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Foreign trade in poultry meat of Ukraine in the context of integration processes

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► **Abstract.** Foreign trade is of particular importance for the economic development of agri-food products and for food security. The increase in the export of poultry meat is noticeable. The purpose of the work is to substantiate the prospects of Ukraine's foreign trade in poultry meat, taking into account production, the situation on the world market, and participation in integration processes. Economic-mathematical, graphic, analysis, etc. methods were used for this purpose. The main suppliers (most of whom are members of the most developed integration groups) and importers have been identified, the share of the latter in the world market is smaller than the former. The trade balance for the main suppliers is mostly positive, but there is an exception for the countries of the European Union, which are significant importers. Trade is developing, as can be seen from the foreign trade turnover. Production is concentrated in Asia, North America, and Europe. The growth of Ukraine's exports and its entry into the top ten exporters is noticeable. Exports had a positive effect on the increase in production. The largest importers are the countries of Asia and Europe, and African countries are among the buyers. In 2021, meat was exported to about 100 countries, but this is less than its main exporters. Among the groupings and countries with which regional trade agreements have been concluded, the most exported in recent years were to the European Union, Turkey, and Azerbaijan, which indicates competitiveness in these markets. The export market concentration index indicates the diversification of the geographical structure of exports. In the conditions of growing demand for poultry meat, taking into account the quality advantages and consumption by the majority of the population, except for vegetarians, it is worth increasing production and export. This should be facilitated by improving quality, diversifying the geographical structure of exports, taking into account the characteristics of consumers in countries, the production of kosher and halal products, the demand for which is growing, and the growth of the population of countries where it is consumed, especially kosher products. Taking into account the export potential of Ukraine and existing trends, there are prospects for increasing exports. Of practical importance is the determination of export expansion directions, taking into account the characteristics of markets and main competitors, etc.

► **Keywords:** export, import, poultry meat, regional trade agreements, international economic integration

► Introduction

For thousands of years, foreign trade helps satisfy demand, contributes to the growth of well-being, is a key to economic development, and is one of the determining factors in the development of international economic integration (IEI). Taking into account the deepening of the international division of labour, the significant importance of trade for the economic development of countries, the appearance of some new products, and the disappearance of some relatively old ones, we note that agricultural products do not leave their positions on the world market as a result of the influence of scientific and technical progress, but on the contrary find consumers in significantly distant regions of the world, which contributes to the development of international economic relations between countries.

Moreover, as Vijayapri (2013) pointed out, in the modern world there is an interdependence of different national economies, and it is difficult to find an example of a closed one. But although all economies have become open, the degree of openness varies from country to country. In the modern world, no country is completely self-sufficient, although there is also a difference between them. At the same time, issues of regional and international specialization are no less important. Taking into account and using specialization, the development of foreign trade is often a powerful tool for solving some problems, and not only concerning meeting the demand for a particular type of product.

During the study of foreign trade in poultry meat, scientific works of foreign and Ukrainian scientists

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were used on the development and influence of foreign trade, in particular, M. Miller et al. (2022) regarding the expectation of poultry meat on the world market, V. Chatellier (2021) – the main trends in international trade over the last decades and EU countries, S.S. Diarra (2017) on the problems and prospects of poultry farming in the South Pacific region, I. Salkova (2017) – analysis of the situation of poultry meat in Ukraine, Sydorova A. (1998), T. Tsygankova et al. (2003), I. Gurova (2009), analysis of the development of international trade, etc.

The importance of foreign trade, geographical concentration, and openness are evidenced by the presence of several indicators, as well as their impact on the economic development of countries. It is worth noting the relevant research, in particular, whether trade openness and foreign direct investment in the Middle East and North Africa are driving factors for human development. Thus, according to the obtained results, the development of human potential in the short term is influenced by direct foreign investments (Hamdi & Hakimi, 2022). The solution to the problems of lack of resources and the possibility of getting out of critical situations, etc., depends on the participation of countries in international trade. For example, to overcome the global economic crisis, Portugal tried to increase the degree of internationalization of the economy. A significant obstacle to the expansion of exports with new goods or access to new markets (the extensive margin) or increasing exports to current trading partners (the intensive margin) is the incompleteness of information (Pacheco & Matos, 2022). This should also be taken into account for agri-food products of Ukraine, which already have a permanent consumers, but there are still significant untapped opportunities for new products and new markets.

In 2015, under the auspices of the UN, the international community adopted the Agenda for Sustainable Development for the period until 2030, which provides, in particular, measures aimed at creating favourable conditions for the successful development of global trade. This summons should be taken as a basis for developing trade policy for the specified period. Thus, modern global economic uncertainty and the need to develop inclusive and more sustainable development strategies require the strengthening of political commitments at the national and international levels, and this leads to consideration of the most important questions, whether the rules and agreements in force in the field of international trade meet the specified goal or need to be strengthened. Since it is impossible to slow down with the implementation of measures to achieve the goals specified in the Agenda for Sustainable Development, progress in improving the trading system must not affect only indicators of economic growth, but also ensure comprehensive and sustainable economic growth, reducing the scale of poverty and increasing well-being (International trade..., 2017).

At the same time, in addition to the importance of foreign trade in general, trade in agricultural products deserves special attention, which contributes to

solving the issue of food security in the world. It is worth emphasizing its importance for Ukraine because according to the calculations of the International Trade Center (ITC) (Trade statistics for international..., n. d.), the share of agri-food products in total exports in 2021 exceeded 40%. Although Ukraine is one of the largest producers and exporters of grain, there is interest and research in the export of livestock products, particularly poultry meat. After all, there is a trend of growth in the volume of its production and export. There are several advantages regarding its production, in particular agroclimatic ones, significant volumes of crop production, and existing positions on the world market, but there are questions about world consumption and its prospects, opportunities to increase and expand export vectors, etc., which determines the feasibility of the study.

The issue of food security does not lose its relevance either at the global level or at the level of an individual country. Although it is difficult to overestimate the importance of cereals, vegetables, and fruits for the health of the population and exports, there is a growing debate about the consumption of livestock products, in particular meat, the number of vegetarians is increasing, particularly in developed countries, but livestock products are produced and exported in significant volumes. This applies directly to Ukraine, so the issue of quality, expansion of positions on the world market, and stability remain relevant. Thus, the advantages of white meat, its presence in the diet of the population of various faiths that consume meat, and a larger share in the export of Ukraine determined the expediency of the study. Therefore, the purpose of the article is to identify the features of foreign trade on the world market and to determine directions and opportunities for increasing the export of poultry meat by Ukraine, taking into account the concluded regional trade agreements.

The task is the study trends and features of foreign trade in poultry meat, analysis of geographical diversification of exports taking into account its production, and concluded regional trade agreements.

► Literature Review

Scientists have been dealing with issues of foreign trade for centuries, which confirm the theories and research of A. Smith (2001), D. Ricardo (1941), P. Samuelson (1997), and others. Studies of trade in agricultural products were carried out even in the classics, and since it has not lost its importance in the world market, it continues even today. Moreover, this is typical for both foreign and Ukrainian scientists, in particular with regard to poultry meat. Poultry is the first meat produced and consumed in the world. It is worth noting that it has a much higher rate of annual consumption than other types of meat, due to the following reasons: the price paid by consumers is lower; the nutritional quality of this lean meat is recognized; this meat is not subject to religious prohibitions like pork in Islam and Judaism or beef in India (Chatellier, 2021).

S.S. Diarra (2017) notes that in the South Pacific, poultry meat and eggs are the most popular livestock

products, but domestic production is small and does not meet demand, so imports are trying to overcome this. Analysing foreign trade in livestock products, issues of its quality deserve special attention.

In addition, studies on international trade and the spread of poultry diseases have become relevant (Awada et al., 2021). For example, in relation to bird flu, according to the information note of the World Bank, it was noted about measures to strengthen borders and control over international trade and international travel (Marces, 2005).

V. Chatellier (2021), researching international trade in livestock products, noted that world trade in livestock products is growing mainly due to the increased consumption of animal proteins in Asia and their difficulties with the development of domestic supplies. In turn, in many importing countries, mainly those that are developing, in particular in Asia and Africa, preference is given to inexpensive goods. The specifics of consumption and the presence of comparative advantages of the regions of the world determine relevant research.

Also, J.M. Radin and others (2017) noted that billions of chickens are shipped thousands of miles around the world each year to meet the ever-increasing demand for a cheap and nutritious source of protein, but international transport can increase the likelihood of introducing zoonotic viruses such as highly pathogenic avian influenza A(H5N1) into new countries. Limiting the trade in live chickens or strengthening infection control measures during the period of infection could be an important step in reducing the spread of H5N1 and other avian influenza viruses, according to the research findings. That is, international trade and the quality of products are of great importance, which determines the volume and geographical structure of the former.

M. Miller etc. (2022) noted that over the past two decades, poultry meat has become the most consumed livestock product in the world, especially in developing markets where production prospects have been relatively limited. Since the demand for poultry products in these markets increased from 2001 to 2021, so did global imports. It is assumed that for the next 10 years, poultry meat will remain a livestock product with a high demand for imports.

As for Ukraine, according to research by I. Salkova (2017), the offer of poultry meat covers domestic demand, so the market is balanced.

So, the trade in poultry meat occupies a significant share in the world trade in livestock products, there is an increase in its consumption, which is mostly not limited by religious beliefs, and based on the prospects and the presence of comparative advantages in terms of production and existing production in Ukraine, the continuation of the study was determined.

► Materials and Methods

Using the method of scientific abstraction, the study of export-import relations was carried out taking into account the peculiarities of the development of globalization processes, identifying the peculiarities

of trade for countries that are members of international integration groups. Issues such as the openness of the economy, the impact of world crises on its development and foreign trade, and the development of international integration processes required consideration.

The abstract-logical method was used to determine competitors in the world market, and the main countries-suppliers of poultry meat and its producers were highlighted. To outline the most promising product sales markets, the country's largest buyers were identified and their share in world imports was calculated. The development of intra-industry trade led to the identification of countries that are both the main suppliers and importers of poultry meat on the world market. To achieve the goal, general scientific and special economic methods were used, including analysis and synthesis for the analysis of the world poultry meat market, induction – formulation of conclusions, and abstract-logical – determination of promising directions for the development of foreign trade. The study of the development of foreign trade led to the use of separate economic and mathematical methods, which made it possible to identify the shares of countries in world production, export, and import, reflect trade trends, analyse the diversification of exports, etc.

To determine the role of foreign trade in the economy, volume indicators were calculated, in particular:

– the volume of foreign trade turnover (Sidorova, 1998):

$$3TO = E + I \quad (1)$$

where E is export of products, dollars; I – import of products, USD.

– the saldo of the trade balance:

$$C_T = E_T - I_T \quad (2)$$

where C_T – the saldo of the trade balance; E – cost of commodity export; I – the value of commodity imports, dollars.

The saldo is positive if exports exceed imports and the trade balance is active, otherwise, the saldo is negative, and the trade balance is passive. In the case of a zero saldo, when exports equal imports, a net balance is observed.

Since the absolute dimensions of the balance of the trade balance allow only to rank countries according to this indicator, and it is incorrect to compare the dimensions of the balance by country, since the economic and export potentials of the countries differ, then the index of the state of the balance or the index of coverage of exports by imports is used, which is calculated according to the formula:

$$K = \frac{E}{I} \cdot 100\% \quad (3)$$

where E – the export value; I – the cost of imports.

If the value of the index is greater than 100, then the trade balance has a positive saldo, and in the opposite case, the opposite (Tsygankova, et al., 2003).

To analyse the diversification of the geographical structure of exports, the export market concentration

index was calculated:

$$EMC = 100 \cdot \left[\sqrt{\sum_j \left(\frac{X_{ij}}{X_i} \right)^2} \right] \quad (4)$$

where EMC is the export market concentration index; X_{ij} – export of country i to country j ; X_i – the total export of the country i .

Index values can vary from 0 to a maximum of 100 in the case of one trading partner. Usually, the averaged value over a certain period is used to analyse the dynamics of the indicator, as it is subject to the influence of cyclical fluctuations and changes in relative prices on world markets (Gurova, 2009).

The graphic method was used to fully reflect the trends in the export of poultry meat at the world level and Ukraine, as well as the share of regions in its global production. The method of comparative analysis was useful in the study of foreign trade in Ukraine relative to other countries. In addition, methods of analysis and synthesis, abstraction, etc. were used. for the analysis of export-import flows, the formation of conclusions, and the development of proposals for the further development of trade. The study used statistical data on foreign trade of the UNCTAD/WTO International Trade Center (ITC) for 19 years, from 2002 to 2021 (Trade statistics for international ..., n.d.), to more objectively assess the situation on the foreign market, determine prospects, as well as identify Ukraine's place in it, analyse trends and develop proposals.

The information base of the study also became the materials of the UN FAO (OECD-FAO Agricultural Outlook..., n.d.), regulatory and legal acts of Ukraine, in particular recommendations regarding the principles of healthy nutrition (Order of the Ministry..., 2013), the Bible (1962), international treaties on international economic integration, in particular, the Association Agreement between Ukraine and the EU No. 1678-VII..., 2014), of the International Trade Center (Trade statistics for international..., n.d.).

► Results and Discussion

It is expected that in high-income countries, the

growing public interest in environmental protection and health will contribute to the transition from animal proteins to alternative sources and the substitution of red meat, in particular beef, with poultry and fish shortly (OECD-FAO Agricultural Outlook..., n.d.). The preference for white meat consumption is also confirmed by the Order of the Ministry of Health of Ukraine "On the approval of methodological recommendations for general practitioners – family medicine regarding patient counselling" dated 01.14.2013, according to which patients should be encouraged to consume a variety of foods with a high protein content, in particular low-fat meats such as poultry, low-fat dairy products, eggs, legumes, unsalted nuts, and seeds. Moreover, "recommendations should be provided on the significant limitation of food sources of proteins that simultaneously contain saturated fat or trans-fat, including red meat and technologically processed meat products" (Order of the Ministry..., 2013).

Despite modern trends regarding the increase in the number of vegetarians, appeals to the initial consumption of plant food under the Bible records (Bible, 1962), discussions about the expediency and humanity of meat consumption, and its production continues. It is also worth remembering the need to follow a proper diet, take appropriate vitamins, etc.

Moreover, it is known that food of animal origin is a source of B vitamins (Rodina, 2017). However, according to the Methodological recommendations for doctors, saturated fatty acids, in particular meat, lard, coconut, and palm oil, can contribute to an increase in the risk of coronary heart disease, and colon and prostate cancer (Order of the Ministry..., 2013). The type of meat is of great importance, separately in the order it is noted the increased risk of certain diseases and mortality when consuming mainly red meat in comparison with white meat (Order of the Ministry..., 2013).

The development of foreign trade in poultry meat in the world is growing noticeably. So, only from 2002 to 2021, its exports increased 3.4 times, namely from 8841.7 to 29688.9 million dollars (Fig. 1).

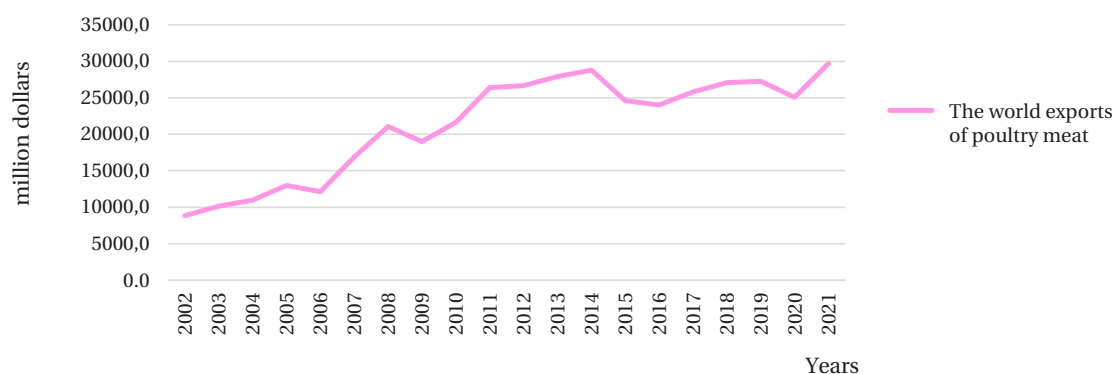


Figure 1. Dynamics of world exports of poultry meat in 2002-2021, million dollars

Source: Compiled by the author, given the data from International trade statistics (n. d.)

In 2021, the number of poultry meat exporters fluctuated around 140, with the five largest – Brazil, the USA, Poland, the Netherlands, and Belgium – accounting for 63.5% of global exports in 2021, and Brazil alone accounted for almost a quarter – 23.4 %, and the first three countries – 50.3%. Ukraine also entered the top ten suppliers, its share was 2.4%, although exports were higher than those of such countries as China, Russia, Spain, Belarus, Argentina, Canada, and others. At the same time, it is worth paying attention to the cost, because in terms of export volumes, Belgium was overtaken by Turkey, and Ukraine took 7th place. In general, poultry meat is produced, consumed, exported, and imported by countries in all regions, including Asia, Africa, Central America and the Caribbean, South America, North America, Europe, and Oceania.

The world's largest importers of this product, include China, Germany, Mexico, France, Great Britain, Japan, the Netherlands, Saudi Arabia, the UAE, and others. It is worth noting that geographically imports are more diversified than exports, in particular, the largest buyer China accounts for 12.1% of world imports, while the share of other countries did not exceed 6.1% (Germany). In addition, in 2021, the top 10 importers imported 51.4% of poultry meat, while the top 10 exporters exported 78.1%, and this trend remained constant from 2002 to 2021, in particular, the value of the indicator of the first ones did not exceed 57.5%, and the latter did not fall below 74.1%. Considering the growth of the poultry meat trade, it is advisable to consider which countries are its main exporters and importers and their share in world volumes (Table 1).

Table 1. The share of the largest exporting countries and importers in the world volume of poultry meat exports and imports, %

Main exporters	Share in world exports				Main importers	Share in world imports			
	Years					Years			
	2002	2010	2020	2021		2002	2010	2020	2021
Brazil	16.3	27.5	22.2	23.4	China	5.0	4.7	14.0	12.1
USA	17.5	17.6	15.3	16.1	Germany	9.9	6.9	6.6	6.1
Poland	1.4	4.4	10.6	10.8	Mexico	2.9	4.0	4.0	5.2
Netherlands	12.0	9.2	10.3	9.8	France	3.2	4.9	4.7	5.1
Belgium	4.9	4.0	3.5	3.5	Great Britain	9.9	7.7	5.1	4.6
Germany	3.9	4.6	3.5	3.3	Japan	11.3	5.6	4.5	4.3
Thailand	6.5	0.3	3.6	3.1	Netherlands	3.5	3.2	3.7	4.1
France	11.5	5.6	3.1	3.0	Saudi Arabia	3.9	6.4	4.5	4.1
Turkey	0.1	0.9	2.2	2.8	UAE			2.8	3.0
Ukraine	0.04	0.2	2.2	2.4	Hong Kong	7.7	8.3	3.9	2.8
In total	74.1	74.5	76.5	78.1	In total	57.2	51.7	53.7	51.4

Source: calculated by the author given International data trade statistics (n.d.)

From the data in Table 1, it can be seen that the countries are trying to maintain their positions on the world market, which is confirmed by the high shares of Brazil, the USA, and the Netherlands during the specified years. However, this does not mean that it is impossible to enter or increase exports in this market, as evidenced by the experience of Poland and Ukraine, whose shares in 2002 were 1.4 and 0.04%, respectively, and in 2021 – respectively 10.8 and 2.4%. At the same time, a decrease is likely, which follows from the data in the table and indicates the need for constant improvement of product quality.

It is worth noting that certain countries are among the largest exporters and importers of poultry meat at the same time, in particular the Netherlands, Germany, and France. This testifies to the development of intra-branch trade of these countries, and once again confirms that it is more characteristic of the member countries of integration groups, in this case, all countries are members

of the most developed trade and economic association of the European Union. It is also appropriate to take into account the difference in consumer preferences depending on their material well-being, the liberalization of trade policy, the territorial proximity of countries, and other factors, and the development of many are influenced by the participation of countries in integration groups.

Regarding the world's 10 largest suppliers, during 2002-2021, the balance of foreign trade in poultry meat was consistently positive for Brazil, the USA, Poland, the Netherlands, Belgium, Thailand, and Turkey, but the opposite situation for Germany. A negative balance in the specified period was observed for France only for 7 years – in 2014 and from 2016 to 2021, and for Ukraine – until 2011 and 2012. That is, this indicates that the main exporting countries can and are also important markets for the sale of products, but it is clear from the above that these are mainly member countries of the most developed integration grouping. At the same time,

this indicates that integration and, accordingly, liberalization of foreign trade can contribute not only to an increase in imports but also to the export of products.

Taking into account that due to the difference in the economic and export potential of the

countries, it is inappropriate to compare the size of the balance, it is recommended to calculate the export-import coverage index (Tsygankova et al., 2003). Therefore, calculations of the latter and the volume of foreign trade turnover of poultry meat of its largest suppliers were made (Table 2).

Table 2. Index of coverage of export with import and the volume of foreign trade turnover of poultry meat of the main supplier countries

The main exporting countries	Index of coverage of export with import, %				Foreign trade turnover, millions of dollars			
	2002	2010	2020	2021	2002	2010	2020	2021
Brazil	145448.1	188171.1	55302.0	45120.6	1438.0	5949.4	5564.6	6968.9
USA	4164.1	2141.7	1410.1	1246.0	1582.0	3994.8	4105.9	5155.9
Poland, poultry meat	610.0	2222.4	3379.4	2642.0	146.2	1000.4	2730.1	3328.3
Netherlands	362.9	302.7	275.7	242.1	1358.1	2646.6	3531.5	4095.6
Belgium	187.3	205.6	159.5	158.6	658.7	1297.5	1416.7	1685.1
Germany	41.0	70.3	53.3	55.2	1178.6	2396.7	2529.5	2739.9
Thailand	83187.6	4045.4	22400.1	19657.7	578.0	70.0	918.7	919.7
France, poultry meat	370.3	122.6	66.5	60.6	1291.4	2211.5	1966.1	2367.2
Turkey	36456.3	23555.9	1464.6	1555.3	11.7	204.2	583.1	898.8
Ukraine	11.8	23.4	1219.1	1215.3	33.2	218.0	600.3	760.4

Source: calculated by the author given ITC data (Trade statistics for international ..., n. d.)

From the given data, it can be seen that the highest values of the export-import coverage index were in Brazil, Thailand, Turkey, and Poland, that is, their exports exceeded imports more than those of other main supplier countries. Foreign trade turnover of poultry meat was the highest in Brazil, the USA, and the Netherlands in 2002, 2010, 2020, and 2021, as well as in Germany, France, and somewhat less in Belgium and Poland. At the same time, according to the index of export-import coverage, only Poland is among the first countries among those that are part of the most developed integration groups, in this case, the EU, which indicates the development of intra-industry trade in its member countries, in particular, in the specified years, Germany had the index was consistently less than 100 in France in the last two years. However, among the countries in which the trade fair was the smallest – Turkey, Thailand, and Ukraine, and for the first two the values of the coefficient of coverage of exports by imports were the highest, and it is worth noting that they are not members of the most developed integration groups. The increase in the maintenance and repair of Ukraine, as well as the growth of exports over imports, is noticeable. In the context of modern trends in the development of international

economic integration, it is worth noting that of the 10 main suppliers of poultry meat to the world market, all except Thailand, Turkey, and Ukraine, which account for 8.3% of exports, are members of the most developed integration groups, in particular, Brazil – MERCOSUR, the USA – the North American Free Trade Agreement, and the rest of the countries – the EU. It should be noted that Ukraine and Turkey have concluded regional trade agreements with the EU, and they seek to deepen integration with this association.

At the same time, it is advisable to pay special attention to product quality and price, because some countries export more poultry meat in terms of volume, but less in terms of value, for example, Turkey and Ukraine, but on the contrary – Germany and France.

It is worth noting that according to calculations according to FAO data (Meat market review..., n.d; p. 10-12) in the total production of meat, the maximum share in 2020 was for poultry meat – 39.5% (133,266 thousand tons), and was higher than for beef – 21.2% (71,408 thousand tons). Most of it is produced in Asia, North America, and Europe, and the former accounts for almost 40% of global production (Fig. 2).

Production of poultry meat by individual regions of the world, 2020

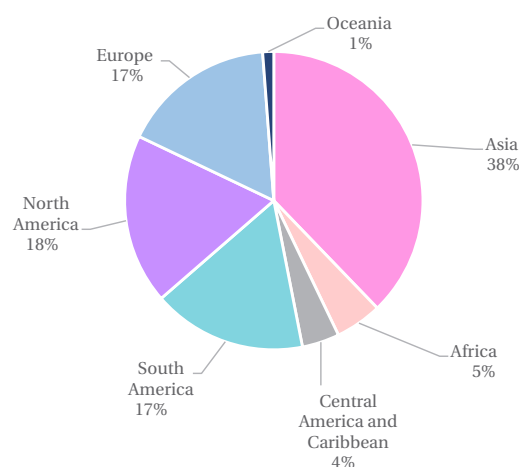


Figure 2. Production of poultry meat by individual regions of the world, 2020

Source: Compiled by the author, given data from International trade statistics (n. d.)

The main producers include China (16.7%), the USA (17.4%), the EU (11.4%) and Brazil (10.8%), with the latter producing only 869,000 tons less meat poultry than the EU. It is worth noting that the largest producers are the largest exporters, but in this case, the determining factors are not only the volume of production, but also the consumption of products. So, although China produced 16.7%

of the world's poultry meat, exports accounted for 2.2%, and its last one exceeded Ukrainian by only 1,739,000 dollars.

The value of the export of poultry meat of Ukraine has increased significantly, namely from 3.5 in 2002 to 702.6 million dollars. in 2021, i. e. 200.7 times, and compared to 2011 – up to 79.0 million dollars, i. e. 8.9 times, and the growth was quite rapid (Fig. 3).

Export of poultry meat

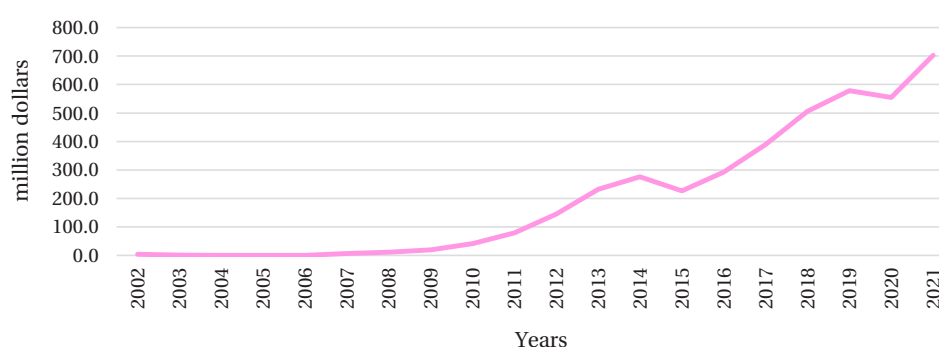


Figure 3. Export of poultry meat by Ukraine, million dollars

Source: Compiled by the author based on data from International trade statistics (Trade statistics for international ..., n. d.)

Production of poultry meat in Ukraine in 2020 amounted to 1,404.7 thousand tons, and compared to 2000, it increased by 7.3 times (Prokopenko, & Vyshnevskaya, 2021). That is, exports have a significant impact on production volumes, and this is the only type of meat whose production has increased, which indicates higher quality and demand for it.

Among the largest importers of Ukrainian poultry

meat are Saudi Arabia, the Netherlands, Slovakia, UAE, Azerbaijan, Turkey, and Kyrgyzstan, which accounted for 66.1% of exports, and 73.7% for the 10 main buyers. The biggest part, almost a third of exports, 27.5% were made to the first country and 18.5% to the second country. Thus, the main buyers of Ukrainian poultry meat are mostly European countries, in particular the EU, and Asia, and sales were

made to some African countries. In 2021, Ukraine exported meat to about 100 countries, the USA – 145, Germany – 90, and Brazil – 150 countries. Therefore, Ukraine should continue to expand its sales markets and increase export volumes.

Taking into account the development of integration processes in the world and Ukraine's conclusion of free trade agreements, in particular with about 50 countries, because as recently as 2017 it had free trade zones with 45 countries (Ukraine has free ..., 2017), it is advisable to consider trading with them. Thus, the share of poultry meat exports to the EU during 2002-2021 varied from 0 to 46.0%, and in 2021 it was 27.0%. It is worth paying attention to the exit and rapid increase of exports to the EU market since even before 2014 its share did not exceed 0.5% (1055 thousand dollars). In 2022, sales were made to many countries of the grouping, but in quite different

volumes, in particular, the Netherlands, Slovakia, and Romania imported the most – respectively 18.5%, 5.6%, and 1.3%. For other countries, the value of the indicator did not exceed 0.5%, but among the importers were Ireland, Belgium, the Czech Republic, Poland, Germany, Estonia, Spain, Denmark, Bulgaria, Cyprus, Austria, Malta, Greece, and Portugal.

In addition, among the countries with which free trade agreements were concluded, the largest importers in 2021 were Azerbaijan, Turkey, Kyrgyzstan, Belarus, Kazakhstan, Moldova, Armenia, Turkmenistan, Georgia, Great Britain, and Uzbekistan, whose share varied from 0.4% to 3.2% (Table 3).

Considering the increase in the volume of poultry meat export, it is advisable to analyse the diversification of its geographical structure, therefore the concentration index of the poultry meat export market was calculated (Fig. 4).

Table 3. Value and share of poultry meat exports of Ukraine to its largest importers from countries with which regional trade agreements have been concluded, 2021

Countries, groups	Export value, thousands of dollars.	Share in the total export of Ukraine, %
EU-27	189.5	27.0
Azerbaijan	22.6	3.2
Turkey	22.4	3.2
Kyrgyzstan	21.6	3.1
Belarus	19.3	2.8
Kazakhstan	17.0	2.4
Moldova	16.8	2.4
Armenia	12.7	1.8
Turkmenistan	7.1	1.0
Georgia	6.0	0.9
Great Britain	5.8	0.8
Uzbekistan	2.5	0.4

Source: calculated by the author given ITC (Trade statistics for international ..., n. d.).

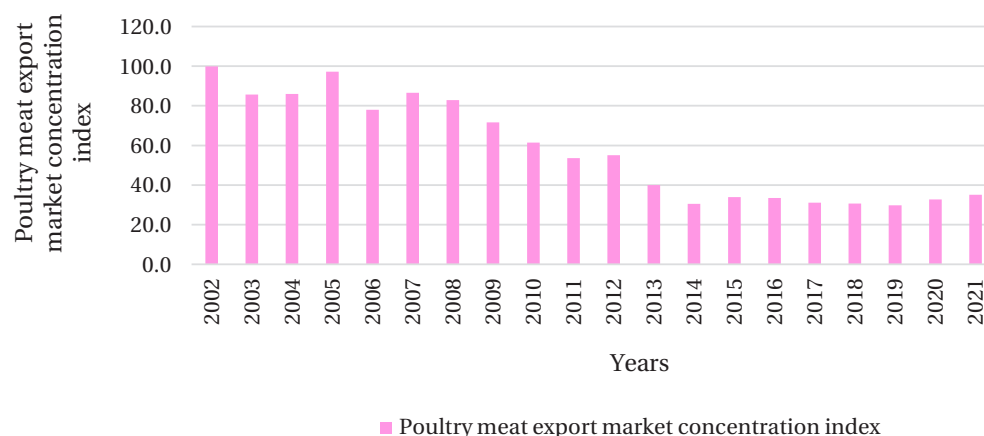


Figure 4. Poultry meat export market concentration index, 2002-2021

Source: calculated and constructed according to ITC data (Trade statistics for international ..., n.d.)

That is, the given data testify to the diversification of the geographical structure of the export of poultry meat in Ukraine. Thus, if the calculated values of the concentration index of the poultry meat export market in 2002-2005 varied from 85.7 to 99.9, then in 2016-2021 – 29.8-35.1. Regarding product quality, it is necessary to take into account some indicators and production technologies today. Currently, due to the growing demand for poultry meat, its production is also increasing. But for it to be of good quality, it must be properly grown, transported, inspected, processed, etc., without causing unnecessary pain and stress to the animals. Thus, proper compliance with animal welfare guidelines and traceability of poultry meat is becoming increasingly important and will soon become mandatory requirements in the poultry industry (Kumar et al., 2022). In addition, according to the recommendations, the bird should have enough space for normal behaviour, in particular, bathing in dust, eating, drinking, etc. Attention is also paid to the number of birds in the aviary, which should depend on their overall size, the weight of the bird, so that each when it is fully grown, has a place to access fresh water and feed throughout its life (Animal welfare for..., n.d.). Therefore, such requirements and recommendations should be taken into account, especially to expand exports to developed countries. It is necessary to take into account the peculiarities of the demand of the population of different regions. For example, unlike North American consumers, who mostly prefer breast meat, global consumers prefer dark meat. This means that exports are very necessary to achieve a better balance of supply and demand for all parts of the chicken (International trade, n.d.).

Considering the importance of Biblical laws, the benefits of clean meat, its consumption mainly in Asian countries, in particular Muslim countries and Israel, as well as by the population belonging to such Abrahamic religions as Christianity – Seventh-day Adventists, Muslims and Jews, who live in almost all it is expedient for countries to promote the increase in volumes and diversification of poultry meat exports in the future. At the same time, it is worth paying attention to their consumption of halal and kosher products, which includes permitted products. From a practical point of view, it is expedient to note that kosher products include the meat of livestock with split hooves that chew the cud, eagles, pelicans, herons, sea eagles, owls, and other types of birds according to their genus are prohibited from poultry products (Bible, 1962) and the use of special slaughter technology. That is, religion affects the development of foreign trade, which is evident from the above and requires study and consideration. After all, the famous scientist A. Marshall, the founder of the “Cambridge School”, in his work “Principles of Economic Science”, which was republished for many decades and was the main textbook of economic science in England and some Western countries, noted that the two great forces that shaped world history, were religion and economy, and religious motives are stronger than economic ones (Marshall, 1993).

At the same time, it is advisable to focus on kosher products, since they will be halal, but not vice versa.

Notably, because production is less directly linked to the land than other productions, such as cattle and sheep, it is easier to develop near urban areas with strong population growth; poultry farming is easier to develop compared to other types of livestock thanks to the “technological packages” that some global companies sell to any local entrepreneur (Chatellier, 2021).

However, according to S.S. Diarra (2017), in most countries in the South Pacific region, the main constraints limiting poultry production are the high cost of inputs, including feed, equipment, and market access. And there is a massive import of poultry products, mainly from the USA, Australia, and New Zealand. The author examines the state of the industry in individual countries of the region, as well as the main challenges and opportunities. Thus, the barriers of some countries are opportunities for increasing the export of others, including Ukraine.

Thus, I. Salkova (2017) notes that the largest enterprises and producers of the industry are located in the Kyiv, Vinnytsia, Dnipro, Cherkasy, and Kherson regions, among which “Myronivskyi Hliboproduct” stands out the most. At the same time, in the domestic market, they have to compete with German and Polish manufacturers. The author notes that the development of the market requires a state strategy and policy of import substitution for the development of domestic production.

It is worth paying special attention to the quality and price of products, the solvency, and the peculiarities of the demand of the population of the countries to which the export is planned. I. Salkova (2017) noted the competitors of Ukrainian manufacturers, in particular from Germany and Poland, but also other major exporters, expanding the geography of exports, can increase exports to Ukraine, which requires increasing the competitiveness of products.

In particular, a number of countries has increased domestic production of poultry meat to meet growing demand. Its biggest exporters are Brazil, the USA, the EU, and Thailand. Moreover, according to forecasts, Brazil will remain in the leading position in 2031, but it is predicted that the USA will lose market share in the coming decade (Miller et al., 2022). Ukraine should also not lose, but expand its position on the world market.

O.V. Rodina (2017) noted the need for state support for the industry, at least for the domestic producer from importing meat, but in this case, the regulation should be well-founded, because Ukraine is among the 10 largest exporters of this product.

► Conclusions

Given the expectations of replacing red meat with white meat due to the population's concern for health and the environment, the demand for poultry meat is increasing, in particular, from 2002 to 2021, exports increased 3.4 times. The total number of exporters in 2021 was about 140, and the largest of

them – Brazil, the USA, Poland, the Netherlands, and Belgium – exported more than 63.5%. It was found that geographically, imports are more diversified than exports, if Brazil accounts for 23.4% of world exports, then the largest importer is China – 12.1%. And the 10 largest importers account for 51.4%, and exporters – 78.1%.

The balance of foreign trade for most of the main exporters has been consistently positive, but the opposite situation for Germany, and there is an exception for France. After 2012, the whole time remained positive for Ukraine as well. This is also confirmed by calculations of the index of export coverage by import, and exports exceeded imports the most in Brazil, Thailand, Turkey, and Poland, mainly in countries that are not members of the most developed integration groups.

It was revealed that among the largest suppliers of poultry meat are members of the most developed integration groups – MERCOSUR, the North American Free Trade Agreement, and the EU. A significant part of meat production is poultry meat, and most of it is produced in Asia, North America, and Europe, in particular in China (16.7%), the USA (17.4%), the EU (11.4%) and Brazil.

There is a significant increase in exports by Ukraine, 8.9 times in just 10 years (2011-2021), which has entered the top ten exporters. The increase in production became noticeable (by 7.3 times in 2020 compared to 2000), which indicates the impact of exports on production volumes and encourages increasing it about other types of products.

Ukraine exported a large amount to Saudi Arabia, the Netherlands, Slovakia, UAE, Azerbaijan, and Turkey, the 10 main buyers accounted for 73.7%. Among the countries and groups with which Ukraine

has concluded regional trade agreements, Ukraine significantly increased exports to the EU (the share was 27.0% in 2021). It is worth spreading positions on this market, since, except for the Netherlands, Slovakia, and Romania, the share of exports to other countries did not exceed 0.5%.

To increase exports, it is necessary to take into account what advantages are given to imports by individual countries. It is advisable to increase the volume of production and export of poultry meat, which due to its properties regarding the impact on health compared to other types of meat, the permission for consumption by representatives of all Abrahamic religions (Jews, Muslims, Christians) and even by residents of India, a significant share exported by Ukraine to Asian countries. It is necessary to promote the production of kosher and halal products, and above all first, which can be consumed by everyone and the demand for which is growing regardless of the religious affiliation of the population.

Special measures must be taken regarding the conditions for raising animals, as this issue becomes more acute when exporting, especially to the markets of developed countries. Taking into account the growth of global demand for poultry meat, its advantages in terms of quality, and consumption by almost all non-vegetarian populations, it is necessary to increase its production and diversify the commodity and geographical structure of exports, taking into account the main importers, as well as countries that are not its main producers.

The issues of expanding positions in the markets of North and South America, Australia, production of kosher and halal products, the creation of a Ukrainian brand for the production of poultry meat, etc., require further research.

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Зовнішня торгівля м'ясом птиці України в контексті інтеграційних процесів

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► **Анотація.** Зовнішня торгівля відіграє особливе значення для економічного розвитку агропродовольчої продукцією і для продовольчої безпеки. Помітним є збільшення експорту м'яса птиці. Метою роботи є обґрунтування перспектив зовнішньої торгівлі України м'ясом птиці з урахуванням виробництва, ситуації на світовому ринку та участі в інтеграційних процесах. Для цього використовувались економіко-математичні методи, графічні, аналітичні. Виявлено основних постачальників (більшість з яких є членами найрозвиненіших інтеграційних угруповань) і імпортерів, частка останніх на світовому ринку менша за перших. Торговельне сальдо для основних постачальників переважно додатне, але є виключення для країн Європейського Союзу, які є значними імпортерами. Торгівля розвивається, що видно із зовнішньоторговельного обороту. Виробництво зосереджено в Азії, Північній Америці та Європі. Помітним є зростання експорту Україною та її входження до десятки топ експортерів. Експорт позитивно вплинув на підвищення виробництва. Найбільшими імпортерами є країни Азії та Європи, серед покупців – країни Африки. М'ясо у 2021 р. вивозили близько до 100 країн, але це менше, ніж його основними експортерами. Серед угруповань та країн з якими укладено регіональні торговельні угоди найбільше експортували в останні роки до Європейського Союзу, Туреччини, Азербайджану, що свідчить про конкурентоспроможність на цих ринках. Індекс концентрації експортного ринку вказує на диверсифікацію географічної структури експорту. В умовах зростання попиту на м'ясо птиці, з урахуванням якісних переваг та споживання більшістю населенням, крім вегетаріанців, варто нарощувати виробництво та експорт. Цьому мають сприяти підвищення якості, диверсифікація географічної структури експорту, врахування особливостей споживачів країн, виробництво кошерної та халяльної продукції, попит на яку зростає, зростання населення країн, де вона споживається, причому передусім кошерної. Враховуючи експортний потенціал України й наявні тенденції є перспективи нарощування експорту. Практичне значення має визначення напрямків розширення експорту з врахуванням особливостей ринків і основних конкурентів та ін.

► **Ключові слова:** експорт, імпорт, м'ясо птиці, регіональні торговельні угоди, міжнародна економічна інтеграція