private sector are a priori environmentally friendly and do not require certification and regulation.

It should be added that about 85% of domestic fresh vegetable production takes place in the private sector (including households). Another problem is the high competition from products labeled as «without genetically modified organism», which complicates the positioning of organic products on the market. Despite the fact that global sales of organic food have stabilized after a sharp rise in 2020, factors such as inflation, supply disruptions, and the forced reorientation of some countries' national strategies to industrial development (heavy and medium engineering) have negatively affected supply and consumer demand in 2023-2024. Experts at FIBL (Forschungsinstitut für biologischen Landbau) are hopeful that the organic market will grow with the improvement of the global and regional economic situation [11].

Conclusion

Thus, in this article, we substantiate a comprehensive approach to the analysis of the organic agricultural market as a result of complex socio-economic interaction. To achieve this goal, the following tasks were solved: to prove that socio-economic interaction is a key factor in the development of the organic agricultural market; to identify and analyze the trends in the development of the global organic agricultural market in terms of the following links: production, processing, and export-import operations; to study and analyze the advantages of organic products over traditional ones in the context of the social component of interaction in the market; to analyze changes in the functioning of organic agricultural production in Ukraine, its genesis.

The conclusion about the crucial role of socio-economic interaction in the modern world and its relevance in the context of economic instability and uncertainty is supported by a comprehensive study of the organic agricultural market, which ensures economic growth and contributes to the social

development of the country. This interaction is manifested in meeting the needs of society for healthy food and environmentally friendly products, creating jobs in rural areas and improving the quality of life of the population. It stimulates the development of agricultural entrepreneurship, promotes market relations and ensures high profitability for producers. Global trends in the development of organic agriculture, including a significant increase in the area of organic land and sales, confirm its growing role in the global economy. The structural analysis of land use shows the growing role of organic livestock farming, which is reflected in the increase in the area under pasture. At the same time, grain and oilseeds, perennial plantations (nuts, olives) continue to play an important role, occupying a stable market niche, and thus the arable land area is not decreasing. The steady growth of organic production is characterized by clear regional differences and structural features. The global organic market faces challenges such as inflation and geopolitical factors, but awareness of the importance of organic products for health and the environment remain the main arguments in favor of their consumption. The organic agri-food market in Ukraine is showing upward trends, despite the current economic and military challenges and very specific features (gender issues, adaptation to foreign economic conditions, global challenges). The quality of organic products is superior to traditional foods; they have a relatively higher content of substances useful for the human body and better sensory characteristics.

Thus, a comprehensive approach to analyzing the organic agricultural market as a result of complex socio-economic interaction means researching and analyzing trends in its development in terms of the economic component with related social issues, primarily the basic needs of humanity for healthy nutrition, proper quality of life, and reproduction of the population.

Abstract

This publication substantiates a comprehensive approach to the analysis of the organic agricultural market as a result of complex socio-economic interaction and solves the following tasks: proves that socio-economic interaction is a key factor in the development of the organic agricultural market; identifies and analyzes trends in the development of the global organic agricultural market in terms of production, processing and export-import operations; studies and analyzes the advantages of organic products over traditional ones in the context of social composition. The conclusion about the crucial role of socio-economic interaction in the modern world, its relevance in the context of economic instability and uncertainty is supported by a comprehensive study of the organic agricultural market, which ensures economic growth and contributes to the social development of the country. Such interaction is manifested in meeting the needs of society for healthy food and environmentally friendly products, creating jobs in rural areas and improving the quality of life of the population. It stimulates the development of agrarian entrepreneurship, promotes market relations and ensures high profitability for producers. Global trends in organic agriculture, including a significant increase in the area of organic land and sales, confirm its growing role in the global economy. The structural analysis of land use shows the growing role of organic livestock, which is reflected in the increase in the area under pasture. At the same time, grain and oilseeds, perennial plantations (nuts, olives) continue to play an important role, occupying a stable market niche, and thus the arable land area is not decreasing. The steady growth of organic production is characterized by clear regional differences and structural features. The global organic market faces challenges such as inflation and geopolitical factors, but awareness of the importance of organic products for health and the environment remain the main arguments in favor of their consumption. The organic agri-food market in Ukraine is showing upward trends, despite the current economic and military challenges and very specific features (gender issues, adaptation to foreign economic conditions, global challenges). The quality of organic products is superior to traditional foods;

they have a relatively higher content of substances useful for the human body and better sensory characteristics. An integrated approach to analyzing the organic agricultural market as a result of complex socio-economic interaction means researching and analyzing trends in its development in terms of the economic component with related social issues, primarily the basic needs of humanity for healthy nutrition, proper quality of life, and reproduction of the population.

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