

**HOW PRICING STRATEGIES ARE FORMED IN DIGITAL MARKETING AND
ONLINE SALES AND HOW THEY AFFECT ECONOMIC EFFICIENCY**

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Abstract

This article provides a comprehensive scientific analysis of the economic essence of pricing strategies in digital marketing and electronic commerce systems, as well as the factors influencing their formation. The study examines algorithmic pricing (dynamic pricing), the use of psychological pricing models, the impact of traffic and advertising costs on pricing, commission policies of online platforms, real-time consumer behavior (customer journey), price monitoring based on big data and artificial intelligence technologies, and the level of development of logistics infrastructure as key determinants. The findings confirm that the pricing process in the digital market is multifactorial, dynamic, and adaptive in nature, and they serve as a theoretical and practical basis for developing effective pricing strategies for e-commerce entities.

Keywords

digital economy, electronic commerce, pricing strategy, algorithmic pricing, dynamic pricing, psychological pricing, big data, artificial intelligence, digital marketing, online platforms.

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Globalization and digital transformation processes are fundamentally reshaping market mechanisms within the world economy. In particular, the rapid expansion of e-commerce and digital marketing systems necessitates a reconsideration of traditional pricing models. While conventional trading systems determine prices largely based on production costs and the balance between supply and demand, pricing in digital markets is increasingly formed in real time, relying on large-scale data and algorithmic computations.

In digital environments, consumer behavior has become highly transparent, as users' search activities, purchasing patterns, cart interactions, and responses are continuously monitored through online platforms. Consequently, pricing strategies are shaped not only by economic considerations but also by technological and psychological factors. This underscores the growing relevance of conducting a comprehensive scientific analysis of pricing mechanisms within digital marketing and e-commerce systems.

Literature review

Recent studies highlight that pricing in digital markets has evolved beyond traditional cost-based and demand-driven models toward more dynamic and data-oriented approaches. Scholars emphasize the growing role of algorithmic pricing, which allows firms to adjust prices in real time based on market conditions and consumer behavior. Research also shows that Big Data and artificial intelligence significantly improve pricing accuracy and decision-making efficiency.

In addition, the literature underlines the importance of psychological pricing strategies, demonstrating how pricing formats and promotional techniques influence consumer perception and purchasing decisions. Studies on digital marketing further reveal that advertising costs, traffic acquisition, and platform-based competition directly affect pricing structures.

Moreover, researchers note that platform commissions and logistics infrastructure are critical cost-related factors shaping final prices in e-commerce. Overall, the literature agrees that

effective pricing in digital markets requires an integrated approach that combines economic principles with technological capabilities and behavioral insights.

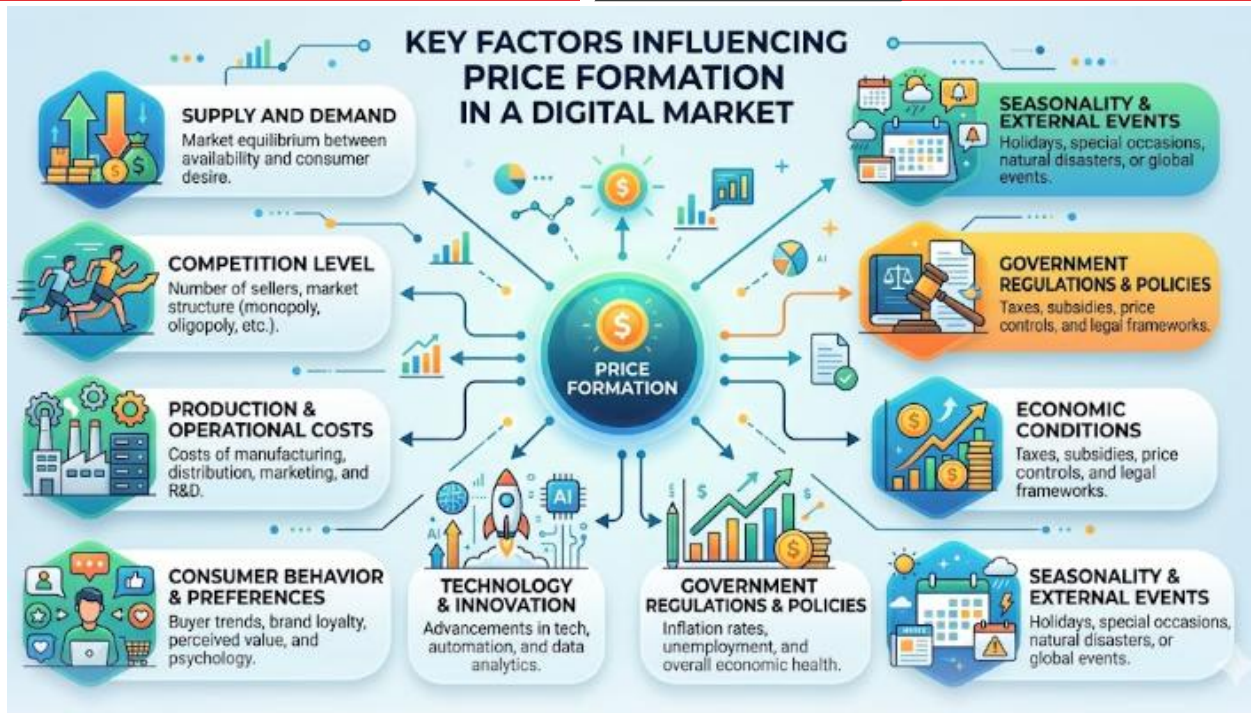
Discussion

In the Republic of Uzbekistan, the rapid development of the digital economy has created a strong foundation for the expansion of the e-commerce sector. Within the framework of the “Digital Uzbekistan – 2030” strategy, key priorities have been established, including the digitalization of economic sectors, the advancement of electronic payment systems, and the strengthening of online trade infrastructure. Regulatory and legal frameworks aimed at supporting e-commerce contribute to the increased activity of online platforms, the formation of a competitive environment, and the enhancement of price transparency.

As a result, transaction volumes on platforms such as Uzum Market, Asaxiy, Goodzone, and Book.uz have shown consistent growth. At the same time, the increasing number of factors influencing price formation in digital markets necessitates a scientifically grounded reassessment of pricing strategies.

With the continuous evolution of the digital economy, the process of determining the value of goods and services is being refined through approaches that significantly differ from traditional market mechanisms. In particular, pricing within online trading environments can no longer be viewed as a simple function of cost–benefit analysis or supply–demand equilibrium; rather, it has evolved into a complex, multi-factor system. Within this system, competitive dynamics, digital consumer behavior, data flows, and the algorithmic mechanisms of e-commerce platforms interact in an integrated manner to influence price levels.

Furthermore, the expansion of the digital ecosystem and the accelerated implementation of technological innovations have considerably broadened the range of determinants affecting pricing processes. Elements such as algorithmic pricing, psychological influence mechanisms, traffic and advertising costs, platform commissions, large-scale data (Big Data), and artificial intelligence technologies are becoming critical drivers of price formation. Therefore, a rigorous scientific examination of pricing mechanisms in digital markets, along with an in-depth exploration of these factors and their interrelationships, holds significant theoretical and practical importance.



1-picture. Key factors influencing price formation in the digital market

In the context of the digital economy, pricing represents a multidimensional and complex process shaped by the interaction of economic, technological, and behavioral factors.

Algorithmic pricing (dynamic pricing). Algorithmic pricing enables the automatic optimization of prices in response to real-time fluctuations in supply and demand. This model facilitates revenue maximization, efficient inventory management, and the strengthening of competitive positioning.

Psychological pricing. Psychological pricing influences consumers' emotional perception, thereby increasing the likelihood of purchase. Price formats such as "99,000 UZS," free delivery offers, and discount effects significantly enhance conversion rates.

Traffic and advertising costs. The cost of traffic acquired through digital marketing channels indirectly affects the final price of a product. A higher share of organic traffic contributes to price stability, whereas reliance on paid advertising intensifies pricing pressure.

Platform commissions. Commission fees imposed by e-commerce platforms generate additional costs for producers and sellers, often resulting in higher product prices.

Big Data and artificial intelligence. Big data and AI technologies enable faster and more precise price monitoring. Data-driven pricing strategies provide a significant competitive advantage.

Logistics infrastructure. Delivery speed, transportation expenses, and warehouse infrastructure directly influence pricing. In regions with well-developed logistics systems, product prices tend to be relatively lower.

The factors outlined above clearly demonstrate that price formation in digital markets is not a simple or linear process, but rather a complex, multifaceted, and dynamic system. Under digital economic conditions, pricing is no longer determined solely by production costs, profit margins, or the classical relationship between supply and demand. Instead, it is increasingly shaped by a wide range of technological, institutional, and behavioral determinants. Notably, within e-commerce environments, prices are highly dynamic, requiring the capacity for rapid adjustment in response to changing market conditions.

The level of technological infrastructure development, the algorithmic management mechanisms embedded within e-commerce platforms, consumer digital behavior, and the capacity to process large-scale data (Big Data) exert substantial influence on price formation in digital markets. For instance, algorithmic pricing systems automatically optimize prices by accounting for seasonal demand variations, competitors' pricing strategies, inventory levels, and consumers' historical purchasing behavior. While this enhances price adaptability, it simultaneously increases the complexity of pricing processes.

Moreover, psychological pricing strategies assume particular significance in digital environments. Pricing formats designed to influence consumer cognition—such as discounts, time-limited offers, and free delivery—directly shape purchasing decisions, integrating emotional dimensions into the economic essence of pricing. In addition, advertising and marketing expenditures, especially those associated with paid traffic sources (CPC, CPA, CPM), exert indirect upward pressure on final prices.

Platform commission policies and logistics systems also constitute essential components of price formation. While platform commissions elevate sellers' operational costs and affect pricing strategies, the efficiency of logistics infrastructure determines delivery costs, thereby influencing overall price levels. The application of big data analytics and artificial intelligence further enables the development of scientifically grounded pricing strategies, the anticipation of consumer demand, and the maximization of revenue.

Therefore, enterprises engaged in e-commerce must formulate pricing policies not solely on the basis of traditional economic criteria, but through an integrated analysis of technological capabilities and consumer digital behavior. The implementation of scientifically grounded and adaptive pricing strategies is a critical prerequisite for enhancing competitiveness, strengthening consumer trust, and ensuring long-term economic sustainability in digital markets.

Table 1.
Key factors influencing price formation in the digital market
(estimated impact, %)

N	Factor	Impact Level (%)	Explanation
1	Algorithmic (Dynamic) Pricing	85%	Adjusts prices in real time and maximizes revenue
2	Psychological Pricing	70%	Influences consumer decisions through emotional perception
3	Traffic and Advertising Costs	75%	Indirectly increases product costs through marketing expenses
4	Platform Commissions	65%	Raises sellers' costs, leading to higher prices
5	Big Data and AI Technologies	80%	Enables accurate and fast pricing decisions
6	Logistics Infrastructure	60%	Affects prices through delivery and transportation costs
7	Competitive Environment	78%	Forces price adjustments according to market conditions
8	Consumer Behavior	82%	Shapes demand and influences pricing dynamics

As illustrated in the table, price formation in digital markets is a multi-factor and complex system. The most influential factors are algorithmic pricing (85%), consumer behavior (82%), and Big Data and AI technologies (80%), as they play a crucial role in real-time price optimization and data-driven decision-making. Additionally, advertising costs (75%) and the

competitive environment (78%) act as significant external drivers that shape market-based pricing levels. These factors ensure that prices remain aligned with demand conditions and market competition. Relatively lower, yet still important factors include platform commissions (65%) and logistics infrastructure (60%), which primarily influence pricing through cost structures. Overall, in the context of the digital economy, pricing is evolving from a traditional static model into a dynamic, flexible, and data-driven system. This transformation requires businesses to adopt a comprehensive and scientifically grounded approach when developing pricing strategies.

The analysis demonstrates that price formation in digital markets is inherently complex, dynamic, and driven by multiple interconnected factors. Unlike traditional pricing models, which primarily rely on cost structures and supply–demand equilibrium, digital pricing is increasingly shaped by algorithmic systems, consumer behavior analytics, technological infrastructure, and data-driven decision-making tools. Key determinants such as dynamic pricing mechanisms, Big Data and AI technologies, advertising expenditures, platform commissions, and logistics efficiency collectively influence both the level and flexibility of prices. These factors enable firms to respond rapidly to market changes, optimize revenue, and enhance competitiveness, while simultaneously increasing the complexity of pricing processes.

Therefore, companies operating in digital environments must adopt adaptive and scientifically grounded pricing strategies that integrate economic, technological, and behavioral insights. Such an approach is essential for achieving sustainable competitive advantage, improving market efficiency, and ensuring long-term business performance in the digital economy.

Conclusion. The findings of the study indicate that pricing strategies in digital marketing and online commerce systems are significantly more complex and multi-factorial compared to traditional market mechanisms. Key determinants of pricing include algorithmic (dynamic) pricing, psychological approaches, advertising expenditures, platform commission structures, big data utilization, and the efficiency of logistics infrastructure.

Therefore, e-commerce entities should not rely solely on cost-based or competition-based factors when formulating pricing policies. Instead, they must conduct a comprehensive analysis of digital determinants and develop pricing strategies on a scientifically grounded basis. Such an approach contributes to achieving sustainable competitive advantage in digital markets while simultaneously safeguarding consumer interests.

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