

Methods of State Regulation of the Spheres of Natural Monopolies

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Abstract: This scientific article covers the methods of state regulation and management of the spheres of natural monopolies. The reasons for the origin of natural monopolies in the market, their negative consequences in the economy are covered. Proposals and recommendations have been developed on the economic features of the regulation of natural monopolies.

Keywords: monopoly, natural monopoly, market defects, price regulation, regulation, management, income norms, income delimitation, technologic property, economic efficiency.



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Introduction. The theoretical definition of natural monopolies is rarely debated by economists. In practice, however, enterprises regulated in different states fall into the branches of natural monopoly.

First, if we return to the definition of natural monopolies, it becomes clear that, due to various technological developments between countries and the amount of demand in relation to the rational size of the enterprise, areas with a natural monopoly designation can be distinguished, say, between small countries with a transitional economy and large industrial countries. For example, the automobile plant in Asaka has a natural monopoly mark in the conditions of the Uzbek market, but in Western countries the automotive industry can be characterized as a highly competitive industry.

Secondly, the legal inclusion of one or another network in natural monopolies does not have any practical significance in Western countries. Natural monopoly laws and their regulation do not exist in these countries. In other words, the issue of regulation is important from a practical point of view. One or another area with a natural monopoly designation can affect only the forms and methods of regulating this area from a practical point of view.

The presence of natural monopoly conditions is the main evidence for the regulation of these areas. As can be seen from the list, these areas are, in content, the infrastructural sector of the economy. For anti-regulation, natural monopoly signs are only an excuse to regulate this area. However, they put forward the idea that infrastructure sectors have always been the subject of political debate.

In a broad sense, regulation can be defined as the intervention of state bodies (country, regional, local) in the functioning of market mechanisms in order to correct the behavior of market participants, which means that it interferes with the results of its work.

Analysis of thematic literature. Natural monopolies in countries are explained by the lack of qualified personnel and experience in regulating their activities, and by the partial repetition of their issues through antimonopoly regulation. Especially this applies to the use of a leadership position

(or monopoly power) by a natural monopoly subject for the purpose of evil. Certain models, for example, were able to meticulously limit the area of competence between antimonopoly bodies and

the regulatory body in the areas of natural monopolies. Usually the competence of the first includes issues that prevent the use of monopoly power in the path of evil (along with the possible repetition of these tasks), while regulatory competence includes pricing issues.

As a result of the new policy towards regulated natural monopolies, all models that arise in the world have their own legislative basis. The CIS countries and some developing countries believe that it is necessary to pass separate laws that establish procedures and norms in all areas of regulated natural monopolies.

"Natural monopolies are a situation when the creation of competitive conditions in the market in meeting the demand for certain types of goods (works, services) is impossible or economically unacceptable by technological characteristics." [1]

The principles of antitrust management are as follows [2]:

- ensuring equal opportunities (the need to do business, develop without administrative barriers);
- discretion (entry and exit to the market, choice of transactions and requirements for their signing);
- ensure the direct operation and execution of the regulatory framework (voluntary acceptance and unobstructed execution of requirements in the instruction and explanation of documents);
- systematization of the existing base in regulatory and legal creativity, ensuring the stability of the regulation of market relations.

The path to the formation of a competitive environment in the conditions of Monopoly was the first, in 1838 A. By Kurno, in his work "research of the mathematical principles of wealth theory". He believes that when commodity production is concentrated in the hands of one person, it constitutes an absolute monopoly.[3]

Natural monopoly acts as a structural structure of the economy - an element that ensures its stability, integrity and efficiency. The functioning of natural monopoly entities significantly affects the final macroeconomic indicators, the social sphere and the security of the country.[4]

L.I. Lopatnikov defines the concept of "natural monopoly" as follows: on the one hand, this is a situation when the manufacturer (seller) of goods and services effectively responds to the industrial demand when there is no competition in the market due to the technological characteristics of production.[5]

To the concept of "natural monopoly", among the first, J.S. Mill quotes his reaction as follows. As an active proponent of competition, without acknowledging the benefits of a natural monopoly in certain areas of Management, "an enterprise of real community importance can only benefit on such a large scale in the performance of its functions that freedom of competition almost disappears".[6]

There are direct and indirect reasons for state regulation. This is because the policy of regulating and setting prices by the state, taking into account the social layer of the population, that is, consumers, is carried out on the products produced by these industries and the services provided. At the same time, these areas are sectors of high strategic importance for the state. [7]

Implementation and regulation of the activities of natural monopolies in market conditions is one of the most complex and controversial problems related to many areas of society: economics-diy, information, technological aspects, political and social spheres. Legal regulation of public relations arising under the influence of structural changes, the introduction of market mechanisms and progressive technologies, the improvement and transformation of the regulatory role from the state side. [8]

The formation of competitive relations in the field of natural monopolies combines more complex and multifaceted problems. Many experts and scholars who study the problems of competition and monopoly express different views on the problem of competition, but they do not give a clear

definition of the term, there is no fixed model of defining the relationship between enterprises or organizations as competitive, clear formulas affecting efficiency also not developed. [9]

Stratified approach to monopoly markets and separation of natural monopoly areas. In the economy of any country, there are areas where market mechanisms are not rational, including the system of pricing through the market. Natural monopolies, sectors in which it is impossible or economically inefficient to develop competition are among just such areas. In relation to such networks, the main task of the state is to agree with their monopolistic activities. For this reason, direct state regulation applies to economic entities that apply to natural and state monopolies, and provides for the regulation of their economic activities according to the main indicators of production and investment, product quality, price (tariffs) planning, as well as the possibility of providing dossiers related to such regulatory costs. [10]

The following areas of natural monopolies are regulated by the state: transportation of oil, oil products and gas by pipeline; production and transportation of electricity and thermal energy; transportation on railways, taking into account the use of railway infrastructure; general freely used postal services; water pipelines and sewage service; services of Aeronautics, ports and airports. [11]

Research methodology. The paper made extensive use of scientific study of existing problems in the management of natural monopolies, comparative comparison, study and economic comparison and analysis of statistical data, logical reasoning, scientific abstraction, analysis and synthesis, induction and deduction methods.

Analysis and results. Regulation is carried out in different forms. There are direct and indirect regulatory methods. Indirect regulation involves measures or behaviors directed directly at market participants or a group of participants. It currently covers all aspects that affect economic and market conditions that are common to all Real and potential participants, such as direct regulation.

Three forms of state regulation are more common:

structural regulation indicates what companies are allowed to participate in certain types of activities, or what companies are assigned such an obligation; determines the needs for the creation of new infrastructures; distributes concessions (licenses) to the maintenance of the distribution, etc.

behavior regulation (sometimes called price regulation) is carried out directly by setting prices or tariffs, or indirectly - through tax and subsidy policies. Prices can also be regulated through competition laws, which eliminate the validity of monopolistic or oligopolistic power. In general, this form of regulation includes measures taken by the state to control the behavior of the firm.

We can accept that the following types of "market defects" make the inclusion of regulation on an economic basis an objective necessity (Figure 1).

Its advantage over state intervention is that it increases all associated costs, i.e. the cost / benefit ratio from regulation exceeds 1, with:

in a natural monopoly situation, the issue cannot be solved competitively;

competition exists, gives relatively effective results, but it is also possible that it does not give effective results due to certain problems with market participants and types of activities;

there is a competitive decision, but (the "competition-efficiency" relationship is broken) can be ineffective due to external influences or asymmetry of information.

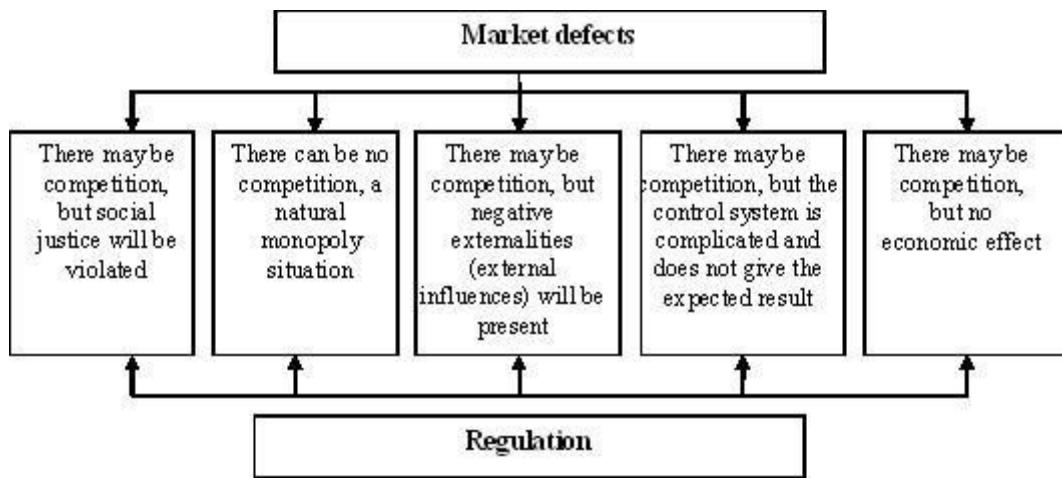


Figure 1. Reasons for state regulation of natural monopolies

Source: developed by the author.

Issues such as social policy, environmental protection, security cannot find their solution directly through the market, using regulation through a system of standards.

A price regulation system dominated until the early 1980s. According to him, prices are regulated according to the vertical chain from the price of the manufacturer to the price of the ultimate consumer. They should not exceed the level necessary to cover reasonable costs. In this case, the issues of building and expanding new capacities are solved in a centralized way. The forms of regulation of natural monopolies can be categorized according to their purpose as follows (Figure 2).

Natural monopolies feel the need for special regulation by the state. In them, the state, by administrative means, in other areas of the economy, in a "natural" way - in terms of their contribution under the influence of the mechanism of competition, compulsively achieves the desired results in the well-being of society.

Thus, the creation of antimonopoly organs is consistent with the formation of regulatory bodies of natural monopolies. Many of the developing and transitional economy countries (in practice in all mamalakats in the former Soviet space, including Uzbekistan) considered it advisable to combine the functions of these two bodies in one, in most cases in a state body.

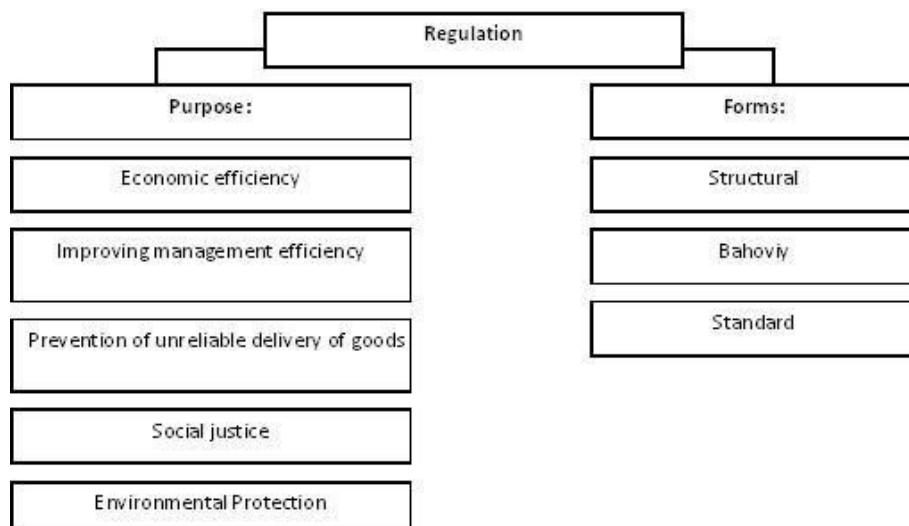


Figure 2. Goals and forms of regulation of natural monopolies

Source: developed by the author.

We considered the elements of a system that differ among themselves one or another model of the regulation of natural monopolies. Various tools can be used to regulate natural monopolies, which are conditionally divided into the following three groups:

1. Direct price and tariff setting on products of natural monopoly entities.
2. Indirect regulation of prices and tariffs by setting a limited amount of profitability and price growth.
3. The use of competitive mechanisms to grant production rights in conditions of natural monopoly.

Direct pricing on the product of natural monopolies. This method is considered one of the traditional and widely used methods of price regulation. In this way, the regulatory goods and services they determine prices that will be appropriate only in cases where the monopolist – enterprise can rely on a competitive market. Such a price guarantees the production of goods and services in a cost-effective volume and the maximum possible amount of consumption (supply). This price should of course include the regulatory benefit that investment can cover costs and keep the business out of capital leakage. Thus, the price setting is based on the accounting report on the regulatory selective costs plus the profit norm. This method aims to establish such prices that they are:

guarantee the production and consumption of the product in a cost-effective volume, which can be achieved in conditions of advanced competition;

ensure self - financing of enterprises.

Direct pricing of a natural monopoly product has the following advantages: firstly, as a result of such regulation, a certain and sufficiently stable price is established for goods and services, which is convenient for consumers; secondly, the regulatory monopolist – receives full information about the financial situation of the enterprise and accounting activities. Finally, the regulator cannot have full control over the price of the monopolist.

Regulation of profitability standards. In many countries (in particular, the United States and the United Kingdom), the procedure for indirect regulation of the price of natural monopolies is spread by setting profitability standards of invested capital.

Let's take a closer look at the disadvantages of this method of regulation. The profitability norm applies to the amount of capital invested by the regulatory body. In connection with this, an issue arises, such as the assessment of assets by market or accounting (initial) value. Regulation of the norm of profitability assumes that the enterprise raises prices only when costs increase, and, accordingly, higher revenues are required to obtain earlier profitability from capital. Even when difficulties are allowed with assessing the amount of invested capital and the level of costs, the regulation of natural monopolists by recording the norm of profitability has certain disadvantages, that is, it does not encourage companies to increase the efficiency of their work, since when costs increase, prices can rise.

In our opinion, in Uzbekistan, directly recorded prices are applied to the areas of regulation of natural monopolies, while in relation to monopolist – enterprises that are not related to natural monopolies, it is possible to use the regulation of the level of profitability.

Regulation of the price increase limit. Compared to all means of price regulation of the activities of natural monopolies, the regulation of the price cap is the most "young" and fast-spreading method of regulation. It originated in the process of restructuring, privatisation and the formation of a new regulatory model in telecommunications in the United Kingdom. The method was proposed by professor Littlchayld in response to the government's request to prepare a report on the regulation of the telecommunications sector after the privatisation of British Telecom in 1983. The purpose of the regulatory new model is to comply with the following conditions:

protection of consumers from the use of monopoly power in the cause of evil;
 encourage the monopolist to operate effectively;
 ensuring the perspective of the privatized business;
 reduce regulatory problems;
 promote the development of competition;
 increase budget revenues from privatization.

Despite the fact that one of these conditions is opposite to the other, Littlechild considered it the most reasonable decision to adopt a new means of regulation. This tool later received the name price cap regulation. The relative price growth limit has given the following appearance:

$$\Delta P = \Delta PR - X, (1.1.)$$

here, ΔP - relative price growth limit;

ΔPR – retail price growth;

X – a realistic expression of the relative increase in prices planned by the regulatory authority.

According to the authors of this approach, the stated formula was intended to provide consumer protection against realistically expressed price increases, to encourage the company to grow performance and reduce costs. However, the lower the costs, the higher the profit. In addition, price regulation under this formula is much easier than the limitation of the profitability norm, since it does not require an assessment of costs and the amount of invested capital.

Littlechild believes that it is necessary to include the price growth limit in the time scale, this time is valid until competition occurs on the network (initially, for "British Telecom", this period was set for 3 years). But as long as "British Telecom" retains its leadership position and competition is not enough, the revision has led to a change in the amount of the X indicator. [12]

Privatised in 1986, British Gas was the second company to have price growth limits set. As a result of this, the formula for calculating the price growth limit was slightly corrected:

$$\Delta P = \Delta PR - X + \Delta C (1.2.)$$

here, X – expected growth in productivity (for "British Gas" it was set at a rate of 2 percent per year);

ΔC – change in the value of gas extraction and processing. The main difference is that consumers themselves prevented the growth of wholesale prices or benefited from a decrease in the cost of mining and processing (after a few years, the cost of mining decreased, and consumers won).

Below are two advantages of arranging a price hat:

simplicity of calculation-the formula does not require a large study of accounting reports and the calculation of the cost of services. The price cap is put on the level of existing tariffs using only two indicators – the price index and the X – Factor (in fairness, it is worth noting that in practice, the choice of the X – Factor also faces certain difficulties, equal to the choice of a similar index of price growth). Thus, this formula also facilitates the activities of the monopolist.

increase efficiency and encourage tariff reduction. As the Formula is determined for a period of more than 1 year, any profit that the enterprise receives as a result of reducing costs (in conditions where the quality of services is not violated) remains under its jurisdiction. This encourages the enterprise to increase production efficiency in a means of reducing costs per unit of product. If the regulator believes that at the expiration of the formula it will be possible to further reduce the costs of the monopolist, the X – Factor will increase in the subsequent revision of the formula.

Despite the existing advantages, the regulation of the price cap is not ideal, there are also disadvantages in this method of regulation.[13] their main thing is a decrease in the attractiveness of the network investiture. Many criticized the price hat for being too conveniently set for monopolists.

Transfer of rights to production on the basis of competition in the conditions of natural monopolies. Despite the fact that monopoly unsuri is inevitable in terms of technological and economic indicators in the fields of natural monopoly, the introduction of the element of competition by economists to the basis of natural monopoly has been achieved. This method provides for competition for the right to temporary ownership and concession, the so-called monopoly on network management (through negotiations and tender sales).

Conclusion. Judging by the issues that await their solution to the management and regulation of the activities of natural monopolies in Uzbekistan, this is the method of direct pricing for the products of natural monopolists, which today assumes a gradual transformation of other methods that are more suitable for the market economy. These are: regulation of the price growth limit, granting the right to produce on a competitive basis.

In addition, it is very important to carefully identify the types of activities that fall into the areas of natural monopolies. It should be noted that only a part of the types of economic activity in such areas as the gas industry, electricity, rail transport and communications are part of the natural monopoly and must be regulated by the state. The rest of the types of their activities can be practiced potentially effectively in competitive conditions. Hence, creating a competitive environment requires conducting specific structural changes.

International experience and modern theoretical developments show that the most effective direction of state economic policy in relation to the branches of natural monopolies is to re-structure (restructuring) them, that is, to bring them to market conditions that can be viable and effective:

regulated and unregulated types of activities were allocated;

independent enterprises were formed on each type of activity, which began to apply under the contract system;

production tasks were separated from transport and distribution tasks;

auxiliary types of activities are separated (repair, construction, etc.), which, although they have a specific direction, can be carried out on competitive principles;

social infrastructure enterprises were transferred to municipal ownership or product manufacturers were privatized in order to reduce costs.

Summing up the conclusions, we note that natural monopoly is an objective phenomenon in which the economy of all countries is forced to agree, regardless of its economic and social structure.

Even in such conditions, it is important to improve state regulatory measures to reduce damage from the activities of natural monopolies to a lesser extent.

List of literature used

1. National Encyclopedia Of Uzbekistan. Tashkent Volume 8. 2004. P. 215.
2. Woodrow N.T. Institutional foundations of antitrust management. Economy. - T.: 2019. P. 115.
3. Cournot A. Recherches sur les Principes Mathematiques de la Theorie des Richesses» // Augustus M. kelly. -1960. - P. 59.
4. Kirsanov S., Safonov E., Ramirez S. Natural monopoly in Russia: state regulation problems. Baltic Journal of Real Estate Economics and Construction Management. 5(1). August 2016.
5. Lopatnikov L.I. Economico-Matematichesky slovar: slovar sovremennoy ekonomicheskoy nauki / Lopatnikov L. I. - 5-e izd., pererab. I dop. – M.: Delo, 2003. – 520 P.

6. Mil Dj.S. Osnovi politicheskoy ekonomii. T. 1. – M.: Progress, 1980.
7. Saidov M.S. (2021) economic and legal aspects of the management and regulation of natural monopolistic organizations in Uzbekistan. Scientific electronic journal" Economics and innovative technologies". № 3, may-June, 2021. file:///C:/Users/Acer/Downloads/%D0%93%D0%9E%D0%A2%D0%9E%D0%92%D0%9E+%E2%84%963+2021_97%20(1).pdf
8. Saidov M.S. (2021). Foreign experience in the regulation and management of natural monopolies. Economics and education / 2021yil, No. 5. <https://cedr.tsue.uz/index.php/journal/article/view/209/256>
9. Saidov Mashal Samadovich (2021) Challenges and solutions of formation of competitive environment in regulation of natural monopolies. International Journal of Advanced Research in IT and Engineering. ISSN: 2278-6244. <https://garph.co.uk/IJARIE/Nov2021/G-6.pdf>
10. Saidov M.S. (2021). Development of a competitive environment in the management of natural monopolistic organizations. Economics and education / 2021, No. 4. file:///C:/Users/Acer/Downloads/4-%D1%81%D0%BE%D0%BD+2021+%D0%B9%D0%B8%D0%BB+02.10.2021-6-12.pdf
11. Saidov M.S. (2021). Economic and legal aspects of the management and regulation of natural monopolistic organizations in Uzbekistan. Scientific electronic journal" Economics and innovative technologies". № 3, may-June, 2021. file:///C:/Users/Acer/Downloads/%D0%93%D0%9E%D0%A2%D0%9E%D0%92%D0%9E+%E2%84%963+2021_97%20(2).pdf
12. Littlechild S. The Regulation of British Telecommunications Profitability, Department of Trade and Industry: London., 1999. p 18.
13. Helm D.R. and Jenkinson T.J. (1997). The Assessment introducing competition into regulated industries. Oxford Review of Economic Policy, Vol. 13, no. 1, pp. 1-14.
14. Saidov Mashal Samadovich, Alimov Aziz (2023) Methods of Organizing Corporate Governance at the Enterprise. AMERICAN JOURNAL OF ECONOMICS AND BUSINESS MANAGEMENT ISSN: 2576-5973Vol. 6, No.1,2023. <https://globalresearchnetwork.us/index.php/ajebm/article/view/1910/1739>
15. Saidov Mashal Samadovich, Vafoeva Zarnigor (2023) Features of Strategic Alliances in the Global Economy. AMERICAN JOURNAL OF ECONOMICS AND BUSINESS MANAGEMENT ISSN: 2576-5973Vol. 6, No.1,2023. <https://globalresearchnetwork.us/index.php/ajebm/article/view/1896/1725>
16. Saidov Mashal Samadovich. Muidinov Dilmurod Murodzhonovic. (2023) The Development Strategy of International Companies in Modern Conditions. AMERICAN JOURNAL OF ECONOMICS AND BUSINESS MANAGEMENT ISSN: 2576-5973Vol. 6, No.1,2023. <https://globalresearchnetwork.us/index.php/ajebm/article/view/1897/1726>
17. Saidov Mashal Samadovich, Shodmonov Beknur Olimjonovic (2023) Organization of Control and Evaluation of Effectiveness in International Companies. AMERICAN JOURNAL OF ECONOMICS AND BUSINESS MANAGEMENT ISSN: 2576-5973Vol. 6, No.1,2023. <https://globalresearchnetwork.us/index.php/ajebm/article/view/1898/1727>