

MONOPOLY AS A FORM OF MARKET STRUCTURE: THEORETICAL FOUNDATIONS, TYPES AND INSTITUTIONAL CONSEQUENCES

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Abstract

The article explores the theoretical foundations of monopoly as a form of market structure, its economic nature, typology, and institutional consequences. It examines monopoly behavior models, comparative thresholds for market dominance recognition across countries, and the impact of monopolization on competition and social welfare. Special attention is paid to the transformation of monopolies in the context of digitalization and the emergence of platform-based dominance. The study includes graphical illustrations comparing market outcomes under perfect competition and monopoly. The paper concludes on the necessity of adapting classical theories to the realities of the digital economy and improving market power assessment methodologies.

Keywords: Monopoly, market structure, dominant position, digital economy, platform monopolies, economic efficiency, competition, deadweight loss, institutional risks.

Introduction

Monopoly is one of the key forms of market structure, in which the entire set of supply in the market is concentrated in the hands of one producer or supplier. This provision gives an economic entity market power, i.e. the ability to influence the price, volume of production and conditions of access to the market. In the modern economy, monopolies continue to play a significant role, giving rise to discussions about the limits of their permissibility, consequences and approaches to regulation. The purpose of this article is to analyze the nature of monopoly from the theoretical, institutional and applied points of view, as well as to consider the evolution of its forms and mechanisms of market influence.

The concept of monopoly occupies a central place in economic science, reflecting a situation in which one entity controls the entire supply of a certain good or service, thereby exerting a significant influence on the price, production volumes and consumers' access to the resource. The classical definition of monopoly, which originated from the works of Adam Smith, assumed the negative impact of monopoly power on social welfare due to the possibility of artificially limiting the volume of production in order to inflate prices. Later, David Ricardo and John Stuart Mill developed this line, focusing on the imperfections of competition and the need for institutional restrictions on the monopolization of markets. The formation of

neoclassical theory in the works of Alfred Marshall systematized the analysis of monopoly through the prism of market equilibrium and marginal values. In particular, the monopolist's distinction between price (P) and marginal revenue (MR) was introduced, and a mechanism for extracting excess profits by limiting output to a level at which $MR = MC$ (marginal cost) was described. This difference is fundamental to the conditions of perfect competition, in which the price is equal to the marginal cost ($P = MC$), which maximizes the aggregate surplus. In the 20th century, the attention of economists shifted to the institutional and behavioral aspects of monopoly. The theory of perfect competition lost its absolute normative relevance, and economic practice increasingly clashed with real structures, where large companies retained their dominant positions not only due to size, but also due to access to technology, know-how, data, and government preferences. For example, Joseph Schumpeter considered monopoly as a potential source of innovative development, emphasizing the "creative destruction" and temporary nature of technological leadership. From the point of view of modern institutional economics, monopoly is interpreted as the result of restrictions, transaction costs, and market failure. Maintaining a monopoly position requires continued investment in entry barriers, both legal and technological, as well as strategic engagement with regulators. This topic is especially relevant in the context of digital transformation, where companies gain monopoly advantages not due to production facilities, but due to control over data, algorithms, network effects, and ecosystems.

The classification of monopolies is based on various criteria, including the nature of origin (natural, artificial), legal status (legal, patent), behavioral characteristics (price discrimination, strategic dumping), as well as the degree of impact on competition and institutional frameworks. Each of the forms generates specific risks for the functioning of a market economy and requires differentiated approaches to regulation. In this regard, it is important to move from abstract theoretical analysis to systematization of specific types of monopolies, identification of mechanisms of their formation and consequences for sectoral and national markets.

The variety of forms of monopolies is due to both economic prerequisites and legal and institutional factors. Modern research emphasizes that the stable monopoly position of a company is not an accidental deviation, but the result of a complex interaction of market and non-market mechanisms. The formation and maintenance of monopoly power requires a systemic institutional environment, from the regulation of access to resources and licensing to the legal registration of exclusive rights and the creation of entry barriers.

One of the basic forms is a **natural monopoly**. It arises in industries with pronounced economies of scale, where it is cost-effective to serve the entire market by one manufacturer. Classic examples are pipeline transport, power grids, and water supply. Here, the parallel existence of several competitors is impractical: duplication of infrastructure leads to overconsumption of resources, and technological specifics make it possible centralized control without compromising the consumer. However, this increases the risk of abuse of market power, which requires the introduction of a tariff regulation mechanism and obligations for non-discriminatory access to infrastructure.

Another significant category is **legal monopolies**. Their existence is based on legislative acts regulating the procedure for the provision of certain types of services or the production of

specific goods. Such monopolies are justified in strategically important areas where ensuring quality, safety or standardization takes precedence over competition.

1. Metros operated by a single operator in megacities (for example, Transport for London, Moscow Metro);
2. National postal services with the exclusive right to deliver letters (USPS, La Poste);
3. State alcohol and tobacco monopolies (for example, Canada's Saq);
4. Patent monopoly in pharmaceuticals is a temporary exclusive right to sell an innovative drug;
5. Gambling monopolies (national lotteries in the UK, France, etc.).

These forms can be combined with subsidy mechanisms, obligations to provide services in remote or unprofitable regions, as well as with political instruments to ensure national sovereignty in sensitive industries.

Artificial monopolies are the result of entrepreneurial activity aimed at restricting competition. These include cases of mergers and acquisitions leading to high concentration, the establishment of price and non-price barriers to entry, cartel agreements and behavioral strategies to oust competitors (for example, dumping or imposing unfavorable conditions). capital intensity and significant transaction costs. Such structures require constant antitrust supervision, and in some cases, forced business restructuring.

Special attention should be paid to **platform and digital monopolies**, which dominate not through control over traditional assets, but through algorithms, user data, and network effects. In this model, consumers, suppliers, and regulators are "locked" within the ecosystem (e.g., Google, Apple, Amazon), which creates a completely new configuration of market power. which increases the risks for both consumers and the long-term sustainability of the digital economy.

Thus, different forms of monopolies differ in their sources of origin, degree of legitimacy, scale of impact and mechanism of market behavior. Their existence can be both economically justified and cause institutional and social risks, especially in conditions of a weak competitive environment or ineffective regulation.

The definition of monopoly power and the recognition of an economic entity as dominant in the product market is one of the key tasks of competition policy. In a market economy, it is necessary not only to identify the structure of the market, but also to have clear quantitative and qualitative indicators that allow regulatory authorities to carry out lawful and justified intervention in case of violation of the principles of competition. Of central importance in this process is the measurement of the market share of an economic entity and the analysis of its behavior in the market.

The most common and understandable indicator is the share in the product market, expressed as a percentage of the total sales of a certain product or service in a particular territory for a specified period of time. However, approaches to determining from what level of market share a company is considered dominant vary significantly across countries and legal systems.

The following table shows comparative approaches to determining the threshold of dominant position in the product market in a number of leading jurisdictions:



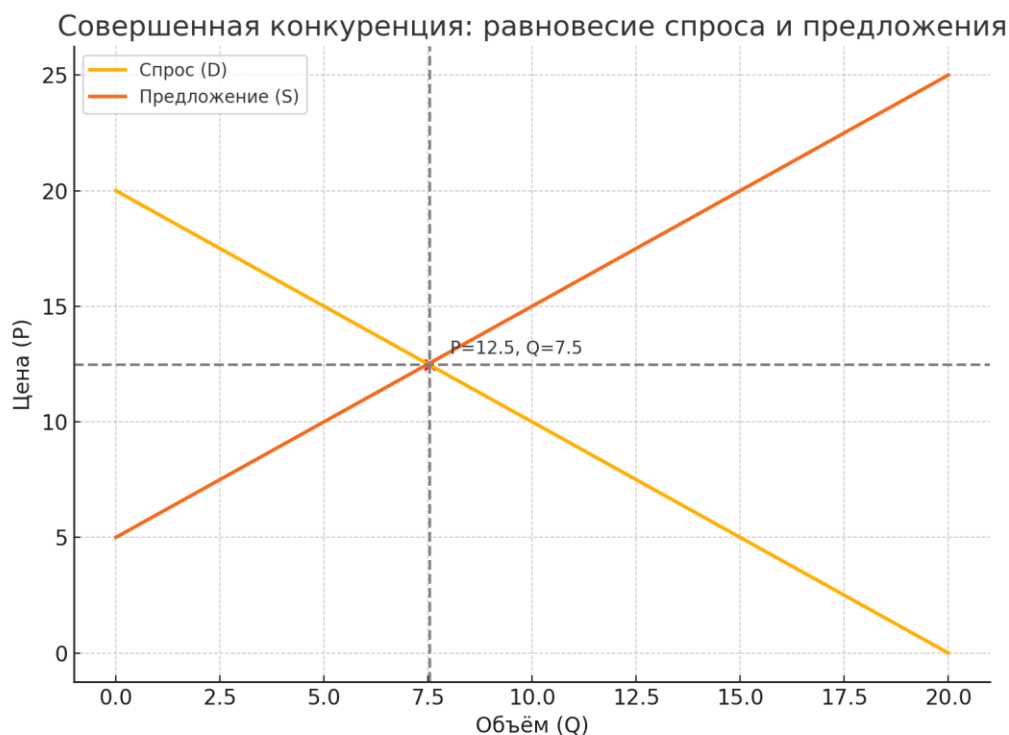
Table 1. Comparative review of the thresholds for recognizing a dominant position in the product market in different countries of the world.

State	Level of market share that gives grounds for recognition as dominant	Features of law enforcement practice
United States of America	More than 70 percent	A market share is not a ground in itself; analysis of the subject's behavior is necessary
European Union	From 40 percent and above	The share may indicate dominance, but requires a comprehensive assessment and additional factors
Germany	From 33 percent	According to the Law on Unfair Competition, there is a presumption of dominance
Russian Federation	More than 50 percent	Established in accordance with the Federal Law "On Protection of Competition"
People's Republic of China	More than 50 percent	A similar approach is applied, exceptions are possible depending on industry specifics
Japan	No fixed level is set	Behavioral and economic analysis is used, taking into account the market structure

Economic consequences of monopoly and institutional risks. The formation and maintenance of a monopoly structure in the market has a profound impact on the functioning of a market economy. The main negative effects of monopoly cover both the microeconomic level (the behavior of individual companies and consumers), and the macroeconomic level (the stability of the economic system as a whole).

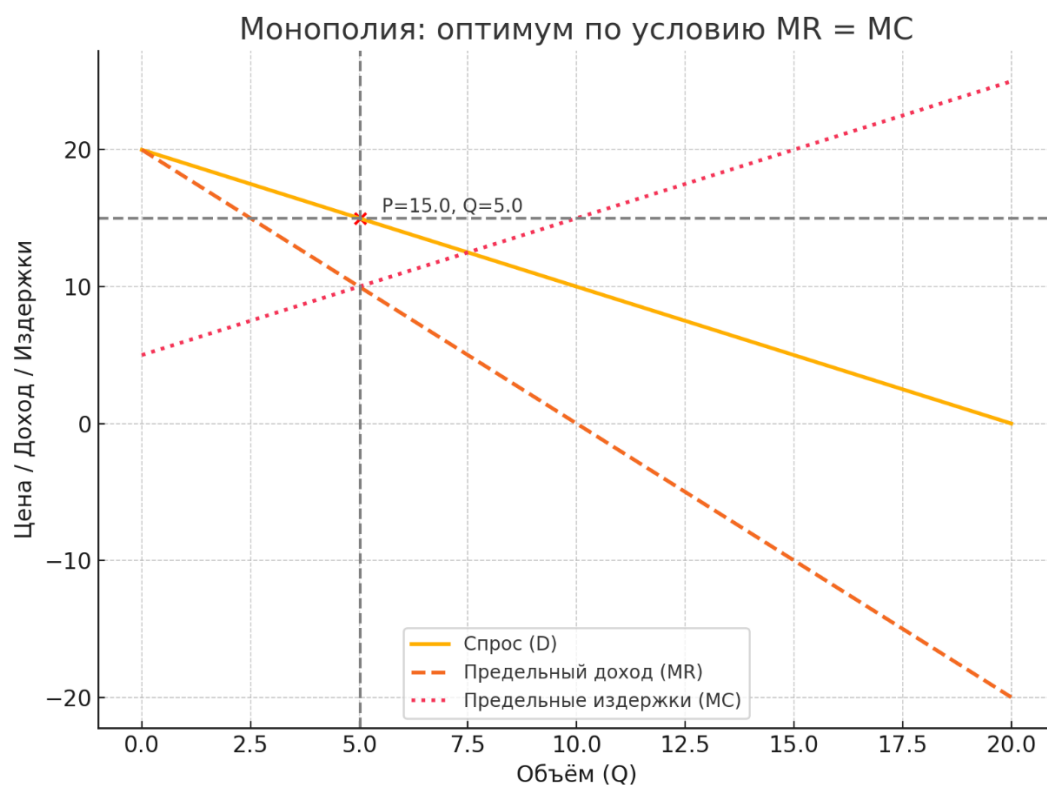
At the micro level, monopoly power leads to a deviation from the efficient allocation of resources. Unlike perfect competition, where the price is equal to marginal cost, in monopoly, the price exceeds marginal cost, which reduces total sales and creates the so-called "deadweight loss". Consumers are forced to pay higher prices for fewer goods, and part of the potential social welfare is lost. These differences are visualized.





Graph 1. Market equilibrium with perfect competition

The optimal volume of production and price are determined at the intersection of the supply and demand curves, where the price is equal to marginal costs. Producers do not have the ability to influence the price, and resources are allocated efficiently.



Graph 2. Monopoly behavior

The producer sets the volume of output at which the marginal income is equal to the marginal cost, as a result of which the price becomes higher and the volume becomes lower than the competitive level. A dead loss zone is formed and a part of the consumer surplus is redistributed in favor of the producer.

At the meso-economic level, monopolies reduce competitive pressures, limit innovation and discourage the emergence of new entrants. Dominant firms can restrict access to raw materials, technologies or distribution channels, thereby hindering the development of small and medium-sized enterprises. institutional hierarchies and deepening inequalities in access to opportunities.

At the macroeconomic level, monopolies can distort market incentives, facilitate tax evasion, create price distortions, and reduce overall productivity. In addition, in an environment of high concentration of economic power, political lobbying and regulatory capture are more likely to erode, undermining trust in public institutions and violating the principles of fair competition. A particular threat is posed by digital platform monopolies, in which dominance is ensured not through traditional production factors, but through algorithms, big data, personalized ecosystems, and network effects. Users are "locked" inside platforms (e.g., Google, Amazon, Meta), and competition is shifting towards access to data rather than to the consumer. This creates new challenges for antitrust policy, as traditional methods of regulation (for example, business division) are becoming ineffective.

Antitrust regulation. The impact of monopoly on the market system necessitates institutional intervention. Antitrust regulation is a set of legal, economic and organizational measures aimed at preventing, detecting and suppressing abuses of a dominant position, unfair competition and restrictions on the entry of new participants. institutional and behavioral schools. From the standpoint of the **neoclassical** paradigm, market efficiency is ensured by competition, which, in turn, leads to the optimal allocation of resources. Monopoly is seen as a market failure, and its overcoming requires correction through government intervention. These include such measures as the structural separation of companies, the introduction of price controls, the abrogation of anti-competitive agreements. market processes and does not sufficiently take into account institutional factors, including information asymmetry, transaction costs and the strength of political and economic interests. **Institutional economics** offers a more comprehensive approach, considering monopoly as a stable result of the imperfection of formal and informal institutions. In this paradigm, antitrust regulation goes beyond simple control over prices and mergers and covers the problems of administrative barriers, corrupt practices, lobbying, as well as unfair behavior in the field of intellectual property. the independence of regulators and the effectiveness of law enforcement. From the perspective of **behavioral economics**, the market behavior of participants often deviates from a rational model, which requires adapting antitrust strategies to take into account consumers' real perceptions of prices, brands, and market power. For example, the effect of "habit" or "network dependence" can maintain a monopoly position even in the presence of formal alternatives, as is observed in digital markets.

Antitrust Policy Instruments and International Practice. The practical implementation of antimonopoly policy is implemented through a system of tools aimed at both eliminating existing violations of competition and preventing abuses. The effectiveness of these



mechanisms depends on the level of institutional development, the maturity of the legal system, the independence of the regulator, as well as the coordination of actions of various public authorities. **The main instruments of antimonopoly policy include:**

1. **For** example, the European Union has a strict system of pre-merger notification, where companies are required to obtain approval from the European Commission if they exceed certain turnovers.
2. **Suppression of abuse of dominant position** covers a wide range of actions, such as refusal to conclude transactions without objective reasons, imposition of unfavorable conditions, economic discrimination of counterparties, price dumping and the creation of artificial barriers to the entry of new participants. For example, the Federal Antimonopoly Service of the Russian Federation regularly initiates cases on the facts of abuse of monopoly position in the field of transport, energy and digital Platforms.
3. **Identification and suppression of anti-competitive agreements** includes the investigation of cartels, hidden price agreements, collusion in participation in public procurement. For this purpose, methods of economic intelligence, analysis of price anomalies, benchmarking and leniency programs are used, successfully used, for example, in the United States of America.
4. **Increasing transparency and digitalization of antitrust monitoring** – modern antitrust authorities are introducing digital platforms for collecting and analyzing data on prices, market shares, and bidders. Such initiatives are being developed in South Korea, Singapore and the European Union, where public market databases are being created, which increases accountability and reduces the possibility of manipulation.
5. **Supporting competition by stimulating small and medium-sized enterprises** – programs for access to infrastructure, subsidized lending, state guarantees and innovation clusters are being created aimed at expanding the number of market participants. In Finland, Estonia and Canada, such measures include technology accelerators, and in Latin American countries, programs for the integration of small producers into supply chains.
6. **International coordination of antitrust policy** – in the context of transnational business, a special role is played by supranational organizations such as the Organization for Economic Cooperation and Development (OECD), the United Nations Conference on Trade and Development (UNCTAD), the International Antimonopoly Network (ICN), where common approaches to the regulation of digital markets, cross-border transactions and transnational abuses are developed.

In the context of the digital transformation of the economy, innovative forms of antitrust supervision are also used: algorithmic audit of pricing, control over user data, assessment of network effects and barriers on digital platforms. The European Union has already introduced provisions on "digital gates" and obligations for large online services to prevent discriminatory access to algorithms and user information. The development of digital technologies, the platform economy and the globalization of business processes have transformed the nature of competition and forms of market dominance, posing new complex challenges to antitrust policy. Traditional regulatory methods focused on structural analysis of industries and static assessment of market share have proven to be insufficient to effectively respond to the dynamics of digital markets.

One of the key features of a digital monopoly is the **phenomenon of network effect**: the more users a platform has, the more valuable it becomes, which makes it difficult for new competitors to enter the market. In addition, the collection and monetization of big data allow companies not only to predict consumer behavior, but also to actively shape it, which shifts the focus from price competition to algorithm competition. which formally does not violate the law, but in fact suppresses alternative solutions.

The issue of interpreting market boundaries **is also becoming an important challenge**. In the traditional sense, the product market is defined based on the physical characteristics of products and consumer preferences. However, in digital ecosystems, where the same platform combines the functions of search, commerce, communication, and information storage (e.g., Amazon, Google, Meta), market boundaries become blurred, and market share estimation becomes problematic.

Another aspect is **algorithmic pricing and automated interaction between competitors**. Modern platforms can use dynamic algorithms that lead to consistent behavior without explicit collusion, which makes it difficult to legally qualify such actions and requires the development of new legal standards.

Against the backdrop of these trends, advanced jurisdictions are taking steps to modernize antitrust regulation. The European Union has adopted the Digital Markets Act, which provides for preliminary regulation of large online platforms, including a ban on self-service, mandatory interoperability, and data openness. In the United States of America, initiatives are being put forward to divide the tech giants and strengthen oversight of their investment and pricing policies. Japan, South Korea, and India are developing specialized digital antitrust agencies that integrate economic and technological analysis. Thus, antitrust policy in the digital age requires not only updating tools and procedures, but also rethinking fundamental approaches to understanding competition, market power, and consumer welfare. Only adaptive and proactive regulation, based on interdisciplinary expertise and international cooperation, can ensure the preservation of a competitive environment in the face of rapid technological change.

In the context of deepening digitalization and accelerated concentration of economic resources, the most important task for national governments and international organizations is to rethink antitrust policy as part of a broader strategy to ensure sustainable economic growth, digital sovereignty and inclusive development.

The key areas for improving the antimonopoly policy are:

1. Adapting legislation to the digital environment It is necessary to develop a flexible regulatory framework that can cover such phenomena as behavioral dominance, platform addictions, monetization of user data, and algorithmic harmonization. It is necessary to introduce the concepts of "digital infrastructure dependence", "big data as a barrier to entry" and other categories that reflect the specifics of the platform economy.
2. Development of analytical and expert potential of antitrust authorities It is necessary to strengthen competencies in the field of data analysis, digital business models, machine learning, as well as to establish interaction with the scientific community and private experts. Improving the skills of personnel and investing in the digital infrastructure of antimonopoly services will be the key to high-quality law enforcement.

3. Transition from formal to behavioral analysis When assessing market power, it is important not only to take into account market share, but also the company's ability to set entry barriers, impose conditions, and control access to key assets (data, algorithms, interfaces). This requires the introduction of multi-factor models for analyzing the competitive environment and the impact on innovation.

4. Interagency and international coordination The creation of cross-border mechanisms for the exchange of information, the harmonization of competition policy standards, the harmonization of sanctions procedures and the development of joint approaches to global players are becoming strategically necessary. An example is the active participation of the European Commission, the US Federal Trade Commission and antitrust agencies in the Asia-Pacific region in multilateral initiatives.

5. Institutional protection of competition Antimonopoly policy should be integrated into strategic documents for socio-economic development, including digital strategy, policy in the field of science and education, and support for entrepreneurship. It is necessary to protect the independence of antimonopoly authorities from political pressure and the economic interests of large corporations.

6. Support for small and medium-sized enterprises as an antitrust vector Creating conditions for business scaling, removing entry barriers, access to digital infrastructures and government orders, supporting innovative startups and developing technology clusters all strengthen the structural stability of the competitive environment.

7. Openness and accountability of antitrust policy The publication of motivated decisions, public discussions, and the development of formats for interaction with business and civil society strengthen the legitimacy of regulation and reduce institutional costs.

The modern market economy inevitably faces a contradiction between the desire to save on scale, technological progress and the need to maintain a competitive environment. Monopoly, being the result of objective and subjective processes, has a dual effect on the economy: on the one hand, it can stimulate investment and innovation, and on the other hand, it can reduce the efficiency of resource allocation, limit consumer choice, and generate institutional risks. In these conditions, antimonopoly regulation acquires a system-forming significance. Its goal is not only to curb the abuse of market power, but also to form sustainable institutions that support competition as the basis for fair and innovative development. This is especially true in the context of digital transformation, where economic power is increasingly taking on non-physical forms related to access to data, algorithms, and ecosystems. The development of antimonopoly policy requires a transition from reactive measures to strategic management of the competitive environment. This includes adapting the regulatory framework, developing analytical mechanisms, strengthening international coordination, supporting small and medium-sized businesses, and institutional accountability of regulators. Only a comprehensive and proactive approach will ensure a balance between efficiency and fairness in the economy, neutralize the threats of excessive market concentration, and contribute to the creation of conditions for sustainable growth in the era of digital transformation.

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