Management Theory and Studies for Rural Business and Infrastructure Development
eISSN 2345-0355. 2023. Vol. 45. No. 1: 79-93
Article DOI: https://doi.org/10.15544/mts.2023.09

ORGANIC POTENTIAL OF UKRAINE IN THE SYSTEM OF ORGANIC PRODUCTION OF THE EUROPEAN COUNTRIES

Oksana Senyshyn [1], Oleksandr Kundytskyj [2], Yevgen Mayovets [3], Iryna Horodniak [4], Oksana Zhuk [5]

[1]Prof., Ivan Franko National University of Lviv, Krupyarska St., 9, Lviv, Ukraine, E-mail address: okssenyshyn@gmail.com

[2]Prof., Ivan Franko National University of Lviv, Ivasyuka St., 10, Lviv, Ukraine, E-mail address: skund@ukr.net

[3]Prof., Ivan Franko National University of Lviv, Pasichna St., 62a, Lviv, Ukraine, E-mail address: Yevhen.mayovets@lnu.edu.ua

[4]Assoc., Prof., Ivan Franko National University of Lviv, Antonycha St., 26, Lviv, Ukraine, E-mail address: gorodnyakira@gmail.com

[5]Assoc., Prof., Ivan Franko National University of Lviv, Nazaruka St., 1, Lviv, Ukraine, E-mail address: zhuk_o@ukr.net

Received 11 01 2022; Accepted 09 02 2022

Abstract

It is described in detail in the article the organic potential of European countries and Ukraine through the prism of specific indicators that characterize it. It is determined that the fullest organic potential of any state is revealed through a system of such indicators: land use in organic farming; number of producers of certified organic products; volumes of retail trade in organic products; volumes of exports and imports of organic products; cost of consumption of organic products per person; the largest importers of state organic products, etc. Based on the constructed complex diagram, which systematically characterizes the organic potential of European countries and, in particular, Ukraine through a set of its main indicators, it is proved that: 1) the most powerful European organic leaders in 2019 are: Austria, France, Germany, Italy and Spain. Collectively, the indicators that characterize their organic potential in 2019 reached, compared to other European countries, high leadership positions; 2) according to statistics, it is determined that in 2019 Sweden for the first time after many years of importing organic grains became their exporter –116 million euros; 3) it is noted that Ukraine in the system of indicators characterizing its organic potential in 2019, among European countries is a pioneer, where the development of organic farming and organic food production is a strategic task of the state over the next few years. After all, the area of organic land in 2019 exceeded 460 thousand hectares, and the volume of exports of organic products in the same year reached the level of 272 million euros with only 470 state producers of certified organic products. The author proposes his own approach to assessing the effectiveness of organic potential in Ukraine through the prism of specific indicators-characteristics, which is generalized into a single integrated indicator – the taxonomy coefficient. The calculations proved the instability of the taxonomic indicator during the study period, which, according to the author, indicates that the state organic potential and system of organic production in Ukraine is at the stage of formation and development.

The analysis allows us to conclude that Ukrainian exporters of organic products are forced to solve a number of problems that hinder the intensification of supply of products from our country to the markets of other countries.

Keywords: *areas of organic lands, organic potential, consumption of organic products per person, organic products, organic production, organic products market, taxonomic analysis.*
JEL Codes: *E23; L23; L66; O13; Q17.*

Introduction

The importance and role of the development of national competitive organic production is growing in the context of Ukraine's European integration. Organic food production is gaining popularity around the world as demand for it grows rapidly during the Covid-19 pandemic and will grow after this pandemic, as nutritious and organic food products are fully in line with current

global trends in health care and well-being of mankind. In the developed countries of the world, the main driving factors for the production of good food products are, first of all, the requirements to the food products quality and minimization of their impact on the environment. Development of the system of organic production and transition of agricultural enterprises to the organic standards is an important way to increase competitiveness of the agricultural sector of Ukraine and the basis for the formation of organic potential of both, the food sector in general and domestic organic sector.

Over the past 20 years, organic agriculture has won the right to be the key element of the sustainable development of agricultural sector in many developed countries. The organic determinant has become an economic indicator of socio-ecological progress in agricultural production. That is, the leading countries of the world have made emphasis on the creation of such agricultural systems that can not only supply the society with food products and bring profit to the producers, but also provide specific socio-environmental benefits. The long-term practice of organic farming shows an increase of the level of balance of economic, environmental and social components of agricultural production systems in temporal and spatial dimensions. Therefore, the organic has become an exceptional focal point for the public, business and state power bodies of the developed world.

The organic market on the way of its evolvement in Ukraine relied on the international laws (primarily of the European Union) and the world's best production practices. A substantial contribution to the development of organic production and to the formation of domestic organic potential of Ukraine was made by the financial donors from Germany, the USA, the Netherlands, Switzerland, Great Britain, France and other countries. Foreign technical aid projects gave opportunity to the Ukrainian specialists to obtain valuable knowledge and skills, to share experience with foreign colleagues in organic production. Besides, Ukrainian certified organic producers received access to new promising sales markets, expanded their capabilities and potential. Today, Ukraine, having strong European integration ambitions, has the opportunity to make full use of many years of international experience in the policy of supporting the organic sphere and its potential.

Proposed methodology

To assess the effectiveness of domestic organic potential, we propose the use of taxonomic analysis, which will allow a comprehensive and systematic selection of indices that form the organic potential of the country and, based on these indices, to calculate taxonomy coefficient, which will permit qualitative assessment and characterization of organic potential of Ukraine.

Besides, to assess development of the organic sector, we used the following generalizing indices: the use of land in organic farming; the number of producers of certified organic products; volumes of retail trade in organic products; volumes of exports and imports of organic products; value-based volumes of consumption of organic products per capita; the largest importers of domestic organic products, etc.

A considerable contribution to the development of the concept of organic production was made by the Japanese philosopher Mokishi Okada, German scientist Rudolf Steiner, French economist Lemer Boucher, Ukrainian scientists Ivan Ovsinskyy and Alex Podolinskyy. T. Avraamenko (2014), V. Artysh (2012), N. Buha (2015), V. Buhaychuk (2018), O. Dudar (2009), O. Yermolenko (2016), T. Yermolenko (2016), T. Zaychuk (2010), E. Savitskyy (2018), Yu. Slavgorodska (2016), T. Stefanovska (2008), O. Frayer (2018), O. Shulha (2017) and others were engaged in resolving similar problems of domestic economic science. Such domestic researchers as S. A. Aivazyan (1974), Z. I. Bazhayeva (1974), V. Plyuta V. (1989), M. I. Repina (2011), P. O. Kutsyk (2021) and others were engaged in the study of the use of taxonomic analysis for the analysis of effectiveness and substantiation of economic phenomena, processes and trends.

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eISSN 2345-0355. 2023. Vol. 45. No. 1: 79-93
Article DOI: https://doi.org/10.15544/mts.2023.09

Their works were based on the study of development and formation of food agricultural markets, on ensuring food security of the state, on the problems and prospects of development of organic production and agriculture. However, our interest deals with the concept and the structure of organic potential of agricultural sector of both, Ukraine and the European countries, and its assessment using methodology of taxonomic analysis. Z. Helwig (1968) was one of the first researchers to use this special research method of aggregation of taxonomic indices. This scientist has proposed a taxonomic index, which is a synthetic value that is formed by all the indices characterizing the economic phenomenon under study.

Result analysis and discussion

The development of organic sector of Ukraine in our opinion is characterized by the following generalizing indices: the use land in organic farming; the number of producers of certified organic products; volumes of retail trade in organic products; volumes of exports and imports of organic products; value-based volumes of consumption of organic products per capita; the largest importers of domestic organic products, etc.

Let us study the issue of organic land areas in some European countries and make a comparative characterization of these areas compared with the domestic organic farming acreage.

Table 1. The pattern of growth of organic farming hectarage in some European countries in 2015-2019, thou. hectares

Country	Years				
	2015	**2016**	**2017**	**2018**	**2019**
Austria	553,570	571,584	620,763	637,805	669,921
Belgium	68,817	78,451	83,509	89,025	93,118
Bulgaria	118,552	160,620	136,629	128,853	117,759
Croatia	75,883	93,593	96,618	103,166	108,127
Czechia	478,033	488,591	520,032	538,893	540,986
Denmark	166,788	201,476	226,307	256,711	285,526
France	1322,202	1538,047	1744,420	2035,024	2240,797
Germany	1088,838	1251,320	1373,157	1521,314	1613,785
Greece	407,069	342,584	410,140	492,627	528,752
Hungary	129,735	186,347	199,683	209,382	303,190
Italy	1492,579	1796,363	1908,653	1958,045	1993,225
Lithuania	213,579	221,665	234,134	239,691	242,118
Poland	580,731	536,579	494,978	484,676	507,637
Portugal	241,375	245,052	253,786	213,118	293,213
Spain	1968,570	2018,802	2082,172	2246,475	2354,916
Great Britain	495,929	490,205	497,742	457,377	459,275
Ukraine	**410,550**	**381,173**	**289,000**	**309,100**	**467,980**

**Source: Organic market in Ukraine, 2020.*

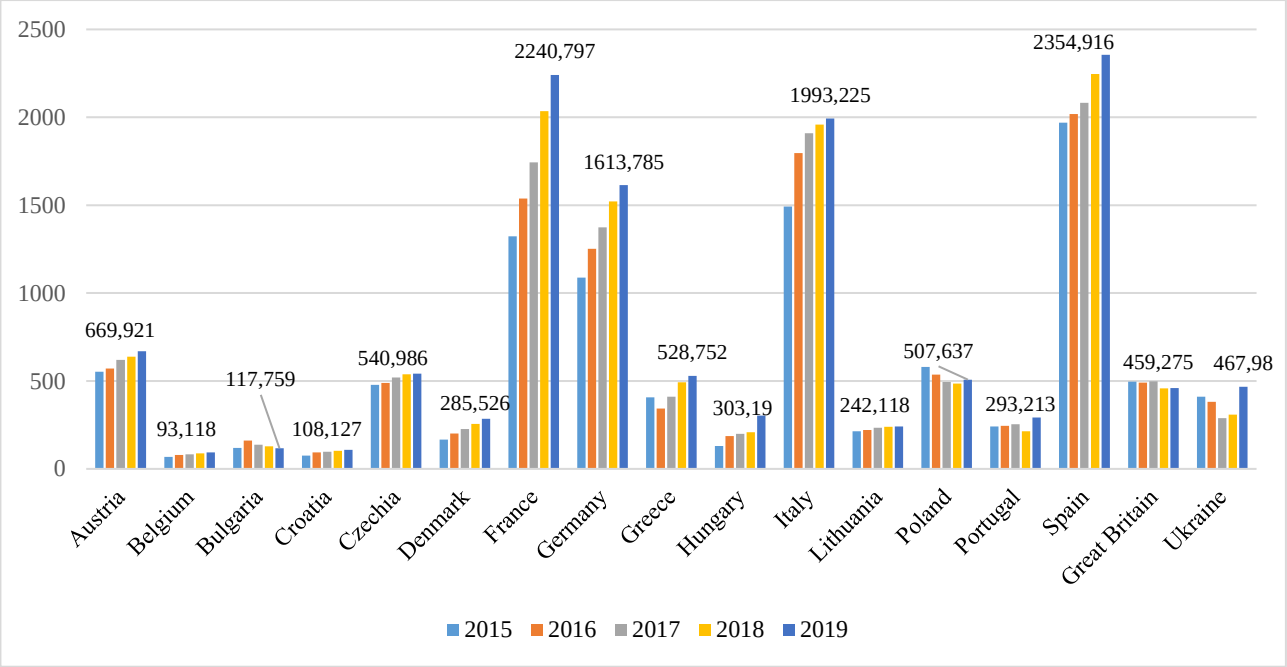

Figure 1. Hectarage of organic farming land in some European countries in 2015-2019, thou. hectares

**Source: Organic market in Ukraine, 2020.*

As the data in Table 1 and Fig. 1 show, the countries with considerable areas of land intended for growing organic products are France, Germany, Italy and Spain. During the period of 2015-2019 organic farming area of agricultural land in each of the above countries kept on growing. And, for example, compared to 2015, the area of organic farming land in France increased by 69,47 % in 2019 and attained 2240,797 thou. hectares in 2019; in Germany – by 48,21 % and attained 1613.785 thou. hectares: in Italy – by 33,54 % and attained 1993.225 thou. hectares in 2019; in Spain – by 19,63 % and attained 2354,916 thou. hectares. The place of Ukraine in this list also calls attention, where the area of organic farming land in 2019 reached 467,980 thou. hectares and compared to 2015 increased by 14 %. This place of our country, in our opinion, is sufficient among the European countries for the rapid development of organic production and agriculture in general.

Another important index-characteristic of the development of the organic sector of Ukraine is the presence of a sufficient number of producers of certified organic products. Let us make a comparative analysis of the latter in the European countries and in Ukraine. Detailed analysis of Fig. 2 shows, that organic market of the European countries is developed and includes a large number of producers of certified organic products. The presence of a considerable number of certified producers of the organic products is shown in such countries as: Austria (26042 producers in 2019), France (47196 producers), Germany (34136 producers), Greece (30124 producers), Italy (70561 producers), Poland (18655 producers), Spain (41838 producers). Ukraine is at the stage of development of the organic sector, and the presence of 470 certified producers of these products in 2019 is a significant achievement in the field of organic production.

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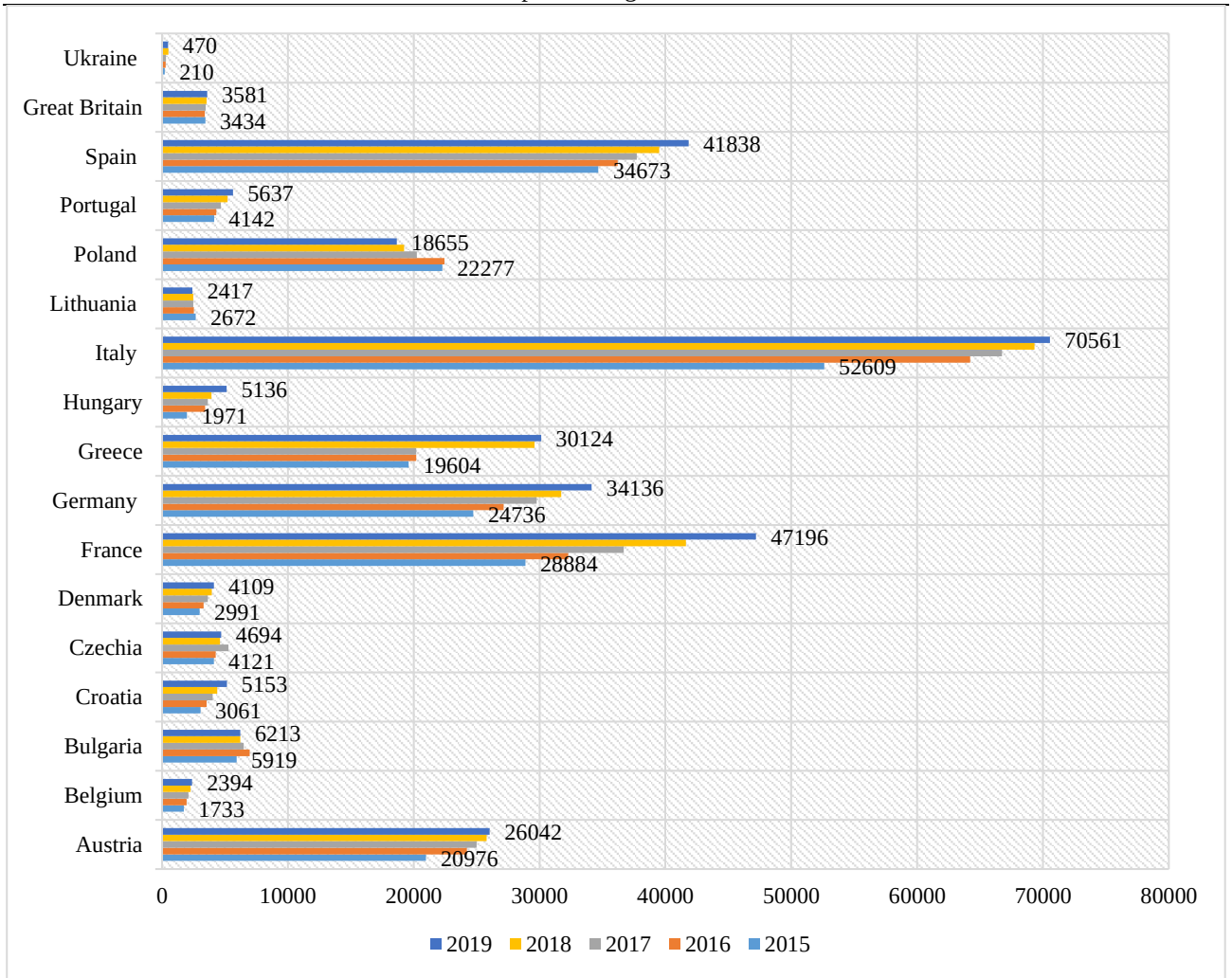

Figure 2. The number of producers of certified organic products in some European countries and in Ukraine in 2015-2019, producers

**Source: Organic market in Ukraine, 2020.*

A remarkable vivid index that assesses development of the organic products markets as well as the potential of the organic products sector is the volume of retail trade in organic products. Let us consider this index on the example of the European countries and Ukraine (Fig. 3).

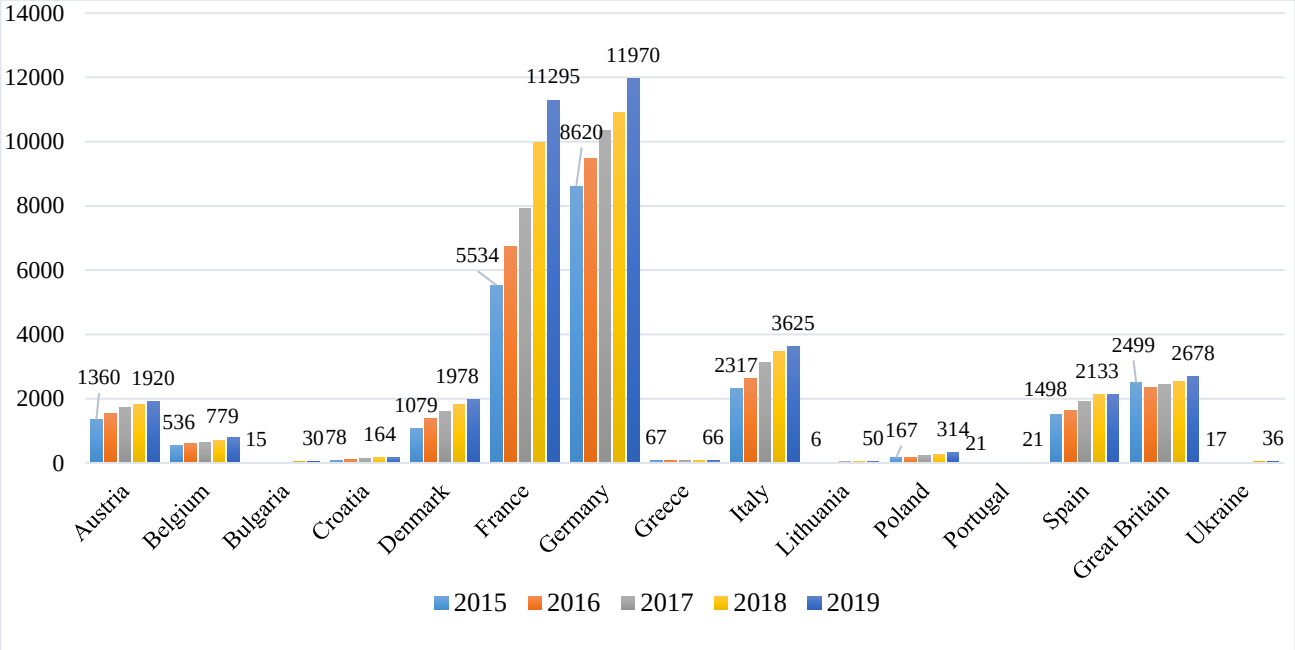

Figure 3. Dynamics of the volumes of retail trade in organic products in some European countries and in Ukraine in 2015-2019, million euros

**Source: Organic market in Ukraine, 2020.*

Obviously, the highest indices of the volumes of retail trade in organic products in 2019 are shown by the leading European countries, such as Austria (1920 million euros), Belgium (779 million euros), Denmark (1978 million euros), France (11295 million euros), Germany (11,970 million euros), Italy (3,625 million euros), Spain, (2,133 million euros) and the United Kingdom (2,678 million euros). The value of this index exceeds one million euros. As for Ukraine, our country has a positive increase in the volumes of retail trade in organic products. In particular, compared to 2015, in 2019 they have grown by 111.8% and reached the level of 36 million euros.

The key indices for the assessment of the country's organic export potential are the volumes of its exports and imports of organic products. Let us trace the pattern of growth of such indices in Table 2. According to the data presented in the table, we can say that the European countries that export considerable volumes of organic products in 2019 - such as Denmark (406 million euros), France (826 million euros), Italy (2425 million euros), Spain (890 million euros), the United Kingdom (193 million euros), and Ukraine (272 million euros).

The largest importers of organic products in 2019 among the European countries according to the Table are Croatia (34 million euros), Czechia (104 million euros), Denmark (1240 million euros), France (1890 million euros).

Table 2. Dynamics of the volumes of exports and imports of organic products in some European countries and in Ukraine in 2015-2019, million euros

Country	Years									
	2015		2016		2017		2018		2019	
	Export of organic products	Import of organic products	Export of organic products	Import of organic products	Export of organic products	Import of organic products	Export of organic products	Import of organic products	Export of organic products	Import of organic products
Croatia	2	34	2	34	2	34	2	34	2	34
Czechia	53	35	53	35	60	56	82	104	82	104

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Denmark	265	321	328	431	396	518	389	593	406	1240
France	435	720	629	720	707	1640	707	1890	826	1890
Hungary	20	18	20	18	20	18	20	18	20	18
Italy	1650	0	1915	0	2060	0	2266	0	2425	0
Lithuania	-	-	-	-	45	0	45	0	45	0
Spain	778	431	890	596	890	596	890	596	890	596
Sweden	-	-	-	-	83	0	116	0	116	0
Great Britain	-	-	193	0	193	0	193	0	193	0
Ukraine	**50**	**4**	**59**	**4**	**99**	**4**	**104**	**4**	**272**	**4**

**Source: Organic market in Ukraine, 2020.*

The important index of characteristics of the organic potential of the European countries and Ukraine is the cost of consumption of organic products per capita. Such dynamics during 2015-2019 is shown in Fig. 4. The data in this figure show the relatively high values of such indices in 2019 in the European countries such as Austria (215 euros/per cap.), Denmark (344 euros/per cap.), France (173 euros/per cap.), Germany (144 euros/per cap.), Sweden (214 euros/per cap.), Switzerland (338 euros/per cap.). According to the statistical data of FiBL (Organic market in Ukraine, 2020), in Ukraine, unfortunately, during 2015-2019, the value index of organic consumption per capita is equal to zero. This is explained primarily by the lack of knowledge and informative awareness of the Ukrainians about the current state of organic production, its quality and policy of consumption. Although according to the statistical data of OrganicInfo.ua (Internal market of organic products of Ukraine, exports and imports in 2019, 2019), 2020-2021 will bring to our country somewhat better indices of consumption of organic products.

We shall present graphically in the form of a detailed radar chart (Fig. 5) indices of efficiency of the organic production functioning and the organic potential in general in separate European countries and in Ukraine. We shall construct this diagram on the basis of symbiosis of 2019 data of all the above tables and figures (Table 3).

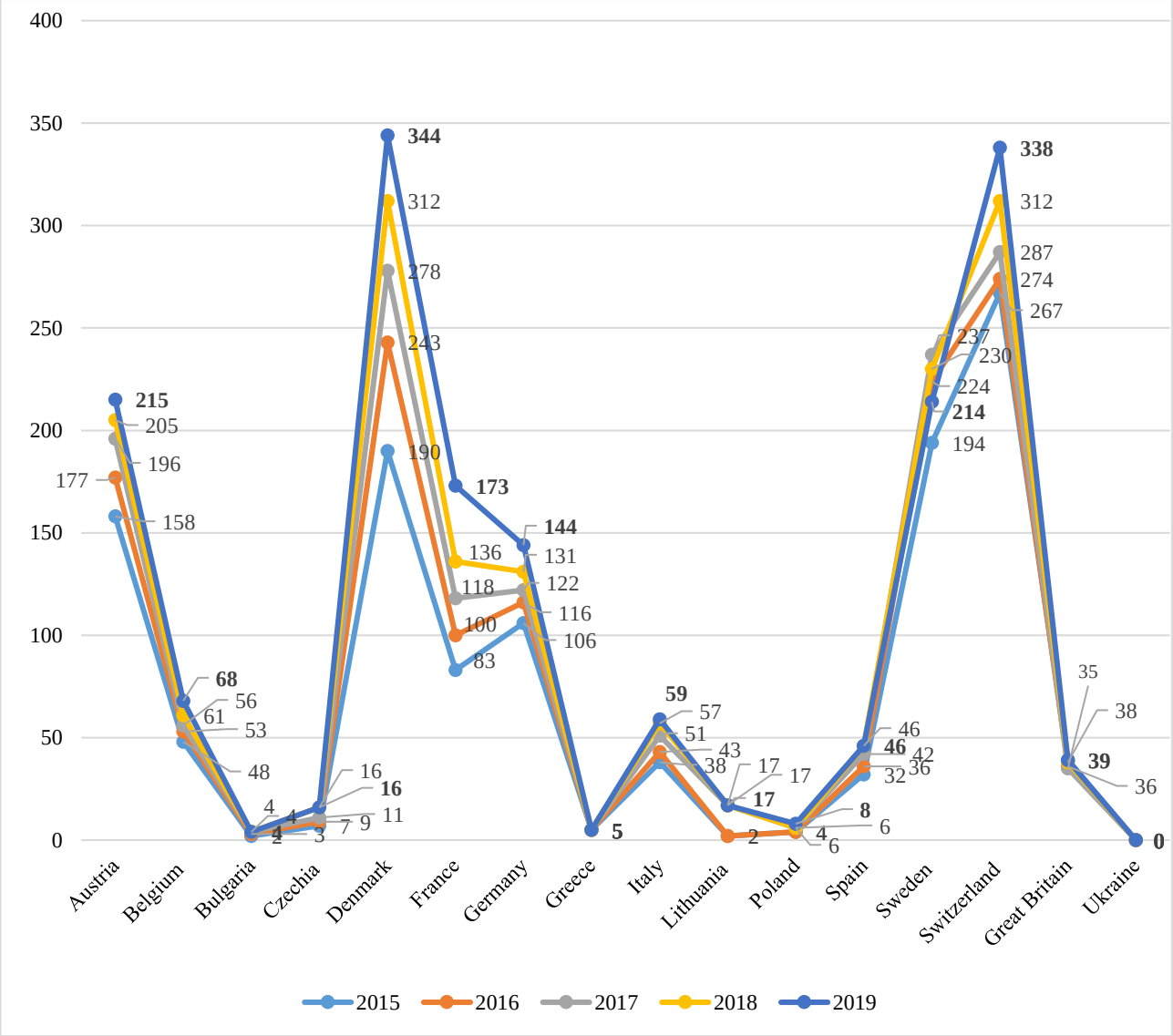

Figure 4. Total worth of the consumption of organic products per capita in some European countries and in Ukraine in 2015-2019, євро/per capita

**Source: Organic market in Ukraine, 2020.*

We propose to determine the overall efficiency of domestic organic potential with the aid of the integrated index - the taxonomy coefficient, calculated using ***the method of taxonomic analysis*** developed by Vyacheslav Plyuta (Plyuta, 1989). The argument in favor of using this method, in our opinion, is that it works with multidimensional economic concepts, described by a considerable number of indices. We are convinced that application of the taxonomy method to assess effectiveness of domestic organic potential is a new method in scientific studies of this problem.

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Table 3. Organic potential of some European countries and of Ukraine in 2019

Country	Area of organic farming land, thou. hectares	Number of certified organic products producers	Volumes of retail trade in organic products, million euros	Volumes of organic products exports, million euros	Volumes of organic products imports, million euros	Total worth of organic products consumption per capita, euro/per cap
Austria	669,921	26042	1920	-	-	215
Belgium	93,118	2394	779	-	-	68
Bulgaria	117,759	6213	30	-	-	4
Croatia	108,127	5153	99	2	34	24
Czechia	540,986	4694	164	82	104	16
Denmark	285,526	4109	1978	406	1240	344
France	2240,797	47196	11295	826	1890	173
Germany	1613,785	34136	11970	-	-	144
Greece	528,752	30124	66	-	-	5
Hungary	303,190	5136	30	20	18	3
Italy	1993,225	70571	3625	2425	0	59
Lithuania	242,118	2417	50	45	0	17
Poland	507,637	18655	314	-	-	8
Portugal	293,213	5637	21	-	-	2
Spain	2354,916	41838	2133	890	596	46
Sweden	613,964	5730	2143	116	0	214
Switzerland	172,7133	7284	2911	-	-	338
Great Britain	459,275	3581	2678	193	0	39
Ukraine	**467,980**	**470**	**36**	**272**	**4**	**0**

**Source: constructed by the authors based on the Organic market in Ukraine, 2020; Internal market of organic products of Ukraine, exports and imports in 2019, 2019.*

We shall present the systematized indices of 2012-2019 in Table. 4, that we shall use to calculate taxonomic efficiency index of domestic organic potential. Taxonomic index is calculated by the classical algorithm of taxonomic analysis (Ayvazyan, Bajaeva, Staroverova, 1974): formation of the matrix of observations, standardization of values of elements of the of the matrix of observations, formation of the reference vector, determination of distance between separate observations and the reference vector, taxonomic coefficient calculation

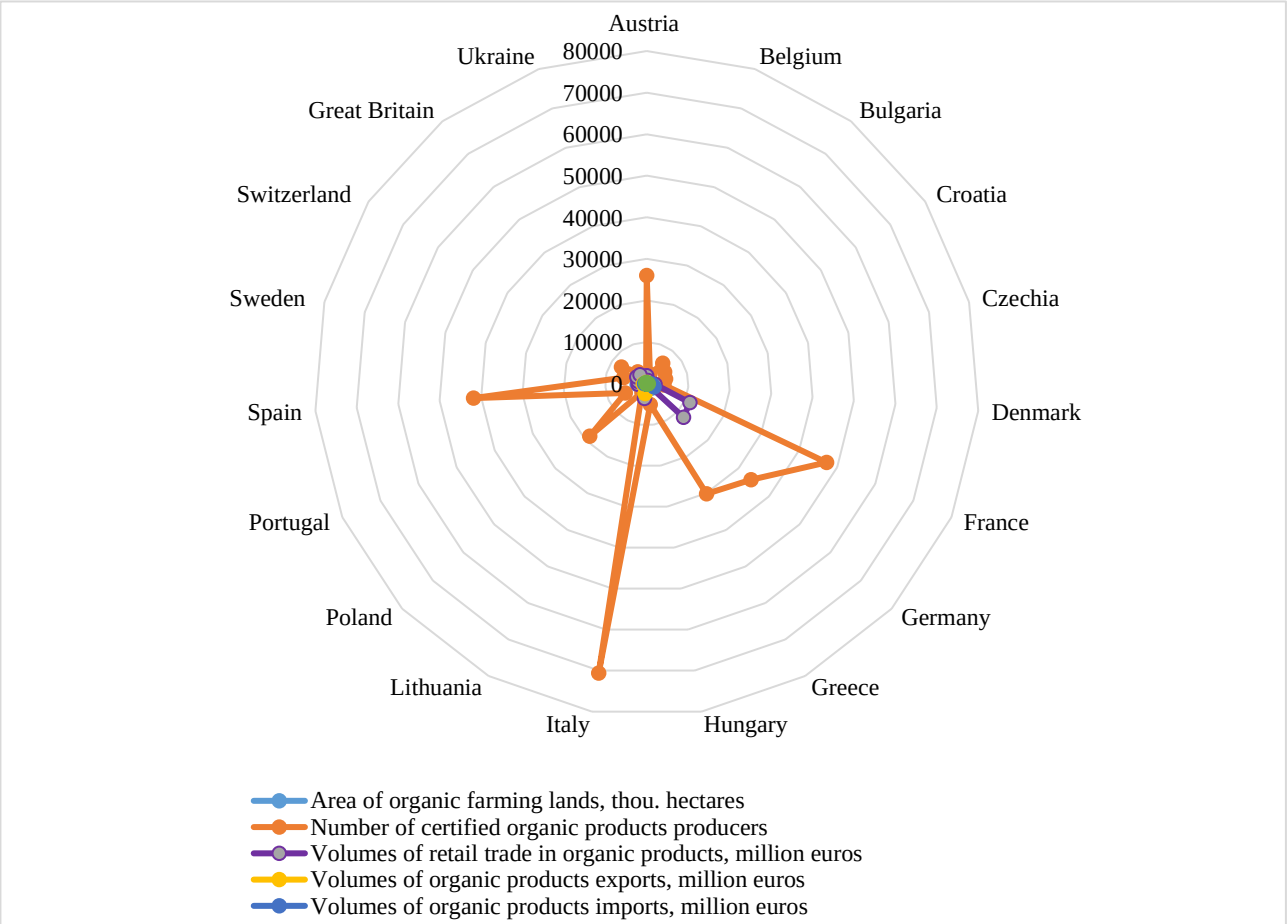

Figure 5. Organic potential of some European countries and of Ukraine in 2019

**Source: constructed by the authors based on the Organic market in Ukraine, 2020; Internal market of organic products of Ukraine, exports and imports in 2019, 2019.*

Table 4. Indices-characteristics of organic potential of Ukraine in 2012-2019

Years	Area of organic farming land, thou. hectares	Number of certified organic products producers	Volumes of retail trade in organic products, million euros	Volumes of organic products exports, million euros	Volumes of organic products imports, million euros	Increase of retail sales of organic products in % per year, %
2012	272,85	164	7	0	0	54
2013	393,40	175	12	36	0	54
2014	400,76	182	14	70	0	18
2015	410,55	210	17	50	4	20
2016	381,17	294	21	59	4	21
2017	289,00	304	29	99	4	38
2018	309,10	501	33	104	4	22
2019	467,98	470	36	272	4	30

**Source: constructed by the authors based on the Organic market in Ukraine, 2020; Internal market of organic products of Ukraine, exports and imports in 2019, 2019.*

To form a matrix of observations we shall use formula 1 and indices of Table 4, that characterize efficiency of domestic organic potential.

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$$X_{mn} = \begin{pmatrix} X_1 \\ X_2 \\ \dots \\ X_i \\ \dots \\ X_m \end{pmatrix} =$$

$$\begin{pmatrix} x_{11} & x_{12} & x_{13} & \dots & x_{1j} & \dots & x_{1n} \\ x_{21} & x_{22} & x_{23} & \dots & x_{2j} & \dots & x_{2n} \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots \\ x_{i1} & x_{i2} & x_{i3} & \dots & x_{ij} & \dots & x_{in} \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots \\ x_{m1} & x_{m2} & x_{m3} & \dots & x_{mj} & \dots & x_{mn} \end{pmatrix} \quad (1)$$

We form the matrix of observations *(X)*:

$$X = \begin{pmatrix} 272{,}85 & 164 & 7 & 0 & 0 & 54 \\ 393{,}40 & 175 & 12 & 36 & 0 & 54 \\ 400{,}76 & 182 & 14 & 70 & 0 & 18 \\ 410{,}55 & 210 & 17 & 50 & 4 & 20 \\ 381{,}17 & 294 & 21 & 59 & 4 & 21 \\ 289{,}00 & 304 & 29 & 99 & 4 & 38 \\ 309{,}10 & 501 & 33 & 104 & 4 & 22 \\ 467{,}98 & 470 & 36 & 272 & 4 & 30 \end{pmatrix} \quad (2)$$

According to the developer of this method, elements of this matrix are indices shown in units of measurement. However, any index shows only certain aspects of the category under the study, while a comprehensive description envisages the use of a system of indices, that in M. Repin's opinion have the following particularities: 1) comprehensiveness of the phenomena quantitative representation; 2) organic relationship of separate indices, and they themselves transform the group of indices into a single set of characteristics of a complex phenomenon or a process (Ayvazyan, Bajaeva, Staroverova, 1974). The very definition of the object of study and establishment of its purpose are the main criteria that determine this system of indices. However, following the algorithm of taxonomic analysis, standardization is required for further calculations, which allows to reduce the measurement units to a non-dimensional value in the range [0; 1], that is, to equalize characteristic values (Sablina, Telichko, 2009). The importance of this step is that standardization allows avoid discrepancies between the units of measurement as the elements of the matrix of observations can be expressed in measurement units specific for each characteristic. To do this, we determine the mean value of each index (Table 5).

Having determined the mean values of indices, we standardize values of the matrix elements by the following formula:

$$Z_i = \frac{X_i}{\overline{X_i}}, \quad (3)$$

where Z_i – standardized value of index *i*;
X_i – value of index *i* in the matrix of observations;
$\overline{X_i}$ – mean value of index *i*.

Table 5. Mean values of indices for calculation of taxonomic coefficient of domestic organic potential effectiveness

Index	Mean value
Area of organic farming land, thou. hectares	365,60
Number of certified organic products producers	287,50
Volumes of retail trade in organic products, million euros	21,13
Volumes of organic products exports, million euros	86,25
Volumes of organic products imports, million euros	2,50
Share of the increase of retail sales of organic products per year, %	32,13

**Source: the author's own calculations.*

The matrix of observations *(Z)* shall have the following look:

$$Z = \begin{matrix} ,7463 & ,5704 & ,3314 & & & ,6809 \\ ,0760 & ,6087 & ,5680 & ,4174 & & ,6809 \\ ,0962 & ,6330 & ,6627 & ,8116 & & ,5603 \\ ,1229 & ,7304 & ,8047 & ,5797 & ,60 & ,6226 \\ ,0426 & ,0226 & ,9941 & ,6841 & ,60 & ,6537 \\ ,7905 & ,0574 & ,3728 & ,1478 & ,60 & ,1829 \\ ,8455 & ,7426 & ,5621 & ,2058 & ,60 & ,6848 \\ ,2800 & ,6348 & ,7041 & ,1536 & ,60 & ,9339 \end{matrix} \quad 4)$$

The next step of the above algorithm is formation of the reference vector, which involves division of all variables into stimulators and destimulators. The basis of such division is the characteristic impact of each index on the level of the object under study. Stimulators are indices whose increase improves the overall performance of the object under study, and destimulators, on the contrary, cause a deterioration in performance.

In accordance with the indices-characteristics of Table 5, we shall attribute the area of organic farming land, the number of certified organic products producers, volumes of retail trade in organic products, volumes of organic products exports and Share of the increase of retail sales of organic products per year, that is indices whose growth has a positive impact on the overall efficiency of organic potential of Ukraine, to the *stimulators*. We shall attribute volumes of imports of organic products to the *destimulators*.

The division of these attributes into stimulators and destimulators is the basis for constructing a reference vector. To do this, it is necessary to choose from the matrix attributes the highest values of stimulators and the lowest values of destimulators respectively for the entire period of the study. The elements of this vector have coordinates and are formed by the values of indices using the formula:

$Z_{oi} = \max Z_{ij}$ (*stimulator*)

$Z_{oi} = \min Z_{ij}$ (de*stimulator*) (5)

Accordingly, reference vector *(P_0)* shall have the following coordinates:

$$P_0 = (1{,}280;1{,}743;1{,}704;3{,}154;0{,}000;1{,}681) \quad (6)$$

The next step of the algorithm for determination of taxonomic index is determination of distance between separate observations and the reference vector. This distance is calculated using the formula:

$$C_{i/o} = \sqrt{\sum_{j=1}^{m}(z_{ij} - z_{oj})^2} \quad (7)$$

where Z_{ij} – standardized value of *j-th* index in the period *i;*

Z_{oj} – standardized value of *j-th* index in reference vector.

Having determined the above said distance we shall calculate the following necessary indices, namely mean square deviation of this distance and norm setting of distances (remoteness) of each unit of the aggregate from the «reference» point using the following formulas:

$$\overline{C_o} = \frac{1}{m}\sum_{i=1}^{m} C_{io} \quad (8)$$

$$S_o = \sqrt{\frac{1}{m}\sum(C_{io} - \overline{C}_o)^2} \quad (9)$$

$$C_o = \overline{C}_o + 2S_o \quad (10)$$

The obtained distances serve as initial values that are used for calculation of the taxonomy index:

$$d_i = \frac{C_{io}}{C_o} \quad (11)$$

The taxonomic index *(K_i)* is determined using the formula:

$$K_i = 1 - d_i, \quad (12)$$

Values of the taxonomy coefficient for 2012–2019 calculated according to the above formula are shown in Table. 6.

Let us show the pattern of changes of the taxonomy index that characterizes overall efficiency of organic potential of Ukraine in 2012-2019 in Fig. 6.

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Table 6. Values of taxonomy coefficient, characterizing overall efficiency of organic potential of Ukraine in 2012-2019

Years	Taxonomy coefficient K_i	Intermediate calculations				
		d_i	$C_{i/0}$	$\overline{C}_o$	S_o	C_o
2012	0,103	0,897	3,673	2,990	0,552	4,094
2013	0,224	0,776	3,179			
2014	0,264	0,736	3,015			
2015	0,148	0,852	3,488			
2016	0,198	0,802	3,285			
2017	0,324	0,676	2,766			
2018	0,329	0,671	2,749			
2019	0,568	0,432	1,769			

**Source: the author's own calculations.*

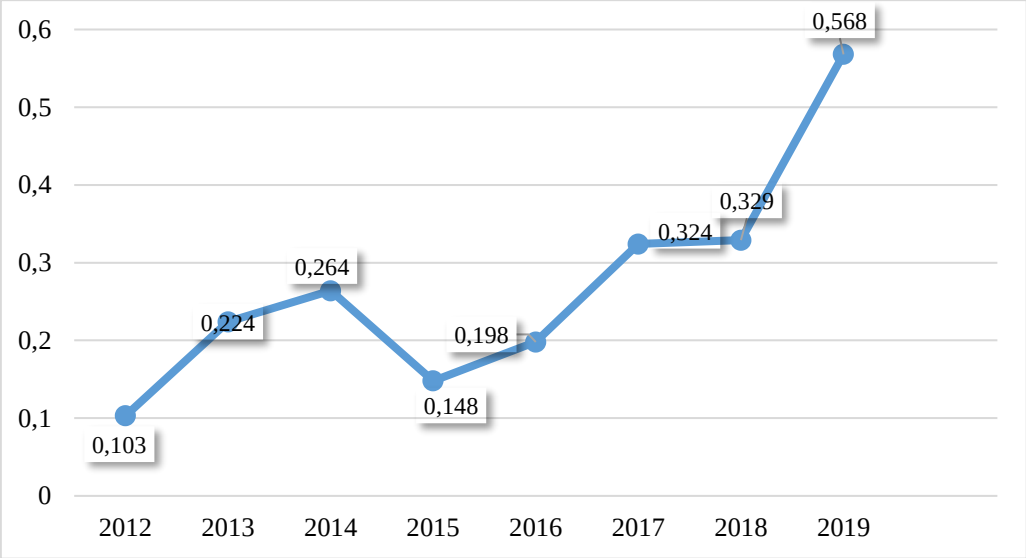

Figure 6. Pattern of changes of taxonomy index of the efficiency of organic potential of Ukraine in 2012-2019

Conclusion

In accordance with the constructed integrated diagram, that systemically characterizes organic potential of the European countries and, particularly, of Ukraine (Fig. 5) through the totality of its principal indices we can say that:

- the major European organic leaders in 2019 were: Austria, France, Germany, Italy and Spain. Collectively indices characterizing their organic potential in 2019 attained, compared to other European countries, the high leadership positions;

- according to the data we shall note, that in 2019 Sweden for the first time after many years of importing organic grains became their exporter - 116 million euros;

- Ukraine in the system of indices characterizing her organic potential in 2019, is a pioneer among the European countries, where development of organic farming and organic food production is a strategic task of the state for the next several years, as shown in Figs. 5. After all, the area of organic farming land in 2019 exceeded 460 thousand hectares, while the volume of exports of organic products in the same year attained 272 million

euros with only 470 domestic producers of certified organic products. Although it is worth noting that 2019 became illustrative for the domestic organic farmers, as they sold a part of their goods in the domestic market as traditional goods and this explains the zero result of the total worth of the consumption of organic products per capita in Ukraine in 2019.

As follows from the above Figure 6 taxonomy index was unstable during the analyzed period. Interpretation of this index is made in accordance with the following logic: the closer the level of the relevant component to the figure one, the better the situation towards functioning and development of the system of indices-characteristics that in their totality constitute the organic potential of Ukraine. Our study confirms that in 2019 this figure was the highest, attaining 0.568, and in 2012 and 2015-2016 - reached the lowest values – 0.103; 0.148 and 0.198 respectively. This indicates that the domestic organic potential and system of organic production in Ukraine remained at the stage of evolvement and development.

The analysis allows us to conclude that the Ukrainian exporters of organic products have to resolve a whole range of problems that hinder stepping up supplies of these products from our country to the markets of other countries. Thus, in particular, under conditions of the formation of ecological culture, consumers prefer mostly local products because their transport costs are lower and reduce the price of food products considerably.

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Management Theory and Studies for Rural Business and Infrastructure Development
eISSN 2345-0355. 2023. Vol. 45. No. 1: 79-93
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