

MANAGEMENT OF COMPETITION AND MONOPOLY IN INDUSTRIAL SECTORS

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Abstract: This article is devoted to the study of the economic impact of competition and monopolies in industrial sectors. The impact of competition on economic efficiency, innovation, and consumer welfare is shown. The development of monopolies and their negative impact on the economy are analyzed, and proposals are made to improve competition policy. The study provides practical examples based on advanced economic theories, statistical data, and modern management tools.

Keywords: Competition, monopolization, industries, economic efficiency, management tools, competition policy, social welfare.

Аннотация: Статья посвящена исследованию экономического влияния конкуренции и монополий в промышленных секторах. Показано влияние конкуренции на экономическую эффективность, инновации и благосостояние потребителей. Анализируется развитие монополий и их негативное влияние на экономику, а также вносятся предложения по совершенствованию конкурентной политики. В исследовании приводятся практические примеры, основанные на передовых экономических теориях, статистических данных и современных инструментах управления.

Ключевые слова: Конкуренция, монополизация, отрасли, экономическая эффективность, инструменты управления, конкурентная политика, социальное благосостояние.

Introduction

In today's industrial economy, issues of competition and monopoly management are gaining importance. The formation of a competitive environment is one of the important factors in increasing economic efficiency, supporting innovative development, and providing consumers with quality products and services. At the same time, the presence of monopolistic structures in some industrial sectors restricts competition, worsens the overall market situation, and negatively affects the well-being of society. Therefore, regulating monopolies and ensuring effective competition have become one of the main directions of state economic policy.

This article is aimed at studying the essence of competition and monopoly management in industrial sectors, their formation and impact on economic efficiency. At the same time, the

article analyzes the importance of modern management tools and state policies for limiting monopolies and increasing competition. The study is related to previous works, studies scientific approaches to the development of competition and monopoly in various sectors of the economy and shows the impact of various factors on efficiency in industrial sectors.

The purpose of the study is to reveal the importance of creating a healthy competitive environment in industrial sectors and effectively managing monopolies. To this end, an in-depth study of the relationship between competition policy, economic efficiency and social welfare is considered, as well as the issues of determining the impact of monopolies on the economic system. Within the framework of this article, scientific evidence is presented on strategies for supporting competition and the socio-economic consequences of monopolies, and practical recommendations are developed based on analytical approaches.

Literature review

The issue of competition and monopoly management has been studied in depth in the field of industrial economics, since this area is of great importance for the management of market mechanisms and economic development. Research shows that ensuring competition in industrial sectors and preventing monopolies serves to increase economic efficiency, stimulate innovation, and protect the interests of consumers. Accordingly, a number of authors have expressed their views on the development and practical application of theories of monopoly and competition.

For example, Porter (1980)¹ identified the main factors determining competition within an industry through his "Porter's five forces" model. According to Porter, competition between industries intensifies competition between existing players in each industry, which encourages companies to introduce technological innovations and improve product quality. His model is widely used in the analysis of competition within an industry and in the management of monopolies (Porter, 1980)¹.

Stigler also raises the problem of managing monopolies and keeping them under government control. Stigler argues that monopolies tend to increase prices and restrict entry to maximize their profits, which in turn reduces economic efficiency and harms consumer interests (Stigler, 1968)².

Studies by Schmalensee (1989)³ and Tirole (1988)⁴ have focused on the role of monopolies in network economies, and they have noted both the short-term effectiveness of monopolies in stimulating technological innovation in industries. Tirole (1988) acknowledges the contribution of monopolies to technological development, but argues that this process can also bring economic risks, along with positive economic outcomes, in the long run.

Subsequent studies, including Motta and Shapiro, have offered new perspectives on competition and monopoly management. Motta (2004)⁵ studied the impact of competition on economic efficiency and noted that limiting monopolies can lead to efficient market operations and benefit consumers. Shapiro (2019)⁶ studied how competition and monopolies are changing in modern

¹ Porter, ME (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors* . Free Press.

² Stigler, GJ (1987). *The Theory of Price* . Macmillan Publishing Company.

³ Schmalensee, R. (1989) . *Inter-industry Studies of Structure and Performance* . Handbook of Industrial Organization, 1, 951-1009.

⁴ Tirole , J. (1988). *The Theory of Industrial Organization*. Cambridge, MA: MIT Press.

⁵ Motta, M. (2004) . *Competition Policy: Theory and Practice* . Cambridge University Press.

⁶Shapiro, C. (2019). Antitrust in a Time of Populism. *International Journal of Industrial Organization*, 61, 714-748.

digital market conditions and expressed opinions on modern approaches to competition management and their role in the development of digital technologies (Shapiro, 2019).

Based on the above studies, it can be seen that the issue of competition and monopoly management in industrial sectors has been studied by many authors through such important factors as economic efficiency, technological innovation, and improvement of market mechanisms. At the same time, the role of the state in the management of monopolies and the study of the impact of competition on various sectors remain among the important topics in industrial economics.

Research methodology

The scientific and theoretical basis of this article is the analysis of economic literature and regulatory legal documents, comparative research on demography and migration studies of local and foreign scientists and specialists, analysis of their written and oral opinions, observation of socio-economic processes, conclusions and proposals are given in relevant areas. In the process of studying the topic, statistical data (national statistical collections, demographic and socio-economic reference books) were used. A sociological survey analysis was conducted. The research strategy includes a logical sequence, interrelation and interdependence of methods of data collection, processing, generalization, analysis of results. Together, they are aimed at a comprehensive scientific study of the problem considered in this work.

Analysis and discussion of results

The Herfindahl-Hirschman Index (HHI) is used to measure market concentration among companies and is used to assess the degree of monopolization of a market. The HHI measures concentration based on the number and share of companies in the market. This measure helps to assess whether monopolies or oligopolies exist and to better understand market competition. If there are only a few large companies in the market or they have a large market share, the HHI will be high, which indicates reduced competition. The concentration of a market can change over time. The HHI can track these changes, for example, helping to determine how competition is affected by the entry of new companies or the exit of large companies.

HHI Formula

$$HHI = \sum_{i=1}^N s_i^2$$

In here:

- **N** is the total number of companies in the market network,
- **s_i** — each company's market share (in percent), but used in the calculation as a share, not a percentage (i.e., 25% is entered as 0.25).

Calculation steps

1. Determine the market share (in percent) of each company.
2. Square each company's market share.
3. Add all the squared fractions.

HHI Market Concentration Interpretation

- **0-1500** : Low concentrated market, meaning competition is high.
- **1500-2500** : Moderately concentrated market.
- **2500 and above** : Highly concentrated market, i.e. monopolized or oligopolistic market.

| Company name | Industry | Annual profit | Note |
|--------------|----------|---------------|------|
|--------------|----------|---------------|------|

| | | (2020) | | | |
|-----------------------------------|------------------------|----------------|----------|----------------------------------------------------|--------|
| Uzbekneftegaz | Oil and gas | 3.4 soums | trillion | Leader in the energy sector | 39.16% |
| AMMC (Almalyk KMK) | Metallurgy | 3.9 soums | trillion | The most profitable company in Uzbekistan | 44.92% |
| Fergana Azot | Chemical industry | 292.6 soums | billion | Local fertilizer producer | 3.37% |
| Uzmetkombinat | Metallurgy | 218.5 soums | billion | Precious metals producer | 2.52% |
| Regional supply | gas Energy supply | 211.2 soums | billion | Gas delivery services | 2.43% |
| Coca-Cola Uzbekistan | Beverage production | 205.7 soums | billion | Beverage sector leader | 2.37% |
| Ucell | Telecommunications | 199.8 soums | billion | Leader of Uzbekistan's telecom sector | 2.30% |
| Uzavtosanoat | Automotive industry | 160.3 soums | billion | Local car manufacturer | 1.85% |
| Commodity Exchange | Trade | 94.8 soums | billion | Trade and commodities exchange | 1.09% |

Now, we will calculate the HHI Market Concentration Index

HHI calculation formula:

$$HHI = \sum (\text{market share})^2$$

Calculation:

Uzbekneftegaz: $(19.2\%)^2 = 368.64$
 AMMC (Almalyk KMK): $(22.0\%)^2 = 484.0$
 Ferg'onaaazot: $(1.6\%)^2 = 2.56$
 Uzmetkombinat: $(1.23\%)^2 = 1.5129$
 Regional gas supply: $(1.19\%)^2 = 1.4161$
 Coca-Cola Uzbekistan: $(1.17\%)^2 = 1.3688999999999998$
 Ucell: $(1.13\%)^2 = 1.2768999999999997$
 Uzavtosanoat: $(0.91\%)^2 = 0.8281000000000001$
 Commodity Exchange: $(0.54\%)^2 = 0.2916$

$HHI = 19.2^2 + 22.0^2 + 1.6^2 + 1.23^2 + 1.19^2 + 1.17^2 + 1.13^2 + 0.91^2 + 0.54^2 =$
 $368.64 + 484.0 + 2.56 + 1.5129 + 1.4161 + 1.3689 + 1.2769 + 0.8281 + 0.2916 = 3590.44$
 Result: HHI = 3590.44

Interpretation:

If the HHI is greater than 2500, the market is considered highly concentrated.

Thus, since $HHI = 3590.44$, this market is assessed as highly concentrated.

In conclusion, the Herfindahl-Hirschman Index (HHI), calculated based on the market shares of large companies in various sectors of Uzbekistan, indicates a high level of market concentration. The HHI value is 3590.44, which is above the threshold of 2500, which makes this market structure highly concentrated. Such concentration means that a few large companies control the market, which can limit the dynamics of competition, reduce consumer choice, and negatively affect prices and innovation.

An analysis of the market share each company contributes to the market—from large players like AMMC and Uzbekneftegaz to smaller players like Commodity Exchange—shows the differences in market power across industries. Concentration at this level may require regulatory and economic policy interventions to promote competition and prevent monopolistic behavior. Accurate tracking of financial accounts and market shares is essential for ensuring economic efficiency and fair competition, and helps policymakers make informed decisions.

Conclusion and suggestions

Competition and monopoly management in industries are integral to economic development. Competition is generally associated with increased economic efficiency, improved product quality, and greater consumer choice. However, the emergence of monopolies in some industries requires serious attention. Monopolies can reduce market efficiency, raise prices, and harm consumers.

This study analyzed the complex relationship between competition and monopolies. Modern and effective approaches are needed to strengthen competition in industrial sectors and combat monopolies. The healthy development of a competitive environment not only ensures economic growth, but also strengthens social stability. Therefore, it is important to ensure effective cooperation between the state, the private sector and other stakeholders. In conclusion, the following proposals for the future are made:

— The state needs to develop strategies to promote competition. This includes encouraging new companies to enter the market and strengthening legislation to regulate existing monopolies. It is also necessary to support small and medium-sized businesses through subsidies and grants to improve the competitive environment.

— The development of monopolies can be prevented by constantly monitoring and analyzing the competitive situation in industrial sectors. Assessing the competitive situation and identifying problems in a timely manner through special analysis groups and market monitoring systems will help further improve state policy.

— Educating about the economic impact of competition and monopolies in business and entrepreneurship is essential to preparing future leaders. Enhancing entrepreneurial skills through educational programs and workshops helps in developing competitive strategies.

— It is important to encourage the production of new and competitive products by supporting innovation and developing entrepreneurship. To increase competitiveness, it is necessary to increase investment in innovation programs and research and development. This will help reduce the influence of monopolies and create opportunities for dynamic development in industrial sectors.

— To develop effective strategies against competition and monopolies, it is necessary to

study and adapt the experiences of other countries. By taking into account international standards and best practices, it is possible to improve the competitive environment and reduce the negative effects of monopolies.

If these proposals are implemented, significant results can be achieved in improving competition and the management of monopolies in industrial sectors. The state's policy of encouraging competition will help to diversify the market by encouraging new companies to enter the market. This will provide consumers with more choice and create competitive prices. Strengthening the legislation on the regulation of existing monopolies will increase market reliability and reduce the injustices experienced by large companies.

Secondly, the implementation of economic monitoring and analysis helps to assess the state of competition in real time. This creates an opportunity to prevent the development of monopolies and identify problems in a timely manner, and also leads to further improvement of public policy. Training future leaders with knowledge of the economic impact of competition and monopolies through education and enlightenment stimulates innovative thinking in the business sector. This helps to develop competitive strategies and further develop the economic environment.

Also, by stimulating innovation, the production of new products and services ensures dynamic development in industrial sectors. This reduces the influence of monopolies and strengthens competition. Studying and adapting international experience, introducing best practices, allows you to improve the competitive environment. As a result, the state's economic policy is effective, leading to the creation of a competitive environment, consumer protection and support for innovative development. These measures, in turn, contribute to economic stability and growth.

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