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A CONCEPTUAL APPROACH TO ANTI-MONOPOLY CONTROL IN SERVICE INDUSTRIES ADAPTED TO THE CONDITIONS OF UZBEKISTAN

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Abstract: This article examines the issues of improving antitrust control in the service sector of the Republic of Uzbekistan under the conditions of digital transformation. The study provides a comprehensive analysis of the impact of the growing share of digital platforms and online services on market concentration processes, the formation of dominant positions, and the development of the competitive environment. Taking into account the institutional and sectoral specificities of the service industry, a conceptual approach to antitrust regulation adapted to the conditions of Uzbekistan has been developed. The research is based on empirical and econometric methods, which enabled a systematic assessment of the influence of digital transformation on competition dynamics. The findings serve as a basis for formulating practical recommendations aimed at ensuring fair competition in the digital services market and enhancing mechanisms for mitigating monopoly risks.

Key words: service sector, antitrust control, digital transformation, digital platforms, competitive environment, market concentration, monopoly risks, economic regulation.

Annotatsiya: Ushbu maqolada O'zbekiston Respublikasida xizmatlar sohasida raqamli transformatsiya sharoitida monopoliyaga qarshi nazoratni takomillashtirish masalalari ilmiy jihatdan tahlil qilinadi. Tadqiqot doirasida raqamli platformalar va onlayn xizmatlar ulushining ortishi natijasida bozor kontsentratsiyasi, ustun mavqening shakllanishi hamda raqobat muhitiga ta'sir etuvchi omillar kompleks tarzda baholanadi. Xizmatlar sohasining institutsional va funksional xususiyatlarini inobatga olgan holda, O'zbekiston sharoitiga moslashtirilgan monopoliyaga qarshi nazoratning konseptual yondashuvi ishlab chiqildi. Tadqiqot empirik va ekonometrik usullarga asoslangan bo'lib, raqamli transformatsiyaning raqobat muhitiga ta'siri tizimli ravishda baholandi. Olingan natijalar raqamli xizmatlar bozorida sog'lom raqobatni ta'minlash, monopoliyaviy xavflarni kamaytirish hamda iqtisodiy tartibga solish mexanizmlarini takomillashtirishga qaratilgan amaliy tavsiyalarni ishlab chiqishga xizmat qiladi.

Kalit so'zlar: xizmatlar sohasi, monopoliyaga qarshi nazorat, raqamli transformatsiya, raqamli platformalar, raqobat muhiti, bozor kontsentratsiyasi, monopoliyaviy xavflar, iqtisodiy tartibga solish.

Аннотация: В статье рассматриваются вопросы совершенствования антимонопольного контроля в сфере услуг Республики Узбекистан в условиях цифровой трансформации. В рамках исследования комплексно анализируется влияние роста доли цифровых платформ и онлайн-сервисов на процессы рыночной концентрации, формирование доминирующего положения и развитие конкурентной среды. С учетом институциональных и отраслевых особенностей сферы услуг разработан концептуальный подход к антимонопольному регулированию, адаптированный к условиям Узбекистана. Исследование основано на применении эмпирических и эконометрических методов, что позволило объективно оценить воздействие цифровой трансформации на конкурентные процессы. Полученные результаты служат основой для выработки практических рекомендаций, направленных на обеспечение добросовестной конкуренции на рынке цифровых услуг и совершенствование механизмов предупреждения монополизации.

Ключевые слова: сфера услуг, антимонопольный контроль, цифровая трансформация, цифровые платформы, конкурентная среда, рыночная концентрация, монопольные риски, экономическое регулирование.

INTRODUCTION

In recent years, the Republic of Uzbekistan has been consistently implementing large-scale reforms aimed at developing the service sector, introducing digital technologies, and strengthening the competitive environment. As a result, the share of digital platforms and online services has been steadily increasing in public administration, financial services, trade, transport and logistics, tourism, and communications. This process has significantly expanded access to services, enhanced efficiency, and improved service quality. At the same time, the growing role of major digital service providers highlights the importance of preventing excessive market concentration, reducing potential entry barriers, and maintaining fair competition. Under these conditions, improving the effectiveness of antitrust control and adapting it to the specific features of the digital environment becomes particularly relevant.

Issues related to digital transformation and antitrust regulation in service industries are widely addressed in foreign scientific literature. However, most existing studies focus primarily on the digital economy in general or on industrial and platform-based markets. In the context of the CIS countries and Uzbekistan, research in this area has mainly been conducted within normative-legal or descriptive frameworks. As a result, there remains a need for comprehensive and empirically grounded studies that take into account the specific characteristics of the service sector. In particular, the application of econometric models to assess the impact of digital transformation on the competitive environment and the prevention of monopoly risks represents a promising and insufficiently explored direction for further scientific research.

LITERATURE REVIEW

Katz and Shapiro (2020) provide a scientific justification for the emergence of high market concentration in the service sector under the influence of digital platforms and network effects, emphasizing the need to reconsider traditional criteria of antitrust control in such conditions. The authors demonstrate that conventional competition indicators are increasingly inadequate due to the rapid formation of dominant positions in the digital economy [1].

The OECD (2020) identifies key factors that constrain competition in digital services markets and recommends the introduction of flexible antitrust instruments aimed at regulating data-driven and platform-based dominance. The report offers an in-depth analysis of institutional characteristics specific to digital markets [2].

Crémer, de Montjoye, and Schweitzer (2021) highlight the critical role of Big Data and algorithmic governance in assessing the market power of digital platforms and scientifically substantiate the need to strengthen ex ante regulatory mechanisms. Their study serves as an important methodological foundation for competition policy within the European Union [3].

Khan (2021) examines the long-term implications of digital platform dominance for consumer welfare and argues for reinforcing a structural approach to competition policy. The author emphasizes that monopoly-related risks in digital markets tend to materialize over the long run rather than in the short term [4].

The World Bank (2022) notes that digital transformation processes in developing countries, including within the service sector, contribute to improvements in the competitive environment; however, in the absence of sufficiently robust regulatory frameworks, these processes may also lead to an increase in monopoly risks. The report underscores the importance of strengthening institutional capacity to address these challenges effectively [5].

UNCTAD (2023) demonstrates that the dominance of digital platforms undermines equal competitive conditions in the global services market and stresses the necessity of adapting national antitrust policies to the realities of the digital economy [6].

The European Commission (2023) has both theoretically and practically substantiated mechanisms for the early identification of digital “gatekeeper” platforms and for the advance regulation of their market behavior within the framework of the Digital Markets Act (DMA) [7].

The OECD (2024) further indicates that algorithmic pricing and Big Data-based dominance in digital services markets generate new challenges for competition and proposes the implementation of digital antitrust monitoring systems as a response [8].

In the national academic context, Abdullayev (2022) analyzes the stages of antitrust policy development in Uzbekistan and substantiates the need to strengthen digital control mechanisms in service industries [9]. Khudoyberdiev (2024) examines the impact of digital transformation on the competitive environment of the domestic services market based on descriptive analysis and highlights the relevance of expanding empirical and econometric assessment methods [10].

RESEARCH METHODOLOGY

This study aims to develop a conceptual framework for antitrust control in service industries that is adapted to the institutional and economic conditions of the Republic of Uzbekistan. The research examines the impact of digital transformation processes on the competitive environment and associated monopoly risks through a systematic analytical approach. The theoretical foundation of the study is based on the concepts of the digital economy and contemporary antitrust policy.

The empirical analysis assesses the state of competition using indicators of digital service penetration and market concentration, while their interrelationships are identified through regression-based methods. In addition, a comparative analysis of international regulatory practices is conducted, with selected approaches adapted to the national context of Uzbekistan. The findings obtained through logical synthesis and generalization serve as the basis for formulating an integrated conceptual approach to antitrust control in the service sector.

ANALYS AND RESULTS

Within the framework of this study, a conceptual model of digital transformation and antitrust control adapted to the conditions of the Republic of Uzbekistan was developed on the basis of international best practices. The proposed approach makes it possible to orient digital transformation in the service sector toward sustainable, inclusive, and innovation-driven development.

In particular, the formation of a healthy competitive environment is supported through the ex ante assessment of the activities of large digital platforms, the identification of algorithmic discrimination, and the creation of equal competitive conditions for small and medium-sized enterprises. As a result, a comprehensive regulatory mechanism is established that promotes economic efficiency, social equity, and long-term strategic stability in the digital services market (Table 1).

Table 1. A comparative model of approaches to evaluating antitrust policy in the digital economy¹

No.	Approach Name	Assessment Object	Key Indicators	Advantages	Limitations	Relevance for the Service Sector
1	Structural Approach	Market structure	HHI, CR4, number of users, market share	Enables rapid identification of market concentration	Limited applicability in zero-price services	Crucial for identifying platform-based concentration
2	Behavioral Approach	Firm behavior	Algorithmic pricing, self-preferencing, discrimination	Detects hidden forms of anti-competitive conduct	Lack of algorithmic transparency	Assesses fairness in digital services
3	Platform-Based Approach	Multi-sided markets	Platform centrality, API openness, lock-in effects	Explains dominance of Big Tech platforms	Measurement criteria are complex	Fundamental for platform-based services
4	Data-Driven Approach	Data dominance	Data volume, data portability, interoperability	Incorporates digital assets into competition assessment	Difficulty in valuing data	Evaluates data monopolization
5	Dynamic (Innovation-Based) Approach	Innovation processes	R&D intensity, speed of technological change	Assesses long-term competitive effects	Short-term harm may not be visible	Supports service innovation
6	Empirical–Econometric Approach	Causal relationships	Panel regression, Difference-in-Differences (DID), SEM	Provides scientifically grounded results	Data availability constraints	Measures policy effectiveness
7	Ex-ante Regulatory Approach	Preventive regulation	Obligations, transparency requirements	Prevents monopolization at early stages	May slow down innovation	Important for digital service security
8	Integrated Approach	Comprehensive assessment	Structural + behavioral + data-driven + empirical	Most comprehensive and reliable approach	Requires high institutional capacity	Optimal for national assessment models

¹ Created by author

The principal strength of the proposed set of approaches lies in their capacity to assess competition and potential monopoly situations in the services sector from multiple theoretical and practical perspectives. Structural indicators enable the rapid identification of market concentration, while behavioral and platform-based approaches make it possible to detect non-price and latent constraints on competition. Data-driven and empirical–econometric indicators provide a scientific basis for evaluating policy effectiveness by accounting for digital assets and causal relationships. The integration of these approaches forms a robust methodological foundation for comprehensive, objective, and reliable analysis of monopoly dynamics in the services sector.

At the same time, certain limitations emerge in the practical application of these approaches. In particular, in zero-price and platform-based services, traditional concentration indicators may have limited explanatory power, while the implicit nature of algorithmic behavior complicates behavioral analysis. Difficulties in accurately measuring the economic value of data, as well as gaps in high-quality statistical information, can reduce the effectiveness of empirical models. Moreover, overly rigid ex ante regulation may potentially constrain innovative activity in the services sector, highlighting the need for a balanced and flexible regulatory approach.

In this context, it is recommended to introduce an integrated national assessment model for the effective evaluation of the competitive environment and monopoly situations in the services sector. Such a model should extend beyond conventional structural indicators and combine behavioral, platform-based, data-oriented, and empirical–econometric approaches within a unified methodological framework. At the first stage, potential risk zones should be identified through an analysis of market structure and concentration levels, using indicators such as the Herfindahl–Hirschman Index (HHI), concentration ratios (CR4), and user base metrics. At the second stage, algorithmic behavior, self-preferencing practices, and data utilization patterns should be examined in order to identify hidden constraints on competition.

The development of this national assessment model should take into account the institutional capacity, technological readiness, and information security considerations of the services sector in Uzbekistan. Its implementation would contribute to ensuring fair competition in both digital and traditional service markets, facilitating the early identification of monopoly risks, and supporting informed, evidence-based decision-making. Ultimately, the proposed model would strengthen the methodological foundations of national antitrust policy and serve as a practical instrument for promoting sustainable and inclusive economic development in the services sector (Figure 1).

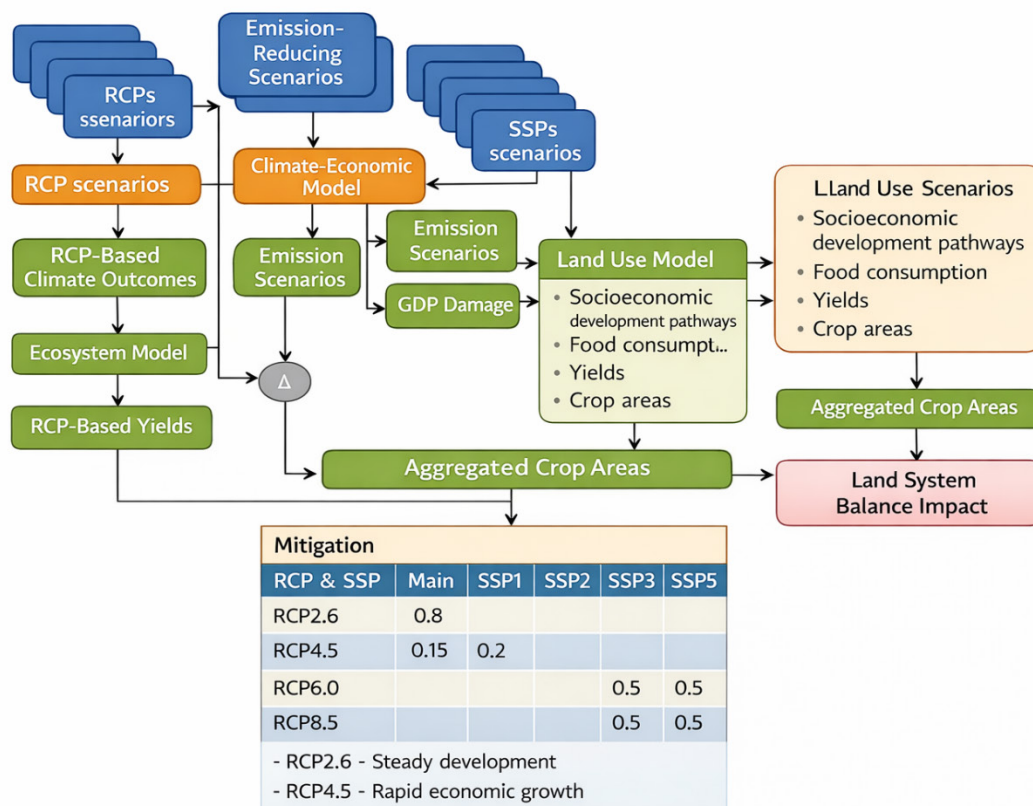


Figure 1. The chain of integrated climate–economy–land use–ecosystem models and their impact on agriculture and the carbon balance

CONCLUSION AND RECOMMENDATIONS

The results of the study demonstrate that, alongside the development of a competitive environment, digital transformation processes in the service industries of the Republic of Uzbekistan are also creating conditions for the emergence of new forms of monopoly risk. The growing role of digital platforms, data concentration, network effects, and algorithmic management reveals the limitations of traditional antitrust assessment criteria. In this regard, the study scientifically substantiates that evaluating monopoly power in the service sector exclusively through market share or price-based indicators is insufficient under the conditions of the digital economy.

In the course of the research, an integrated conceptual approach specifically adapted to service industries was developed on the basis of international best practices and a comprehensive analysis of national institutional and market conditions. This approach provides a broader analytical framework for assessing competition and monopoly risks in both digital and traditional service markets.

Based on the research findings, several practical policy-oriented recommendations are proposed. These include the introduction of a national integrated assessment model to strengthen antitrust control in service industries, the gradual application of ex ante regulatory mechanisms to the activities of large digital platforms, the promotion of equal competitive conditions in the digital services market through enhanced algorithmic transparency and data portability, and the formulation of an evidence-based antitrust policy grounded in empirical and econometric analysis. The implementation of these measures would contribute to reinforcing a healthy competitive environment in Uzbekistan's services sector, enabling the early identification of monopoly risks, and ensuring the sustainable and inclusive development of digital transformation processes.

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