

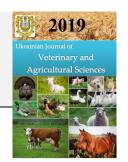
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The current state of fish market in Ukraine

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Abstract

The fishing industry is an important component of the economy of Ukraine at the present stage of development. The development and implementation of the innovative technologies in fish farming and fish processing require mandatory and ongoing analysis of a fish market infrastructure. The demand for food protein, which is characterized by a balanced amino acid content is provided by fish and seafood at 20-30 %. The aim of this work was to understand a current state of a fish products market in Ukraine, its pricing and consumption. Based on the specialized literature the evaluation of a current state of fish and fish products consumption in Ukraine and own studies of the price category of fish products in Ukraine in recent years were conducted. We studied fish and fish products consumption per year per capita in Ukraine over the last 20 years, assortment of fish in Ukraine, the import of fish and fishery products by species, the product prices in UAH per kg both in previous years and today. According to international medical standards the annual consumption of fish and seafood should be 20 kg per person. At the same time in Ukraine according to the State Statistics Committee on the 01.01.2019 14.5 kg of fish and seafood came out per capita. In 2018-2019 herring traditionally remained a leader of consumption in Ukraine. Ukraine also imported such species of fish: mackerel, hake, herring, salmon, pilchards, pollack, capelin, sardines, notating. In addition pangasius, shrimp, blue whiting, mussels, squid, saury, Jack mackerel, sea bass, tuna, flounder, anchovies, smelt, cod, salmon and other species of fish, caviar and seafood are imported in Ukraine. The investigated assortment of fish in Ukraine is represented both domestic and imported products. The domestic production are: carp, pike, capelin, herring, mackerel, sprat, the imported products are: flounder, perch, pangasius, salmon, butter, hake, Pollock, capelin, nototenia, herring, mackerel, cod, tuna, tilapia (sole), sea trout, whiting and so forth. It is established that the condition of a fish market in Ukraine is affected by an unstable economic and political situation in the country, low solvency of the population, corruption and the high payables of the enterprises. In Ukraine a tendency towards a decrease in the volume of fish and fish products consumption by the population of Ukraine is observed annually, which is a consequence of the decline in fish catch and fish production, depreciation of fixed assets and a lack of financial support to the fishing industry.

Key words: fish market, fishing industry, fish, seafood, consumption volumes, imports, consumption, price policy, production, fish farming.

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1. Introduction

Fish, seafood and other live aquatic organisms is not only a valuable source of protein and essential microelements for balanced nutrition and good health, but also a source of raw material for agriculture, pharmaceutical, cosmetic and other industries. A unique feature of aquatic bioresources is their ability to reproduce, and the technologies of artificial fish breading is based on the natural process of fish and other aquatic organisms reproduction (Demchuk & Dracheva, 2013; Shevchenko, 2014; Kleshhsvsknj et al., 2017).

The fishing industry is an important component of the economy of Ukraine at the present stage of development. The development and implementation of the innovative technologies in fish farming and fish processing require mandatory and ongoing analysis of the infrastructure of a fish market. The demand for food protein, which is charac-

terized by a balanced amino acid content is provided by fish and seafood at 20–30 %.

The aim of this work was to establish a current state of a fish products market in Ukraine, a price policy and consumption.

To achieve the goal the next tasks were set:

- 1. To perform a condition of a fish products market in Ukraine;
- 2. To determine a share of imported products and to identify the branches for increasing a share of a domestic products market in Ukraine;
- 3. To perform a modern price category of fish and fish products in Ukraine

2. Materials and methods

Based on the specialized literature the evaluation of a current state of fish and fish products consumption in Ukraine and own studies of a price category of fish products in Ukraine in recent years were conducted.

3. Results and discussion

The world fisheries are steadily increasing the production (catch) of fish, seafood and aquaculture products. The growth rate of world fish catch is ahead of the growth rate of the Earth's population, which characterizes the world fisheries as dynamically developing with inexhaustible growth potential.

The fisheries sector includes ocean and marine fisheries, inland water bodies, fisheries (aquaculture), fish processing agricultural enterprises, fish stocks reproduction and conservation organizations, marine fishing ports, scientific and educational institutions. Fish and fish products, valuable and often indispensable food, provides a human need primarily in proteins of animal origin, a wide range of vitamins, a variety of microelements and biologically active substances.

According to the international medical standards annual consumption of fish and seafood should be 20 kg per person. At the same time in Ukraine according to the State Statistics Committee there are only 14.5 kg of fish and seafood per person on the 01.01.2019 (Derzhavna sluzhba statystyky Ukrainy). In turn in recent years there has been an increase in a level of the hydrobionts consumption (Fig. 1) (Derzhavna sluzhba statystyky Ukrainy).

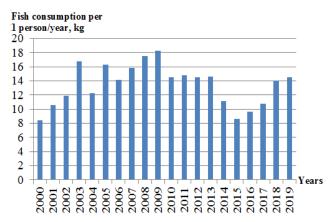


Fig. 1. Consumption of fish and fishery products per year per capita, kg (according to the State Statistics Committee of Ukraine)

According to the State Statistics Committee of Ukraine in 2019, in Ukraine consumption of fish and fishery products per capita increased to 14.5 kilograms, which can be attributed to the increase in imports and a slight increase in the volume of own production in the certain branches of fisheries.

Between 2000 and 2019 consumption of fish and fishery products (per year per capita) varied from 8.4 in 2000 to 18.3 in 2009. Today consumption of fish and fishery products by the Ukrainians is 14.5 kg per year per capita. From 2001 to 2014 this figure was increasing, and in 2015 it dropped to 8.6 kilograms, which can be largely attributed to the decrease in imports of fish and fishery products to Ukraine. Since 2016 consumption of fish and fishery products by the Ukrainians has begun to increase. However the FAO recommended rate of fish consumption is 20 kg per capita per year. At the same time marine fish should be 75 % of a stated norm.

In almost all countries of the world consumption of fish and seafood is higher than in Ukraine (Table 1) (COFI: FT/XVI/2017/2, 2017).

Table 1 shows consumption of fish per capita in the World with the exception of whales, seals and other marine mammals, and marine plants. The total values may differ from the sums of additions through rounding.

In the late nineteenth century 47 percent of global fish consumption was in Europe, the United States of America and Japan, but today a share of these countries decreased by about 20 percent.

In 2018–2019 herring traditionally remained the leader of consumption in Ukraine. Ukraine also imported such species of fish: mackerel, hake, herring, salmon, pilchards, pollack, capelin, sardines, notating (Shevchenko, 2014).

In addition pangasius, shrimp, blue whiting, mussels, squid, saury, Jack mackerel, sea bass, tuna, flounder, anchovies, smelt, cod, salmon and other species of fish, caviar and seafood are imported in Ukraine (Ahrarni novyny ta operatyvna statystyka).

Today Ukraine imports about 90 % of the fish. This situation is due to a lack of a profile fleet, the processing industry, the quotas in international waters and poaching. In addition the cost of Ukrainian fish is higher than imported one. Therefore the products lose their competitiveness (Shevchenko, 2014).

Table 1
Fish consumption per capita in the world, (kg per year) *

	2014	2015	2016	2017	2026 *	Changes to 2017 compared to 2016	Changes by 2026 compared to 2016
Total fish consumption	20.1	20.3	20.4	20.4	21.6	0.1	5.8
From industrial fisheries	10.0	9.9	9.6	9.6	9.1	-0.8	-4.9
Aquaculture	10.1	10.5	10.7	11.0	12.5	2.6	13.3

^{*} According to: COFI: FT / XVI / 2017/2 3

In General Ukraine imports fish and seafood from 60 countries.

Norway is a traditional leader in imports of fish in Ukraine. The USA is in the second place. Estonia, Latvia,

Spain, Canada, UK, China, Vietnam and Argentina are the next.

An assortment of fish in Ukraine is represented by both domestic and imported products:

^{*} Source for 2026: FAO Fisheries Modeling in the OECD-FAO Agricultural Forecast for 2017–2026.

- Domestic products: carp, pike, capelin, herring, mackerel, few.
- Imported products: flounder, perch, pangasius, salmon, butter, hake, Pollock, capelin, nototenia, herring, mackerel, cod, tuna, tilapia (sole), sea trout, hake, etc (Fig. 2).

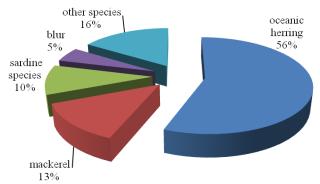


Fig. 2. Imports of fish and fish products by species

Considering the import by fish species it should be noted that the oceanic herring accounts for 56 %; mackerel – 13 %; sardine species – 10 %; pollock – 5 %. The other 16 % of the import are from such fish as salmon, several, capelin, whiting, hake and others. Atlantic herring and mackerel are imported to Ukraine from Norway. Sardines are also imported from Norway, the USA, Canada, Spain and Argentina. Sprat is mostly Baltic. Pollock and salmon are imported from Russia and Norway. France, Italy and China are the main importers of delicate fish species (Stets, 2017).

Now the most popular types of domestic products include carp, pike, several, pelengas. Mackerel (15.5 % of the total number of fish) has become the most popular marine fish caught in Ukraine, 13.3 % is scallop, 8.4 % is tusk, 10.1 % is krill. Carp (10.6 %), silver carp (13.6 %) and crucian (5.1 %) are the leaders among river fish (But, 2017).

The cost of fishery products and seafood imported into Ukraine in 2014 (Novyny Ukrainy) averaged 61.80 UAH per kg and in 2019 it was 121,12 UAH per kg (Table 2).

Table 2 Products prices in UAH per kg (2014 and 2019)

	2	014	2019		
Types of fishes	The average price, UAH.	The max. price, UAH.	The average price, UAH.	The max. price UAH.	
Carp is alive. open.	40	45	79,46	208,16	
The flounder cools. imports	52	56	63,87	120	
Sea bass cooled. imports	30	32	119,9	145	
Pangasius fillet s / m import	42	44	130	150	
Salmon cool. imports	122	126	400	520	
Salmon steak cooled. imports	143	146	339,9	419,9	
Pike cooled. is open.	52	55	119,9	150	
Merlush c / m imports	55	57	68,5	100	
Mintai agricultural imports	38	39,9	62	80	
Pollock fillet c / m import	40	42	77	95	
Capel c / m imports	23	23	32,9	50	
Nototeniya agricultural imports	38	39	96,1	123,4	
Sea bass fillet c / m import	72	75	160	325	
Herring (350+) c / m imports	26	28	49,99	76,3	
Mackerel (400+) agricultural imports	57	59	69,1	98,1	
Tilapia (sea tongue) s / m import	75	75	120	150,4	
Trout sea b / w with / m import	72	74	159,9	249,9	
Hake s / m imports	54	60	69,9	180	
Capelin x / p.	32	35	123	145	
Salaka x / p.	40	46	62	65	
Mackerel x / a native	44	48	140	175	

(2014 according to the State Statistics Committee of Ukraine, 2019 own data)

The average cost of fish and fishery products of the lower price segment on the Ukrainian stalls is 50–80 UAH/kg, while the fish and marine products of the higher price segment cost about 150–350 UAH/kg. Thus from the moment

of fish and seafood delivery to the border of Ukraine till their appearance in the retail trade, the cost of these products increases on average by 8–10 times.

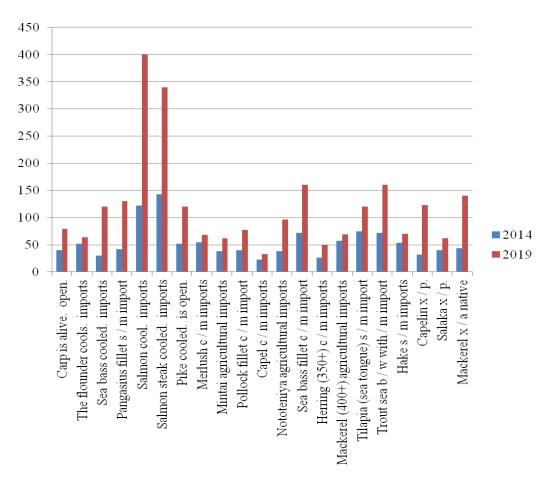


Fig. 3. Comparison of average prices for fish products in UAH per kg in 2014 and 2019 (2014 according to the State Statistics Committee of Ukraine, 2019 own data)

As can be seen from Fig. 3 the average prices for all fishery products in Ukraine have increased significantly. Comparing the average prices in 2014 and 2019 it can be noted that salmon chilled (328 %), salmon steak (238 %), pike chilled (231 %), sea bass (222 %), trout (221%) and mackerel (318%) have risen most in price.

Fish prices in 2014 compared to 2019 increased 3–4 times and now continue to grow rapidly. Such a rapid growth is explained by an unstable economic and political situation in the country as well as by inflation, which amounted to 12–14 % during this period.

Consequently consumption of fish in Ukraine remains a problem. The residents of the country eat half as much fish as the European average, and fish and fishery products are generally inaccessible to the most segments of the population.

4. Conclusions

The state of a fish market in Ukraine is affected by an unstable economic and political situation in the country, low solvency of the population, corruption and high debt of the enterprises.

In Ukraine the tendency to decrease the volume of fish products consumption by the population of Ukraine is observed annually (the Ukrainian eats only 14 kilograms of fish per year on average, but he must eat 20 or more kg), which is a consequence of the decline in fish catches and fishery production, deterioration of the main funds and insufficient financial support for the fishing industry.

Ukraine currently imports about 90 % of fish. This situation is due to a lack of a specialized fleet, the processing industry, the quotas in neutral waters and poaching.

The cost of Ukrainian fish is higher than the import price, so the products lose their competitiveness.

A pricing strategy is mainly related to a price reduction. Realization of this direction can be fully achieved only with the active participation of the state and through financing the various spheres of fishery enterprises activity.

Considerable investments and time are required to solve all the problems, but today there are shifts for the better in the development of the fishing industry of Ukraine and with the support of the state the fishing industry will become one of the most powerful industries in the agrarian complex of Ukraine.

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