UDC 639.2/.3
DOI https://doi.org/10.32851/wba.2023.1.8

ASSESSING THE FISH AND FISH PRODUCT QUALITY AND THE CONSUMER PREFERENCES OF UKRAINIANS AT THE ODESA FISH AND FISH PRODUCT MARKET

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Nowadays, market relations are increasingly becoming the main factors in regulating the fish products production, affecting the price level and dynamics and other activity indicators. Modern parameters of developing the domestic fishing industry, such as: production volumes, quality, prices, an assortment of fish and aquatic bioresources products – are determined by the specific conditions of producing anddistributingthe products, by reducing and increasing the price of resources, by the objective laws of the market (cost, demand, supply, monetary exchange) and by changingthe market conjuncture. The existing conditions need developing the new approaches to managing the economy from the standpoint of marketing, forecasting and developing the strategies to ensure the effectiveness of the functioning the individual industries and the state as a whole through the rapid adaptation to the changing external conditions. In the contex of the aggravation of the food problem, marketing studies of developing the agrarian market acquire special scientific theoretical and practical significance. The system of conducting marketing research and ensuring the effective functioning of the fish and aquatic bioresources market in Ukraine is extremely important.

In the market of fish and aquatic bioresources products in Ukraine, there is a positive trend towards an increase in the production volumes, which will continue in the near future with a high probability. At the same time, along with the significant potential of the domestic fish industry and the prospects for further market transformations, it should be noted that in modern realities its resource, technological, marketing, organizational and management components lag far behind the level of the counterparts in the economically developed countries. The concept of marketing is considered from the classical (limited) and modern (generalized) points of view as a market concept of modern production management.

Managers and specialists of retail trade enterprises were questioned.

One of the main restraining factors is the insufficient using marketing techniques by the subjects of the fish products market and the imperfection of its infrastructural support.

The key issues of the research are forming the fish producers marketing activity system, which concerns studying the fish product sales markets, decision-making on the technology of growing fish and aquatic biological resources, storage, pre-sale preparation, packaging, transportation, sales and developming the infrastructure of the fish product market.

Keywords: market, fish products, seafood, fish products, consumers, fish shops, enterprise, marketing research, Ukrainian market.

Introduction. Nowadays the fish and seafood market is one of the most dynamically growing segments of the food market in Ukraine. The main purpose of the fishing industry is to ensure the food security of the country, which means accessingthe food necessary for a healthy and active life for all people at any time [2; 8].

Fish products are one of the most important components of a balanced diet – animal protein, which is one of the scarcest products in the world. It meets less than 30% of the total world needs [8].

The purpose of the work was a marketing research of population consumer preferences on the market of fish products of Ukraine.

To achieve the goal, the following tasks were set: to consider the Ukrainian fish and seafood market; to evaluate the import of fish and seafood; to conduct an analysis of fish and seafood consumption in Ukraine, to identify consumer preferences.

Materials and methods. To achieve the goal of the research, the following methods and sources of information were used: data from the market participants, information materials from official sources of the Ukrainian Fisheries Agency, to analyze the Ukrainian fish and seafood market, to analyze the data from the market participants.

Results and discussion. Managers and specialists of retail trade enterprisesand consumers (125 respondents) were questioned. 20% of them were representatives of the specialized shops and 80% were the consumers who bought fish and fish products at the fish departments in the supermarkets and at the markets [8].

Suppliers of retail trade enterprises are most often permanent and account for 70% of the total number of suppliers. About 60% of the surveyed stores use the services of non-permanent suppliers, and most often, the older the store, the more reluctant it is to change its suppliers. Across the total, an average number of the supplier change frequency is less than a year. Stores rarely conduct supplier surveysand do it without conducting special studies. At the same time, the main parameter for choosing a supplier is the price. 80% of respondents called this indicator as the most important. The second place was taken by the quality of the products, and the third place was taken by the assortment. Such qualities of a supplier as reliability or supply convenience, in principle, do not play a dominant role when selecting a new supplier.

As a result of the research, it was found that the frequency of purchases is most often determined by the store turnover and varies from daily deliveries (in the large stores like "Tavria B") to weekly deliveries, which indicates that the fish offered by the shops to the Odessa residents is completely fresh, if we assume the honesty of the respondents' answers.

Special fish shops try to reduce a share of fish products in the general store turnover, diluting it with some other food products: sauces, vegetables, alcoholic drinks. In these stores, a share of fish products is usually 75–80%, and in the grocery stores and supermarkets, a share of the fish department in the total store turnover is usually up to 20% of all sold products [4; 5].

Retail businesses prefer to purchase frozen fish, as the costs of its storage are much lower. In addition, keeping live fish requires special equipment, which is often not available. Speaking about the type offish they buy, the following pattern was found: stores prefer to buy fillets and carcasses. A share of whole fish in the store purchase is about 20%. This indicates the predominance of frozen fish on the store shelves (Table 1).

Table 1. **Type of fish purchased by stores (State Statistics Service of Ukraine)**

Carcasses	Fillet	Semi-finished products	Fish product	Preserves	Whole
25%	35%	5%	10%	5%	20%

In principle, this scale corresponds to the consumer preferences.

Most respondents answered the questions of this consumer survey negatively, motivating their answer with a lack of time, a lack of employees who would do it and insufficient funding [4].

Fish products consumers. In order to study the fish products consumers, a questionnaire was conducted and 100 people took part in it. The surveys were conducted in all places of fish and fish products retail trade: at the specialized fish shops, at the fish departments in the supermarkets and at the wholesale food markets. The purpose of the survey was to segment the fish products market and to assess positioning these products at the Odesa market. Assessing the potential demand for fish and the prospect of its increasing in future periods was also quite an important factor (Table 2).

Table 2. **Type of fish purchased by consumers**

Carcasses	Fillet	Semi-finished products	Fish product	Preserves	Whole
62%	53%	12%	19%	32%	45%

Market segments were determined by demographic characteristics: gender, age, income.

Men, as before, go to the shops rarely, so the majority of respondents are women. They make up 53% of the total number of respondents. Ranking them by age, the following ratios were obtained: 22–40 years – 70%, 41–55 years – 14%, over 55 years – 16% [4].

From these data it follows that advertising the fish products and stimulating their consumption should be aimed at middle-aged women who have families, because this segment has the largest specific gravity among the rest.

Income became the leading socio-demographic indicator, and further segmentation of the market was carried out taking it into account. Based on the identified buying trends, consumers were divided into three main groups: with a total family income of up to UAH 12,000, from UAH 12,000 to UAH 20,000, and over UAH 20,000 (Table 3).

Table 3. **Segmenting the consumers by income**

Income	Number of respondents (people)	Number of respondents (%)
up to UAH 12,000	55	55
from UAH 12,000 to UAH 20,000	24	24
more than UAH 20,000.	21	21

As you can see, the main part of the buyers are people with an average income. Then we will consider each of the groups for identifying their preferences and buying trends.

The total income up to UAH 12,000. 55% of the respondents say that they buy fish because they like it, the factor of usefulness is at the last place (Fig. 1).

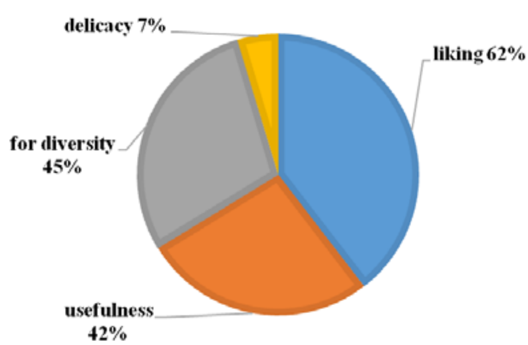

Fig. 1. **Structure of the buyers' preferences**

Most often, when buying one or another type of fish the decisive moment is its price, so the representatives of this group buy mainly ordinary sea fresh-frozen fish: hake, pollock, herring. This fish is the cheapest and has its regular buyers, although the fresh fish sector is quite large, but the buyers of this market segment treat frozen river fish rather coldly (Fig. 2).

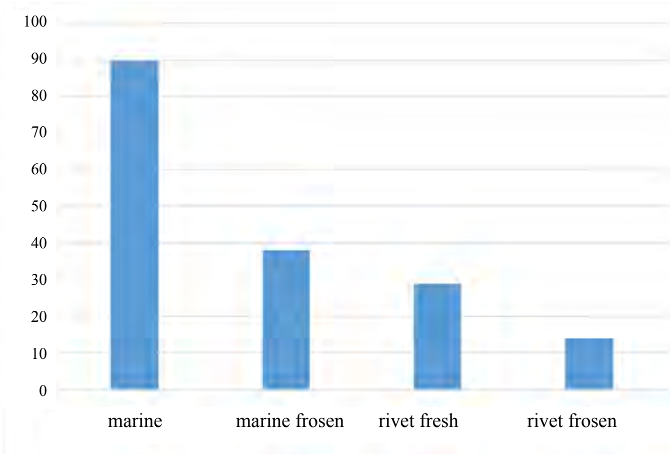

Fig. 2. **Demand for different types of fish**

Speaking about the type of buying fish, it is necessary to emphasize that even buyers with a small income prefer processed fish, that is, decapitated carcasses and fillets. A share of buying the whole unprocessed fish is quite small, and it is the samefor other semi-finished products. Comparing the volume of supplyingthe whole fish to the shops and the demand for it, it can be said that this product does not have a sufficient potential for its further promotion to the market. Gradually, the number of whole fish on the shelves should be reduced, giving way to a more perfect product-processed fish. Such a low demand for semi-finished products in this group is due to their high prices, although, subject to a price reduction this product is very promising in the future. Fish products are not used by this population group, as they belong to the category of delicacies on the table of the middle-class Odesans (Table 4).

Table 4. **Demand for the different types of fish**

Type of fish processing	Number of interviewees (people)	Number of interviewees (%)
carcasses	34	62
fillet	26	47
whole	26	47
fish products	13	24
semi-finished products	8	14

People of this segment buy fish no less than once a month, and even once a week, which indicates the place of this product on the tables of Odesans. Fish are usually bought in small quantities – up to 1 kg. If earlier fish were often bought for animals, now it has become very expensive, and in addition, special feeds have appeared.

Examining the quality of fish products in the Odesa market, we can come to the disappointing conclusion that it mostly suits the consumers of this group. Although there are complaints about dryness, over-frozenness of thefish and a lack of river fish in the range of the stores. The prices, according to most buyers, are quite high, although the share of buyers who are satisfied with the prices is also significant (Table 5).

Table 5. **Answers to the question: "Are you satisfied with the quality of fish products?"**

Answer option	Number of respondents (people)	Number of respondents (%)
Yes	44	80
No	13	24

Dividing this group by places of buying, we can say that those who are interested in prices buy fish at the market because it is cheaper, and those who are interested in quality (which is rare in this group of buyers) buy fish in the shops. Moreover, they are supporters of the same store. If a representative of this group is a regular visitor to the store, it is usually due to the convenience of its location, or because the consumer knows the quality of the product he will buy there.

The total income from UAH 12,000 to UAH 20,000.

As already mentioned, this group has the largest specific gravity in the total survey.

Speaking about the preference criteria, it should be emphasized that, just as in the low-income group, the main role in buying fish is played by the factor of "liking" for fish and fish products, but it is necessary to note the increased values of factorsfor usefulness and variety. Therefore, it is possible to put forward a hypothesis about the dependence of consumers' incomes and their desire to have a healthy lifestyle, that is, to consume natural, high-quality, expensive food products (Fig. 3).

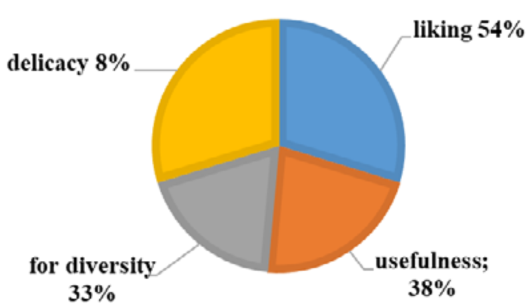

Fig. 3. **Structure of the buyers' preferences**

The representatives of this group also prefer frozen fish. 50% of the respondents answered that frozen fish is easier for them to deal with it is easier to store and to prepare it. Although, a share of buyers who want to buy fresh fish has increased incomparably compared to the previous group, which indicates the demands to the quality of fish with increasing income.

Analyzing the obtained data (Fig. 4), we can say that Odesa stores do not satisfy this segment of the market, because there is not much fresh fish on the shelves, and the demand for it is quite high – 54%.

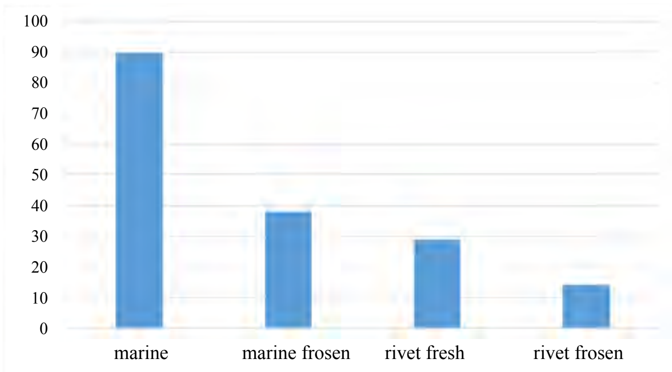

Fig. 4. **Demand for different types of fish**

As for the type of buying fish the reluctance to buy unprocessed fish can be traced even more clearly, but unlike the previous group, which mainly prefers processed carcasses, this group prefers fish fillets, despite the fact that the prices for it is an order of magnitude higher than for carcasses (Table 6). Regarding the consumption of whole fish (that has not undergone any processing), it can be said that with the increase in income, its consumption is constantly falling.

Table 6. **Demand for the different types of fish**

Type of fish processing	Number of interviewees (people)	Number of interviewees (%)
carcasses	17	71
fillet	13	54
whole	8	33
fish products	2	8
semi-finished products	2	8

Consumers of such expensive goods as fish products appear in this segment. The attitude towards semi-finished products is as cold as in the previous group, but the reason is not a price, but a questionable quality and usefulness of these products. For the most part, female customers do not buy semi-finished products due to the sufficient amount of food additives, dyes and preservatives that are present in this type of fish products, in their opinion.

Most buyers buy fish once a week, which is quite logically confirmed by the criteria of fish liking. The following relationship between the frequency and the reason for buying fish was observed: if a purchase is made because of liking the fish products, then it is made once a week. If the main factor preceding the purchase was the desire to diversify the diet, then most often the answer to the question about the frequency of purchases was "sometimes". The consumers who bought fish because of its usefulness answered that they buy fish once a month or even less often.

We can also talk about the relationship between the amount of bought fish and the frequency of buying. However, in this case, there is another parameter such as a size of the family, although in principle most of the respondents buy fish in the amount of 1 to 2 kg, which quite accurately confirms the opinion about the existence of fish days in most Odesa families with an average income.

In this part of the respondents, a share of consumers who buy fish as animal feed is increasing, although 6% of representatives of this group answered the question "Who do you buy fish for?" in such a way "both themselves and animals" because they believe that it is useful for everyone, and the funds allow to feed animals with fish.

The increase in the number of people dissatisfied with the quality of fish products is quite understandable (Table 7).

Table 7. **Answers to the question: "Are you satisfied with the quality of fish products?"**

Answer option	Number of respondents (people)	Number of respondents (%)
Yes	22	92
No	2	8

If a consumer is not satisfied with the price of fish, that is, he considers it is quite high, and then he does not want to buy fish in the stores and goes where it is cheaper – to the wholesale markets. However, there is no such strict control over the fishquality, so there are often complaints about frozen, rotten fish or poorly processed fillets.

It should be noted that most people who buy fish in a store, buy them in "their" store, that is, where its quality is guaranteed, and where they have been customers for a long period of time. However, in this socio-demographic group, the choice of a store is influenced not only by a certain quality of products or its nearness to the house, but also by the variety of the assortment. In addition, the factor of its successful location has an important influence on the choice of a store.

The segment of the fish products consumers with an income more than UAH 20,000.

Regarding this group of fish products consumers, it should be noted that all the main trends continue to persist and to develop.

Very sharply, the criterion of usefulness comes to the fore, as the main one that determines the purchase. With an increase in income, the population begins to strive to increase the consumption of useful products, because they focus on the foreign countries, and a relatively high income makes it possible to fulfill their desires. It is interesting that in this segment the factors of liking and delicacy of fish coincide. This is due to the fact that the representatives of this group can afford to buy expensive fish products and the consumption of food delicacies in this sector exceeds the rest (Fig. 5).

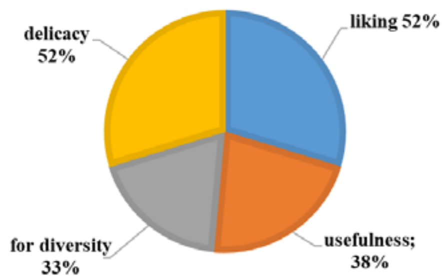

Fig. 5. **Structure of consumer preferences**

With the growth of income, there is a desire to diversify a diet more and more.Talking about the preference of one or another type of fish, it must be said that such a ratio in favor of sea fish is caused by the fact that buyers consider sea fish as more useful due to the iodine content (Fig. 6).

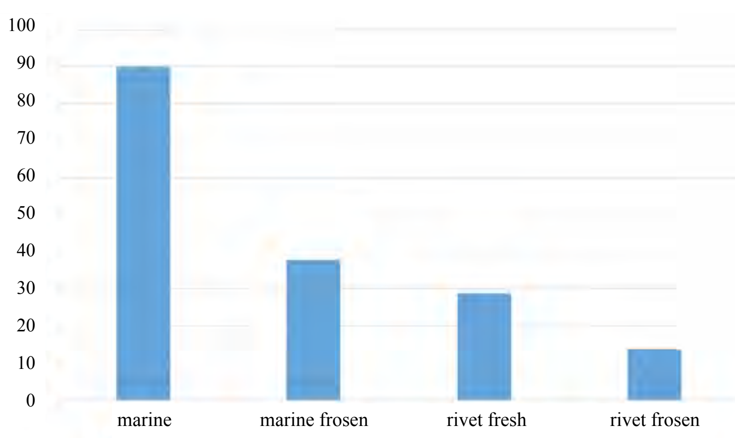

Fig. 6. **Demand for different types of fish**

Such a trend related to the consumption of processed fish in this segment is taking on a pronounced appearance. Even carcasses are already considered insufficiently processed not to mention whole fish. Fillet is the most preferred. Also, the role of buying the fish products is growing, which is fully explained by the increasing role of delicacy in determining the preference when buying. Semi-finished products, as before, are not in particular demand (Table 8).

Table 8. **Demand for the different types of fish**

Type of fish processing	Number of respondents (people)	Number of respondents (%)
carcasses	10	48
fillet	14	67
whole	6	29
fish products	4	19
semi-finished products	2	10

The vast majority of buyers belonging to this socio-demographic group buy fish in quantities from 1 to 2 kg, although a fairly large number buy up to 1 kg. Regarding the frequency of purchases, it can be said that in this segment, however, as in all others, the number of people who buy fish once a week is much more than others, which allows us to conclude that the frequency of purchases does not depend on income, and almost all fish consumers buy it every week. The ratio of the product quality and the price remains the same as in the group of consumers with an average income (Table 9).

Table 9. **Answers to the question:**
"Are you satisfied with the quality of fish products?"

Answer option	Number of respondents (people)	Number of respondents (%)
Yes	20	95
No	1	5

The survey shows that the majority of buyers in this group are satisfied with the quality of products (95%). 5% of buyers who are not satisfied with the quality complained about either the poor assortment of fish shops or about the poor processing of fish, although similar complaints were not found in other groups. In this group, consumers are most satisfied with the product prices, although they mostly shop in the stores, which are 10-5% more expensive than in the wholesale markets.

Conclusions. The majority of consumers who regularly buy fish and fish products are high-income consumers, all others buy these products rarely, or only before holidays.

Such a trend related to the consumption of processed fish in this segment is taking on a pronounced appearance. Even carcasses are already considered insufficiently processed, not to mention whole fish. Fillet is the most preferred. Also, the role of buying fish products is growing, which is fully explained by the increasing role of delicacy in determining preference when buying. Semi-finished products, as before, are not in particular demand.

The vast majority of buyers belonging to this socio-demographic group buy fish in quantities from 1 to 2 kg, although a fairly large number buy it up to 1 kg. Regarding the frequency of buying, it can be said that in this segment as in all others, the number of people who buy fish once a week is much more than others, which allows us to conclude that the frequency of buying does not depend on income, and almost all fish consumers buy it every week. The ratio of the product quality and the price here remains the same as in the group of consumers with an average income.

The majority of fish products consumers with a profit of more than UAH 20,000 are satisfied with the quality of products (95%). 5% of buyers who are not satisfied with the quality either complained about the poor assortment of fish shops or about the poor processing of fish, although similar complaints were not found in other groups. In this group, consumers are most satisfied with product prices, although they mostly shop in the stores, which are 10–5% more expensive than at the wholesale markets.

The survey shows that fish products consumers of all categories prefer sea fish.

Therefore, for the good development of marketing activity in Ukraine, the research is needed to determine forming the fish product producers marketing activity system, which relates to the study of fish product sales markets, decision-making on the technology of growing fish and aquatic biological resources, storage, pre-sale preparation, packaging, transportation, sales and development fish products market infrastructure.

Nowadays, Ukraine is implementing the "Strategy for the development of the fisheries industry for the period until 2030", the purpose of which is to ensure the sustainable development of the fisheries industry, to increase the level of consumption of domestic fish products and its production based on the balance of economic, environmental and social interests, to increase its competitiveness in accordance with the norms of the European Union and international standards, to bring the fishing industry of Ukraine out of the shadows, to increase its export capacity [9; 10].

ОЦІНКА ЯКОСТІ РИБИ І РИБНОЇ ПРОДУКЦІЇ ТА СПОЖИВЧИХ ПЕРЕВАГ УКРАЇНЦІВ НА ОДЕСЬКОМУ РИНКУ РИБНИХ ПРОДУКТІВ

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Сьогодні ринкові відносини все більше стають основними чинниками регулювання виробництва рибної продукції, впливаючи на рівень і динаміку цін та інші показники діяльності. Сучасні параметри розвитку вітчизняного рибного господарства, такі як: обсяги виробництва, якість, ціна, асортимент риби та продукції водних біоресурсів – визначаються конкретними умовами виробництва та розповсюдження продукції, зниженням і підвищенням ціни ресурсів, об'єктивними законами ринку (вартість, попит, пропозиції, грошовий обмін), зміною кон'юнктури ринку. Існуючі умови вимагають розробки нових підходів до управління економікою з позицій маркетингу, прогнозування та стратегії розвитку для забезпечення ефективності функціонування окремих галузей і держави в цілому шляхом швидкої адаптації до мінливих зовнішніх умов. В умовах загострення продовольчої проблеми особливого наукового, теоретичного та практичного значення набувають маркетингові дослідження розвитку аграрного ринку. Система проведення маркетингових досліджень та забезпечення ефективного функціонування ринку риби та водних біоресурсів в Україні є надзвичайно важливою.

На ринку риби та продукції водних біоресурсів України спостерігається позитивна тенденція до збільшення обсягів виробництва, яка, з високою ймовірністю, збережеться найближчим часом. Водночас, поряд із значним потенціалом вітчизняної рибної промисловості та перспективами подальших ринкових трансформацій, слід зазначити, що в сучасних реаліях її ресурсна, технологічна, маркетингова, організаційна та управлінська складові значно відстають за рівнем аналогів у економічно розвинутих країн. Як ринкова концепція управління сучасним виробництвом концепція маркетингу розглядається з класичної (обмеженої) та сучасної (узагальненої) точок зору.

Проведено анкетування керівників та спеціалістів підприємств роздрібної торгівлі.

Одним із основних стримуючих факторів є недостатнє використання маркетингових прийомів суб’єктами ринку рибної продукції та недосконаліcть його інфраструктурного забезпечення.

Ключовими питаннями дослідження є формування системи маркетингової діяльності рибовиробників, що стосується дослідження ринків збуту рибної продукції, прийняття рішень щодо технології вирощування риби та водних біоресурсів, зберігання, передпродажної підготовки, пакування, транспортування, збут та розвиток інфраструктури ринку рибної продукції.

Ключові слова: ринок, рибна продукція, морепродукти, рибна продукція, споживачі, рибні магазини, підприємство, маркетингове дослідження, ринок України.

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