STUDYING THE CONCEPT AND ESSENCE OF THE ECONOMIC EFFICIENCY OF FISH PRODUCTION

I.Yunusov, PhD, "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University

Abstract

In the fishery sector, efficiency indicators are of great importance for the analysis of production costs and profits. Therefore, this article gives information about the composition of the category "Economic efficiency", classification of effectiveness by features and classification of factors affecting the efficiency of fish farming. In addition, this article highlights state support directions for fish farming as well as conclusions and proposals for studying the economic efficiency of fish farming.

Keywords: economic efficiency, scientific approaches, fish productivity, profitability, marketable fish, intensive technologies, feed crops, fisheries investments, intensification, etc.

Introduction. The ultimate goal of any production is to obtain economic results. To determine the efficiency of production activity, it is necessary to consider the economic effect of the activity in relation to its costs, therefore, an important condition for production activity is to determine its economic efficiency. For a deep and detailed study of the issue, it is very important to carefully analyze the concept of "economic efficiency".

In foreign and domestic literature there are different explanations of the essence of economic efficiency. The description of this concept was first given in the work "Economic Table" by the physiocrat F. Keane, and the term "efficiency" was first used in the work "The Theory of Comparative Advantage" by D. Ricardo.

Representatives of the classical school of economics expressed the opinion that economic efficiency can be achieved only in market conditions, in conditions of private ownership, where each owner (private entrepreneur) seeks to save available resources. Further development of the concept of efficiency is reflected in the works of the neoclassical economic school. For example, Arthur Pigou describes the concept of national income in his Welfare Economics. According to him, overall productivity is determined by national income, which in turn is a measure of overall welfare [1].

Literature Review and analysis. Among the researchers involved in the achievement of well-being (efficiency), the representatives of the Lausanne school Leon Valras and Vilfedo Pareto stand out. In his work on the theory of general economic equilibrium, L. Walras tried to reveal the general principles of a market economy, he explains the conditions for maximizing utility, which is one of the achievements in the study of economic efficiency [2]. The principles of the theory of general economic equilibrium by L. Walras were further developed in the works of V. Pareto, another representative of the Lausanne school of economics. The theory of welfare (efficiency) is the theory of the economic frontier, that is, the task of the theory is the optimal distribution of economic resources and output. Thus, V. Pareto emphasized that optimal economic decisions ensure the efficiency of economic activity. The Pareto principles formed the basis of the modern mathematical theory of welfare economics (efficiency) [3]. Ludwig von Mises was a supporter of the ideas of V. Pareto, who recognized that maximum efficiency cannot be achieved with central planning in the economy.

The founder of the statehood theory and one of the supporters of the monarchy was the English scientist T. Hobbes, who emphasized that the most important tasks of the government are efficiency, legislation, order, and, above all, peacekeeping. The thinker was convinced that indifference is required when choosing a form of government. Any reforms to improve the situation will lead to anarchy and civil war [4]. Studying the theory of Western scientists, it should be noted that the views of T. Hobbes and V. Pareto correspond to the views on efficiency, therefore, in the theory of values, they substantiated their reasoning, assigning the leading role to individuals. Both Hobbes and Pareto rejected the possibility of common interests and the need to compare the economic situation of individuals.

Thus, V.Pareto's concept is agreement with the uncertainty of public welfare, agreement with the inequality of personal values (Pareto's principle of rationality).

R.G.Coase approaches the problem of efficiency in a completely different way. In his opinion, it is advisable to reveal the concept of efficiency through the analysis of production and consider this category in dynamics. R. Coase initially noted that not only resources, but also rights to them can be exchanged, therefore, in the process of free exchange, the incorrect distribution of rights is corrected. Thus, in order to achieve economic efficiency, it is necessary to remove barriers to open relationships. Studying the problem of efficiency, Coase found that it is important to obtain the necessary information to develop a trading strategy, take into account the costs incurred, the time spent on trading, as well as the costs spent on preventing fraud by others, by the transaction, etc. All such costs are defined by Coase as transaction costs. As a result, the author states that the initial allocation of resources and their rights are not important for efficiency, the transaction costs of the exchange are 0 [5].

It can be said that the situation in which the production potential of the economy is used to the maximum leads to the greatest efficiency, and the best results cannot be achieved with the same resources. This conclusion was made by the famous economist M.Alla. She says: "... the maximum level of efficiency corresponds to the limit of the set of conditions that can be achieved using the resources and knowledge of society, using a set of unattainable conditions. Any state below this limit is inefficient, any state above the limit is impossible, and all conditions within the limit meet the general goal of maximum efficiency [6].

Modern economic sciences do not stop at determining efficiency; various scientific articles and scientific works are now available for study, confirming the versatility and depth of this category and the importance of its disclosure. In the definition of economic efficiency, which is given in the encyclopedic dictionary as "Capital", we can say that this is one of the aspects of production.

In a broader sense, economic efficiency is the same as the efficiency of the allocation of resources in the economy, the volume of production of goods and services

occurs in full, reflecting consumer preferences for these goods and services, and certain goods and services are produced at appropriate minimum prices or the efficiency of economic activity, economic programs and activities, achieving the greatest volume of production using specific cost resources [7].

Many authors deal with the definition of economic efficiency. A.V.Khomutetskaya defines this category as the efficiency of using resources to achieve a specific goal. In simple words, efficiency means achieving excellent results with minimal effort. But when you delve into the problem, the concept of efficiency loses its transparency, becomes relative and difficult to quantify. This is where new concepts such as economic efficiency and management efficiency come in, and it is necessary to understand the difference between them.

Economic efficiency (production efficiency) is the ratio between the costs of the production process and the useful result [8].

Materials and Methods. The efficiency indicator is the most important indicator in the development of the economy of the state and an individual enterprise, in addition, the final costs are expressed in the form of predetermined fixed and working capital, and the final results are expressed in the form of profits. The economic efficiency of an enterprise is discussed only from the point of view of making correct, qualified management decisions, and a comparison of costs and results is used to justify management decisions [9].

To determine the efficiency of the economy, based on the foregoing, research scientists pay great attention to the resource composition of the category under study. In addition, resources, in their opinion, do not independently affect economic efficiency, they are affected by their optimal use, and in general it is carried out together with the efficiency of managerial, production, technical and other processes (Figure 1).

Efficiency should preferably be taken into account in the context of individual sectors. Here, the analysis of fish farming in the operating fish farms of the regions showed us that there are opportunities to increase the economic efficiency of the production of fish transfer materials and marketable fish in the conditions of cooperation between fish farms and nurseries.

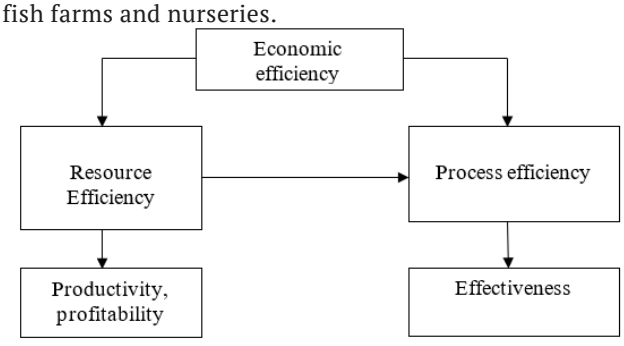


Figure 1. The composition of the category "Economic efficiency" [10]

Such cooperation allows fish farms to keep fish in fish farms for future breeding, and local quality fish transplant material reduces transportation costs, increases the volume of fish transplant material, reduces the cost of production, which allows products to be competitive and available throughout the year. These measures will give an additional impetus to improving the economic efficiency of commercial fisheries.

The indicator of economic efficiency for the fishing industry will be specified and will have a number of specific characteristics. Here are some authors, E.V. Levkina, M.E. Vasilenko, having considered the effectiveness of the fishing industry, came to the conclusion that this indicator reflects the efficiency of fish production, and also shows the level of development of the fishery complex of the country or region [11]. According to scientists, efficiency can be classified according to characteristics, more precisely, it is divided into indicators of economic and social efficiency according to its structure; according to the nature of the object assessment, it is divided into full and local, and depending on the purpose of use - into planned, practical and normative (Table 1).

Table 1.

Classification of effectiveness by features [11]

According to the composition			
Economical		Social	
Object evaluation function			
Full		Local	
Intended use			
Planned	Practical		Normative
Calculation method			
Absolute		Comparison	
Generalization level			
Economy as a whole	Network	Enterprise	Structural division
Object of assessment			
Production and economic activity of the enterprise	Economic processes	Elements of business processes (operations, processes, contracts, agreements, etc.)	Individual production and economic solutions in the field of production and management

When evaluating intensification, one should take into account the increase in costs relative to production factors that increase the fish productivity of water bodies and commercial fish catches. The level of intensification of lake commercial fisheries is represented by the following indicators [12]:

- average annual values of fixed production assets in fisheries;
- average annual values of fixed production assets used in the cultivation, fishing and processing of lake fish;
- cost of the most efficient means of production;
- production costs;
- lake fertilization costs;
- costs for the mechanization of production processes in fish farming and fishing;
- the ratio of intensively managed water bodies to the total area of lakes in the water sector.

Cost calculation plays an important role in determining the effectiveness of fish farming.

Discussion and results. It should be noted that the real cost as an economic indicator in determining the efficiency of the fish farming allows for an accurate assessment of the effectiveness, taking into account the influence of external factors. Thus, the real cost of 1 centner of commercial fish is calculated according to the following formula [13]:

$RC_{cf} = MV_{cf} - DC_{cf} - SEC_{cf}$, (1)

Here, MV_{cf} – the market value of 1 centner of commercial fish, sum;

DC_{cf} – costs associated with the delivery of 1 centner of fish to the nearest (operating) market, sum;

SEC_{cf} – Estimated costs for the sale of 1 centner of marketable fish, sum.

Currently, fish production complexes are faced with the task of organizing the most optimal production and achieving high performance results. To do this, it is necessary to analyze the factors affecting the efficiency of fish farming and draw the appropriate conclusions (Table 2).

According to O. Ponomareva, several factors influence the activity and efficiency of fish farming (Figure 2):

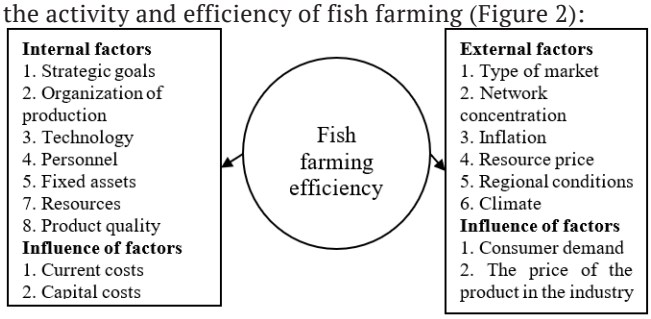


Figure 2. Classification of factors affecting the efficiency of fish farming [14].

In our opinion, organizational and economic measures to improve the efficiency of fish production and find solutions to existing problems caused by factors and regulation are the main issues in the direction of state support, and this is reflected in the following picture, that is, as an example of mechanisms of state support for fisheries (Fig. 3).

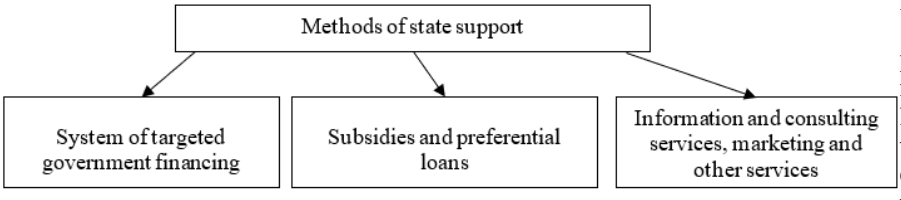


Figure 3. State support for fish farming.

Today, fish becomes a strategic resource if consumed according to medical standards. Therefore, highly qualified specialists are needed in the field of management decision-making in order to increase the efficiency of the fishery complex to perform the following tasks [15]:

- development of waste-free and low-cost resource-efficient technologies;
- use of production means (equipment) with high productivity;
- increase equipment utilization rate;
- replacement of simple equipment with automated equipment and implementation of a multidisciplinary service system.

In addition to the above comments, we can say that foreign economists Arthur Pigou, Leon Walras, Vilfedo Pareto, English economists T. Hobbs, R.G. Krause, M. Allelar, Russian economists A.V. Khomutetskaya, Z. M. Talperin, E. D. Shchetinina, V. P. Volkov, A. I. Ilyin, I. A. Minakov, N. Ya. Kovalenko, O. N. Ponomareva, I. A. Chernyavsky and others in studies of the concept of economic efficiency of agricultural products in the conditions of sustainable development of agriculture, the differences between the concepts of "efficiency" and "efficiency", the concept of economic efficiency of fish production, categories, criteria, types and indicators for determining economic efficiency and calculation formulas expressed different approaches and scientific views. In addition, R. Kurbanov, B. Elmurodova, D. Shokhimardonov, A. Gurbanov, D. Niezov, B. Karimov, B. Komilov and others, leading scientists in the field of fisheries of our republic, with questions related to technology and efficiency fish production contribute greatly to their research.

In particular, foreign economist I. A. Chernyavsky considers it advisable to study three types of fish farming efficiency indicators in his research [16]:

1. Social efficiency:
- number of newly created jobs;
- salary level;
- level of social stability in the network;
- the ratio of average wages and minimum wages at enterprises;
- social payments of the enterprise at the expense of one employee.

2. Environmental efficiency:
- the scale of discharges and residues into the environment (reservoirs). The assessment process is carried out using defined indicators in comparison with threshold standards (this indicator should not decrease after the launch of the project);
- assessment of the profitability of production through a closed technological cycle of processing fish resources.

3. Economic efficiency. When determining economic efficiency, two main tasks can be distinguished: directly - means achieving the maximum effect within the given costs (in conditions of resource scarcity) and, conversely, involves achieving the given effect within the minimum costs.

In our opinion, fish productivity, average daily live weight gain, feed consumption per 1 ton of product, volume of production per 1 kg of feed bill, volume of feed and fertilizer used per 1 hectare of pond, labor force per 1 hectare of pond, 1 ton of product Evaluation and analysis of labor costs for cultivation, cost of 1 ton of products and profit from sales, level of profitability, etc. more fully reveals the economic and social nature of fish farming in the network. Improving these indicators means increasing the efficiency of fisheries investments. We believe that without intensive technologies it is impossible to achieve economic efficiency in fish production.

Conclusion. In conclusion, the concept of economic efficiency in fish farming is minimizing production costs and maximizing profits in the production of 1 kg of fish. Economic efficiency is ensured through the economical use of resources, increasing the volume of fish farming using the most optimal fish farming technologies, providing high-quality and affordable products at prices affordable to consumers, and maximizing the reduction of feed costs (for example, by growing feed crops in the fish farm itself).

Currently, the largest share of costs is spent on feed, including fish fry. When studying the economic efficiency of fish farming, first of all, it is very important to accurately and correctly calculate the composition of the costs of fish farming, as well as the specific characteristics of the fish farming sector, the optimal location of the fishery, the depth or shallowness of the ponds, the death of fish due to diseases. The economic efficiency can be scientifically substantiated, after analyzing with serious attention the changes in market demand and supply, the market price of fish and other important aspects.

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