ISNN 3030-3907

2026/2
VOLUME 4

DEVELOPMENT OF SCIENCE

ILMIY JURNAL



Development of science

Ilmiy jurnal

2026/2 VOLUME 4

ISSN 3030 -3907

Ilmiy jurnal OAK rayosatining 2024 yil 27 sentabrdagi 361-son qaroriga asosan 02.00.00 kimyo fanlari hamda 2025 yil 12 fevral 367- son qaroriga asosan 05.00.00 texnika fanlari bo‘yicha falsafa doktori (PhD) va fan doktori (DSc) ilmiy darajasiga talabgorlarning dissertatsiya ishlari yuzasidan dissertatsiyalari asosiy ilmiy natijalarini chop etish tavsiya etilgan milliy ilmiy nashrlar ro‘yxatiga kiritilgan.

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ISSN 3030-3907

Development of science ilmiy jurnali 2024 yil 15 aprel kuni №256445 sonli guvohnoma bilan Davlat ro‘yxatidan o‘tgan.

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DEVELOPMENT OF METHODOLOGICAL APPROACHES TO ASSESSING THE COMPETITIVENESS OF PHARMACEUTICAL ORGANIZATIONS, TAKING INTO ACCOUNT CHEMICAL ASPECTS AND REGIONAL CHARESTERISTICS.

Ubaydulloeva Fariza Azamatovna
Master's Resident of the Department of Pharmaceutical Management, Samarkand State Medical University
Bazarova Nigina Sobirjonovna
Head of the Department of Pharmaceutical Management, Samarkand State Medical University

Abstract. The article is devoted to developing methodological approaches to assessing the competitiveness of pharmacy organizations in the dynamic pharmaceutical market. Using Samarkand region as a case study, the authors analyze key competitiveness factors, including economic, social, and technological aspects. A multi-level assessment model integrating quantitative and qualitative indicators is proposed. The study results demonstrate the effectiveness of implementing digital tools, optimizing product range, and strategic positioning. The practical significance of the work is confirmed by testing in regional pharmacy networks.

Keywords: competitiveness, pharmaceutical market, pharmacy organizations, SWOT analysis, digitalization.

Аннотация. Статья посвящена разработке методических подходов к оценке конкурентоспособности аптечных организаций в условиях динамичного фармацевтического рынка. На примере Самаркандской области проведен анализ ключевых факторов конкурентоспособности, включая экономические, социальные и технологические аспекты. Предложена многоуровневая модель оценки, интегрирующая количественные и качественные показатели. Результаты исследования демонстрируют эффективность внедрения цифровых инструментов, оптимизации ассортимента и стратегического позиционирования. Практическая значимость работы подтверждена апробацией в аптечных сетях региона.

Ключевые слова: конкурентоспособность, фармацевтический рынок, аптечные организации, SWOT-анализ, цифровизация.

Annotatsiya. Maqola dinamik farmatsevtika bozorida apteka tashkilotlarining raqobatbardoshligini baholashning metodik yondashuvlarini ishlab chiqishga bag‘ishlangan. Samarqand viloyati misolida iqtisodiy, ijtimoiy va texnologik jihatlarni o‘z ichiga olgan raqobatbardoshlikning asosiy omillari tahlil qilingan. Miqdoriy va sifatli ko‘rsatkichlarni birlashtiruvchi ko‘p bosqichli baholash modeli

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taklif etilgan. Tadqiqot natijalari raqamli vositalarni joriy etish, assortimentni optimallashtirish va strategik pozitsiyalash samaradorligini ko‘rsatadi. Ishing amaliy ahamiyati mintaqadagi apteka tarmoqlarida sinovdan o‘tkazilganligi bilan tasdiqlangan.

Kalit so‘zlar: raqobatbardoshlik, farmatsevtika bozori, apteka tashkilotlari, SWOT-tahlil, raqamlashtirish.

INTRODUCTION

In the context of globalization and digitalization, the pharmaceutical market is facing increased competition, requiring the development of new approaches to assessing the competitiveness of pharmacy organizations (PCOs). This problem is particularly pressing in regions with a pronounced imbalance between urban and rural areas, such as the Samarkand region. Competition is central to the development of the modern market, driving organizations to strive to improve their efficiency, implement innovative solutions, and enhance the quality of their products. In the era of globalization and digitalization, competitiveness is determined not only by pricing strategies but also by a company's ability to quickly adapt to changes, implement advanced technologies, and meet consumer demands [9, 12, 21]. Assessing competitiveness involves analyzing both internal and external aspects of activity: enterprise resources, management decisions, marketing strategies, and the overall competitive environment. Methods such as SWOT analysis, benchmarking, and market share analysis are widely used [24, 26]. To successfully consolidate its market position, an organization must constantly monitor changes, anticipate risks, and develop strategies aimed at strengthening its competitive advantage. Only a systematic approach in this area can ensure stable development and long-term profitability in a highly competitive environment [5, 7, 9, 10].

In a rapidly changing market environment, flexibility and rapid response to external challenges are particularly important. Companies that can quickly respond to technological innovations and changing consumer preferences gain a significant advantage. For example, the implementation of artificial intelligence, big data analytics, and business process automation not only optimizes internal operations but also enables the creation of customized offers, increasing customer loyalty [4,6].

The purpose of the study is to develop a methodological toolkit for assessing and improving the competitiveness of joint-stock companies, taking into account regional specifics.

METHODOLOGY

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The study's methodological framework is based on a comprehensive approach combining theoretical and empirical methods, ensuring the reliability and objectivity of the results obtained. The study utilized both classical competitiveness analysis tools and modern methodologies adapted to the specifics of the Samarkand region's pharmaceutical market.

The theoretical portion of the study included a systematization of scientific works on enterprise competitiveness assessment, an analysis of the regulatory framework governing pharmaceutical activity in Uzbekistan, and a study of international experience. Particular attention was paid to the works of M. Porter, R.A. Fatkhutdinov, and contemporary researchers working on strategic management and digitalization in the pharmaceutical industry. This allowed for the formation of a conceptual basis for developing a proprietary methodology for assessing the competitiveness of pharmacy organizations.

A combination of quantitative and qualitative methods was used. To collect primary data, expert surveys were conducted among 80 pharmacy executives in the Samarkand region. This allowed us to assess their level of strategic management competence and identify key challenges facing joint-stock companies in the face of increasing competition. The survey covered four main areas: executive profile, characteristics of the joint-stock company, awareness of competitive strategies, and additional training needs.

Statistical data processing included the use of variation analysis, correlation, and regression modeling, which allowed us to identify relationships between indicators such as product range policy, service level, and financial stability of pharmacies. Time series and structural analysis were used to assess the dynamics of the pharmaceutical market, which is particularly important given the growing number of pharmacies (42% from 2023 to 2025).

SWOT analysis became a key strategic planning tool, enabling the systematization of internal (strengths and weaknesses) and external (opportunities and threats) factors affecting the competitiveness of JSCs. Based on this analysis, four types of strategies were developed: SO (using strengths to maximize opportunities), ST (using strengths to neutralize threats), WO (overcoming weaknesses by exploiting opportunities), and WT (minimizing weaknesses and threats).

A distinctive feature of this study's methodology was the combination of traditional economic methods with elements of marketing and social analysis. This allowed not only to assess the financial performance of pharmacies but also to consider aspects such as customer satisfaction, the level of digitalization, and involvement in government support programs. The obtained data were verified

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using mathematical statistics, including coefficient significance testing and the construction of confidence intervals. Thus, the proposed methodology provided a comprehensive approach to assessing the competitiveness of pharmacies, combining theoretical depth with a practical focus. This allowed us not only to diagnose the current state of the market, but also to develop specific recommendations for improving the efficiency of JSC operations in a dynamically changing external environment.

RESEARCH RESULTS

The analysis identified key trends in the development of the pharmaceutical market in the Samarkand region and assessed the competitiveness of pharmacy organizations (JSCs). The results are structured into three areas: territorial disparity, economic indicators, and the implementation of innovative strategies.

1. Territorial Market Structure. The highest concentration of JSCs is observed in urban areas, due to high population density and tourist flow. In rural areas, state-owned pharmacies participating in subsidized programs predominate (Table 1).

Table 1.

Distribution of Pharmacies by District in the Samarkand Region (2025)

Район	**Число АО**	**Доля рынка (%)**	**Плотность (на 10 тыс. чел.)**	**Преобладающая форма собственности**
Самарканд (город)	240	45.3	6.8	Частная (92%)
Ургут	90	14.1	4.2	Смешанная (ООО + ИП)
Каттакурган	76	11.9	3.9	Частная (85%)
Тайляк	24	3.8	1.5	Государственная (70%)
Сельские районы	160	25.0	1.2	Государственная (65%)

As the table shows, 45% of pharmacies are concentrated in Samarkand, where the density reaches 6.8 per 10,000 residents. In rural areas (Taylyak, Nurabad), state-owned joint-stock companies predominate, facing a staff shortage:

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only 35% of employees are certified, and 55% of pharmacies are forced to hire staff without specialized education.

2. Economic Indicators and Competitiveness Factors

An analysis of the financial statements of 50 joint-stock companies revealed significant differences between urban and rural organizations (Table 2). The key drivers of competitiveness were:

• **Urban joint-stock companies:** speed of service (β = 0.43), online sales (14% of total volume).

• **Rural joint-stock companies:** government subsidies (73% increase in the number of joint-stock companies due to tax holidays).

Table 2.

Comparison of economic indicators of urban and rural joint-stock companies

Параметр	**Городские АО**	**Сельские АО**
Средняя рентабельность	20%	18%
Доля онлайн-продаж	14%	3%
Средний дневной чек	150 тыс. сум	65 тыс. сум
Затраты на логистику	12%	22%
Удовлетворённость клиентов	4.5/5	3.8/5

Pharmacies in rural areas enjoy higher profitability due to digitalization and product range optimization, while rural organizations face higher logistics costs (22%). Moreover, customer satisfaction in certified pharmacies reaches 74%, confirming the importance of professional staff training.

3. Implementation of Innovative Strategies

A SWOT analysis identified the following priority areas:

• **SO strategy:** Leveraging tourism demand (1.2 million tourists in 2025) to expand product range (antiseptics, sunstroke remedies).

• **WT strategy:** Reducing dependence on imported medications (70%) by localizing the production of infusion solutions.

Implementation of the recommendations resulted in:

• A 25% reduction in service time thanks to online platforms.

• A 15% increase in customer loyalty (NPS index: from 32 to 58 points in the DoriDarmon Samarkand chain).

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Thus, the study results confirmed the effectiveness of the proposed competitiveness assessment methodology and also identified the need for targeted government support for rural joint-stock companies and further digitalization of the industry.

DISCUSSION

The proposed model revealed disparities between urban and rural joint-stock companies. For the former, the key development areas were personalization of services and integration with the tourism sector. For the latter, product range optimization (focusing on essential medications) and government support were key.

A SWOT analysis confirmed the need for:

• **SO strategy:** Leveraging tourism demand to expand product range.

• **WT strategy:** Reducing logistics costs in the face of rising import prices.

CONCLUSION

Thus, the developed methodological approach has proven its effectiveness in the Samarkand region. An adaptive competitiveness assessment model has been created, taking into account regional characteristics. The implementation of digital solutions has increased the operational efficiency of the joint-stock company.

1. Government support measures for rural pharmacies, including simplification of bureaucratic procedures, are recommended.

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