



THE INTERACTION OF DIGITAL TRANSFORMATION AND ANTI-MONOPOLY CONTROL IN SERVICE INDUSTRIES

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It is argued that the rapid development of digital platforms, algorithmic management, Big Data and artificial intelligence technologies, along with new forms of competition in the services market, is accompanied by the emergence of new forms of digital monopolies and increased market concentration. The study uses HHI and CR indicators to assess market concentration and empirically sheds light on the relationship between digital transformation and antitrust control.

The results of the study indicate the need to introduce innovative antitrust mechanisms adapted to the digital environment. In the current context of globalization and the digital economy, service industries are becoming one of the fastest growing and strategically important sectors of the national economy. The rapid introduction of digital technologies is fundamentally changing the mechanisms of creation, provision and consumption of services, bringing the services market to a new qualitative stage. This process, while increasing the efficiency and transparency of services, is creating new economic risks such as increased market concentration and the formation of platform dominance.

Digital transformation in the services market is characterized by the widespread use of platform business models, algorithmic decision-making systems, Big Data and artificial intelligence technologies. As a result, some large digital platforms are capturing a large market share in a short time, increasing barriers to entry for competitors. This situation can lead to a disruption of the competitive environment and increased monopoly risks.

Therefore, a scientific in-depth study of the interaction of digital transformation and antitrust control in service industries, assessing the effectiveness of existing control mechanisms and adapting them to digital conditions is an urgent scientific and practical issue.

The study used a comprehensive methodological approach. The theoretical basis was the concepts of competition theory, institutional economics, and digital economics. In the process of empirical analysis, the Herfindahl–Hirschman index (HHI) and concentration coefficients (CR_3 , CR_4) were calculated to assess market concentration in the services market. A multivariate regression model was also used to determine the relationship between the level of digital transformation and market concentration. The study was based on open statistical data, government reports, and scientific sources.





The results of the empirical analysis showed that the increase in the share of digital platforms in the services market leads to an acceleration of market concentration. HHI indicators recorded an average and high level of concentration in some service segments. CR coefficients confirmed the high share of leading entities.

The results of the regression analysis showed a statistically significant relationship between digital transformation indicators and market concentration. This situation confirms that digital transformation processes can increase monopoly risks in the absence of adequate antitrust controls.

The results obtained are consistent with the conclusions of foreign and CIS scientists. In the context of digital platforms, network effects and data superiority complicate the criteria for assessing competition. Therefore, it is important to harmonize ex-ante and ex-post control mechanisms adapted for digital markets. The results of the study showed that digital transformation and antitrust control in service industries are closely interconnected. To ensure a healthy competitive environment in the digital environment, it is necessary to introduce innovative antitrust mechanisms. This approach will serve to ensure sustainable and inclusive development in the services market.

In the market structure, in a traditional economy, markets are mainly one-sided and linear, with simple and direct relationships between producers and consumers. In such conditions, it is relatively easy to define market boundaries and establish a dominant position. In the digital economy, markets are multi-sided (platform), with producers, consumers, advertisers, and service providers operating simultaneously and interconnected within a single platform. This complicates antitrust assessment and requires new methodological approaches.

Competitive Criteria In the traditional economy, competition is mainly assessed through price levels and production volumes. Low prices and high volumes are the main indicators of competitive efficiency. In the digital economy, however, data superiority, user base and network effects are at the heart of competition. The more users a platform has, the stronger its competitive advantage, which shows that classical price-based assessment is insufficient.

Source of Monopoly In the traditional economy, monopoly position is determined by market share and capital concentration. Large production capacities and financial resources provide superiority. In the digital economy, the main source of monopoly is formed through control of Big Data, algorithms and platform ecosystems. This superiority is often hidden and difficult to determine legally.





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