
MARKET ANALYSIS OF FISH AND FISH PRODUCTS

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Abstract

The purpose of this paper is to analyze the Romanian fish market, respectively the demand, supply and foreign trade with fish and fish products. A bibliometric analysis will also be carried out to determine the scientific interest in the fish market.

Keywords: *fish, demand, supply, foreign trade, bidimensional analysis*

Clasificare JEL: Q110

Clasificare REL: 15B Economia agriculturii

Introduction

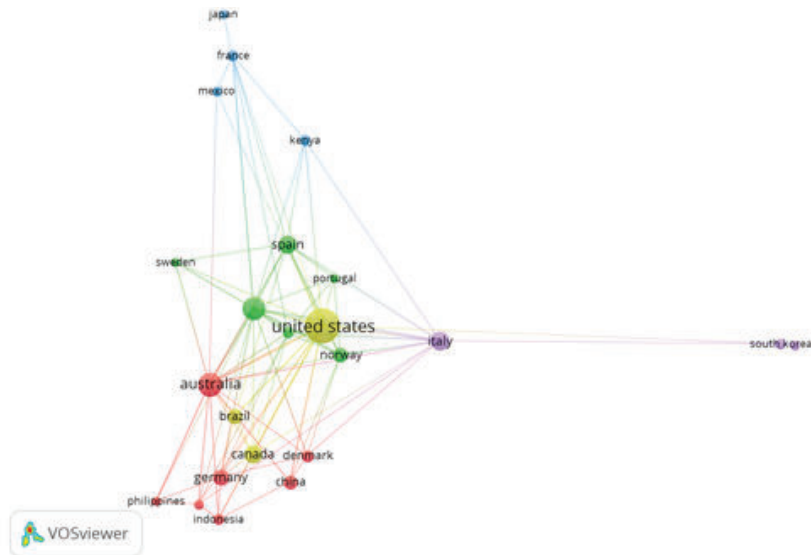
This paper will analyze the market for fish and fish products. In this regard, a set of indicators was analyzed to characterize both the demand and supply of fish and fish products. Regarding the bibliometric analysis, 260 documents from the Scopus database were analyzed to identify the collaborative relationships between states and the main words used by the authors in the research papers.

Review of scientific literature

In this chapter, the bibliometric analysis was performed to determine the scientific interest in the market of fish and fish products. The figure below shows the analysis of relationships between states.

Analysis of relationships between states

Fig.1

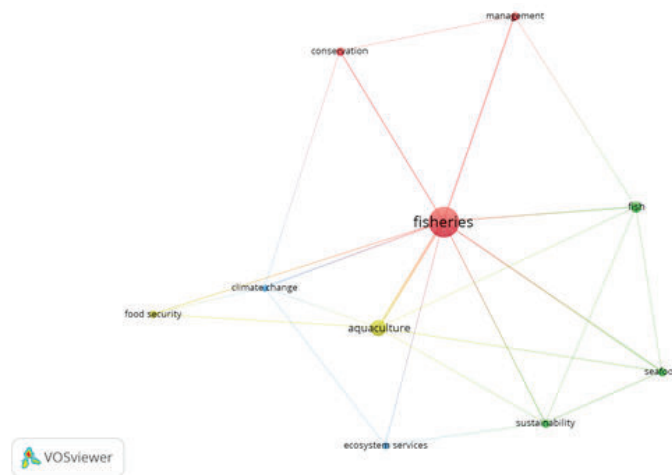


Source: own conceptualization based on Scopus database

The analysis was performed for 65 states. On the first place in terms of the number of collaborative relationships is the United States with 18 collaborative links and 69 documents published in the field of the fish market. On the second place is Australia with 15 links and 33 collaborative relationships. The figure below shows the analysis of the keywords.

Analysis of the keywords

Fig.2



Source: own conceptualization based on Scopus database

The most commonly used word is „fishing” with 90 appearances, followed by „aquaculture” with 26 appearances, „fish” with 13 appearances, „sustainability” with 8 appearances, „food security” with 6 appearances, „climate change” with 5 appearances, „ecosystem services” with 5 appearances and others.

Research methodology

In the first part of the paper, a bibliometric analysis was performed to determine the scientific interest in the field of fish market. In the next chapter, a statistical analysis of the main indicators characterizing the demand, supply and foreign trade on the aforementioned market was performed.

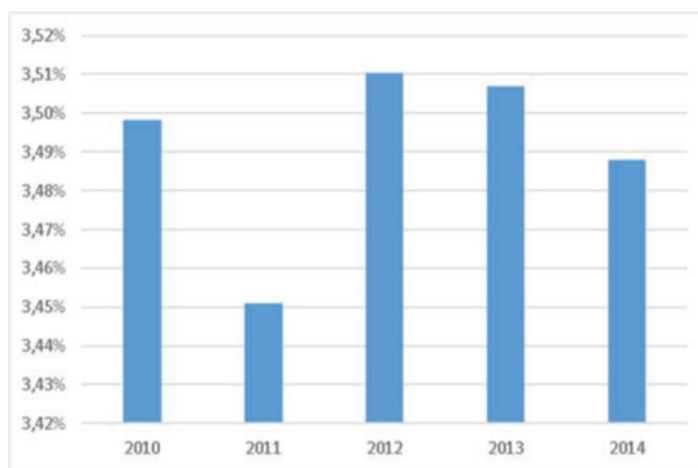
III. Results and discussions

3.1 Analysis of the market supply of fish and fish products

The figure below shows the evolution of the share of the area occupied by water and ponds in the total area.

Dynamics of the share of the surface occupied with water and ponds in the total surface

Fig.3.1.1

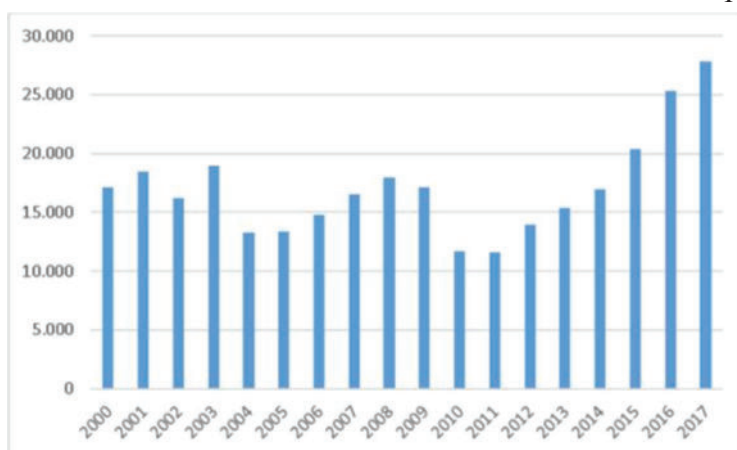


Source: own conceptualization based on Tempo Online database

In the period 2010-2014, the share of the area occupied by water and ponds decreased by 0.3%, reaching an area of about 832,000 ha. In the following graph, the evolution of fish production in the period 2000-2017 will be presented.

Dynamics of fish production

Fig.3.1.2

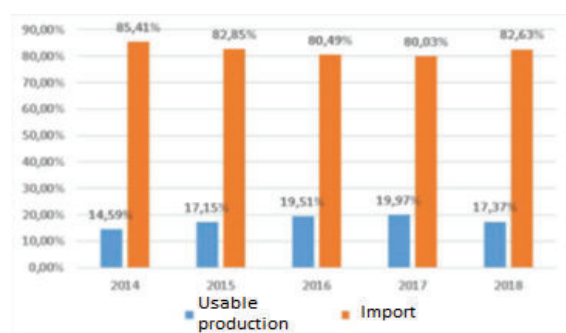


Source: own conceptualization based on data from FaoStat database

During the analyzed period, fish production increased by 58%, which means 10,000 tons. According to the National Administration for Fisheries and Aquaculture, the species raised in the highest quantity, in 2019, was Carp with about 4000 tons, followed by Novac with about 3000 tons and Rainbow Trout with about 2500 tons. The figure below shows the evolution of the structure of total resources of fish and fish products in the period 2014-2018.

Dynamics of the structure of total resources of fish and fish products

Fig.3.1.3



Source: Food balances, 2014-2018, INS

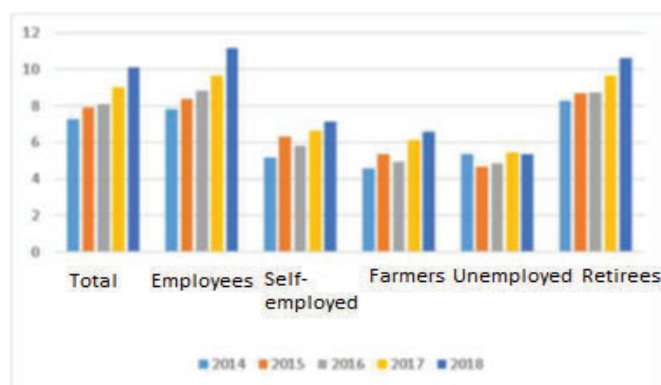
During the analyzed period, the usable production increased by about 3 p.p., and the imports decreased by about 3 p.p. Fish is the category with the lowest rate of food self-sufficiency, approximately 20%.

3.2 Analysis of market demand for fish and fish products

This chapter will analyze the average monthly expenses per person for the purchase of fish, as well as the consumption of fish per capita, both at national level and at the level of European Union countries. It will also be analyzed the fish expenditure compared to meat expenditure for EU Member States.

**Dynamics of average monthly expenses per person
for the purchase of fish**

Fig.3.2.1

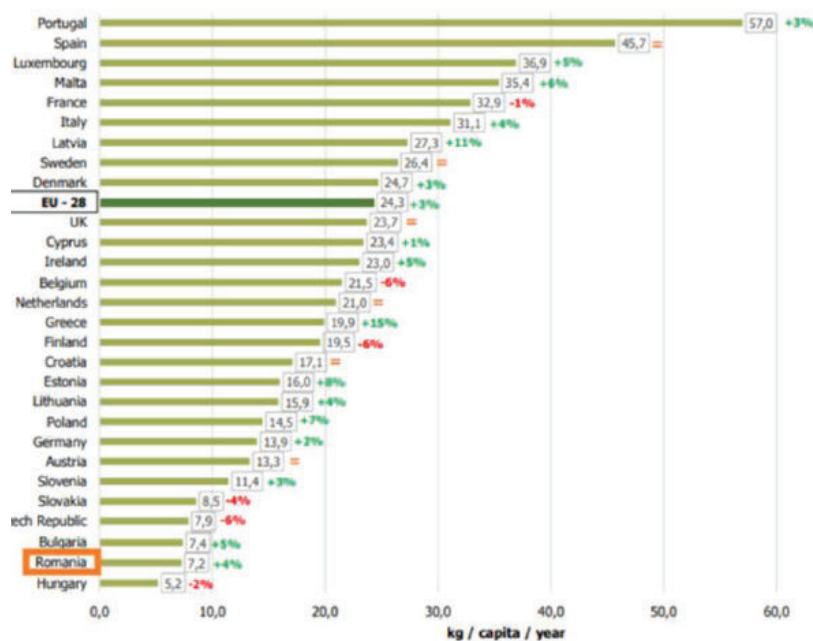


Source: Food balances, 2014-2018

In the period 2014-2018 there was an upward trend of average monthly expenditures per person for the purchase of fish for most of the social categories analyzed. The highest average monthly expenses for the purchase of fish were made by employees and retirees. At European level, Romania is in the middle of the ranking in terms of average monthly expenses for buying fish, more precisely, a Romanian spends on average, per month, about 87 euros to buy fish. The country with the highest level of average monthly expenditure per capita on fish is Portugal, around 337 euros / inhabitant. In figure 3.2.2, the consumption of fish per capita at European level will be presented.

Consumption of fish per capita at European level 2016/2015

Fig.3.2.2

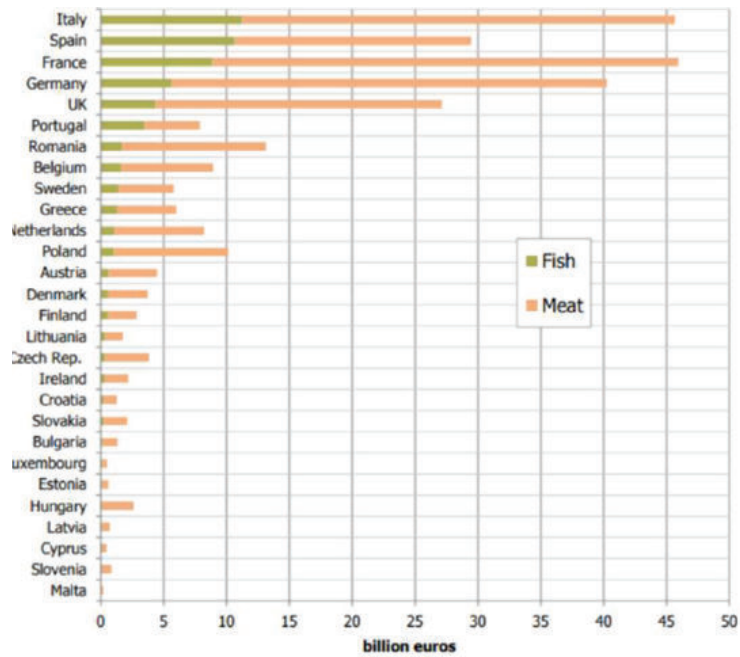


Source: own conceptualization based on data from Eurostat database

Romania is at the bottom of the ranking, with an average monthly consumption of approximately 7.2 kg / inhabitant / year. Portugal consumes the largest amount of fish, respectively 57 kg / inhabitant / year.

Expenditures for fish vs Expenditures for meat 2017

Fig.3.2.3

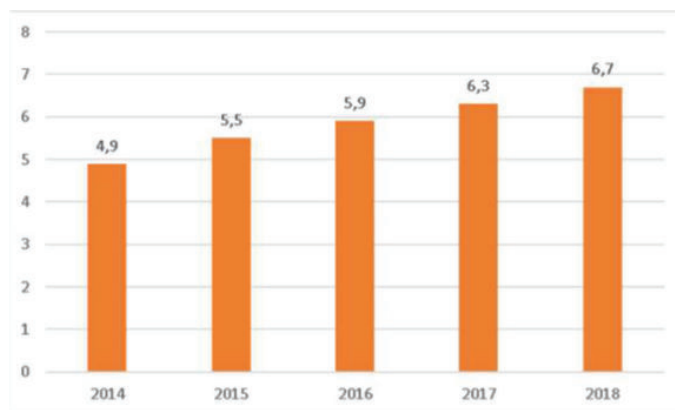


Source: own conceptualization based on data from Eurostat database

As a general trend, it is observed that higher expenditures were recorded for meat than for fish. The highest expenditure on meat in 2017 was recorded in France, around 45 billion Euros, and the lowest expenditure on meat was recorded in Malta. In terms of fish expenditure, the highest level was recorded in Italy at around EUR 12 billion. In 2017, Romania spent about 3 billion Euros for fish and about 13 billion Euros for meat. The most consumed type of fish in 2016 was Tuna, followed by Cod and Salmon. Next, the dynamics of the average annual consumption of fish and fish products in the period 2014-2018 is presented.

Dynamics of the average annual consumption of fish and fish products

Fig.3.2.4



Source: own conceptualization based on data from Eurostat database

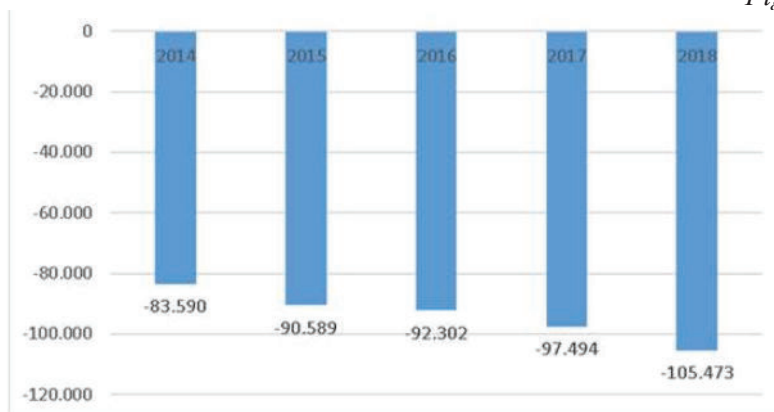
During the analyzed period, the average annual consumption of fish and fish products registered an upward trend, more precisely an increase of approximately 1.8 p.p.

3.3 Analysis of foreign trade in the market for fish and fish products

The figure below shows the evolution of the trade balance in the period 2014-2018.

Dynamics of the trade balance of fish and fish products

Fig.3.3.1

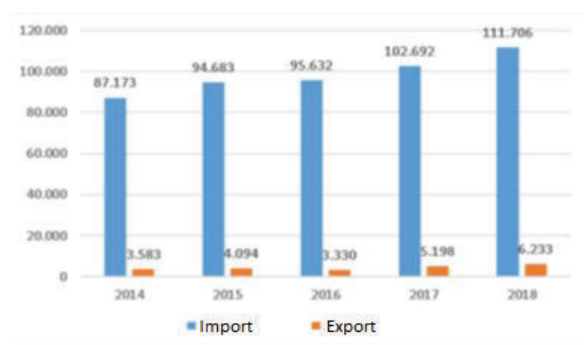


Source: Food balances, 2014-2018, INS

The trade balance for fish and fish products remains negative throughout the analyzed period. The highest value of the trade balance was recorded in 2018. Next, the evolution of imports and exports in the period 2014-2018 is presented.

Dynamics of import and export of fish and fish products

Fig.3.3.2

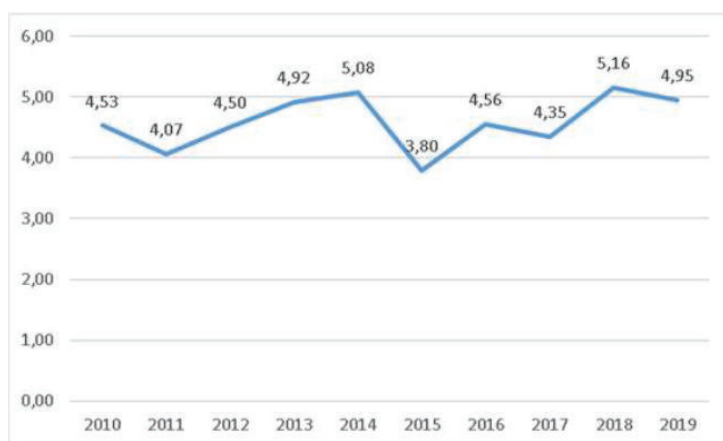


Source: Food balances, 2014-2018, INS

Imports experienced an upward trend in the analyzed period, more precisely an increase of 28%. In terms of exports, it increased by 73.9%. The figure below shows the evolution of the price for fresh and chilled fish.

Price dynamics for fresh and chilled fish, expressed in dollars

Fig.3.3.3

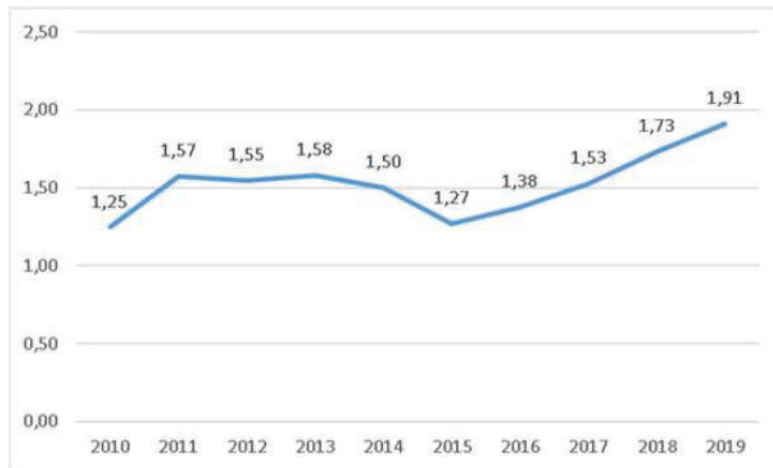


Source: Food balances, 2014-2018, INS

The price of fresh fish fluctuated between 2010-2019. However, it increased by 9.2%. The evolution of the price for frozen fish is shown below.

Price dynamics for frozen fish, expressed in dollars

Fig.3.3.4



Source: Food balances, 2014-2018, INS

The price for frozen fish increased by 52.8% during 2010-2019.

Conclusions

This paper analyzes the market of fish and fish products. Thus, the self-sufficiency rate for fish is about 20%, and the most consumed type of fish is Tuna. Both the price of fresh and frozen fish registered an upward trend in the period 2010-2019. Regarding the situation in Romania, the consumption of fish in 2016 was 7.2 kg / place / year, and spending on fish was about 3 billion euros in 2017.

References

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