

ANALYSIS OF COMPETITIVENESS INDICATORS IN THE UZBEKISTAN E-COMMERCE MARKET BASED ON FINANCIAL ANALYSIS

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Abstract: It aims to reveal the possibilities of using modern digital technologies in analyzing the financial activities of e-commerce platforms. It considers modern financial analysis tools used to determine the financial results of e-commerce systems, assess the effectiveness of their activities, and increase the validity of management decisions. In particular, the capabilities of artificial intelligence, Big Data, cloud technologies, and business analytics platforms in processing financial data, forecasting, and making analytical decisions were studied. Within the framework of international practice, the financial management experience of Amazon, Alibaba, eBay, and Shopify platforms was studied, and the specific features of the advanced analytical mechanisms used in them were identified. Based on the generalization of these experiences, proposals and recommendations were developed to digitize the financial analysis system of e-commerce platforms in Uzbekistan, improve the quality of analysis, and improve management efficiency.

Keywords: E-commerce, financial analysis, e-commerce platforms, international experience, artificial intelligence, Big Data, financial indicators, profitability, liquidity, digital economy, business analytics, financial management.

Introduction

Today, in the context of the rapid development of the digital economy, the e-commerce market is becoming one of the most important sectors of the country's economy. The expansion of e-commerce platforms, the increase in the number of Internet users, the development of digital payment systems, and the growing demand for online purchases by consumers are intensifying the competitive environment in this area. In this regard, when assessing the level of competitiveness of e-commerce platforms, it is not enough to analyze only market share or sales volume, but also a comprehensive assessment of their financial stability, efficiency, and level of resource utilization is required. E-commerce is

considered not only an alternative way to sell products and services, but also one of the important factors ensuring the financial stability, investment attractiveness, and competitiveness of enterprises. Therefore, improving modern methods of financial analysis on e-commerce platforms and studying advanced international experiences are relevant issues from a scientific and practical perspective.

In recent years, the global e-commerce market has been developing at an unprecedented pace. According to Statista, the global retail e-commerce volume reached 6.4 trillion US dollars in 2025, and is projected to approach 9 trillion US dollars by 2030. In addition, the number of Internet users reaching nearly 6 billion in 2025 has been one of the main factors driving the expansion of e-commerce platforms. Platforms such as Amazon, Alibaba, JD.com, Pinduoduo, Taobao, and Shopify serve millions of sellers and billions of consumers in the global market [1].

Another important trend in the development of e-commerce is the increase in the share of mobile commerce (m-commerce). According to Statista analysis, in 2025, almost 80% of visits to e-commerce platforms were made via smartphones. At the same time, the bulk of electronic payments are made through digital wallets (Digital Wallet), and by 2030 their share is expected to account for more than 60% of global electronic payments. These trends further strengthen the need for real-time financial monitoring, liquidity management, and operational cost optimization in e-commerce platforms.

The expansion of e-commerce platforms has also brought significant changes to the methodology of financial analysis. While traditional financial analysis relied mainly on accounting reports and financial ratios, modern approaches widely use Big Data, artificial intelligence (AI), machine learning (ML), business intelligence (BI), cloud technologies, and predictive analytics tools. With the help of these technologies, platforms are able to analyze millions of transactions in real time, predict customer behavior, assess credit risk, detect fraud, and increase profitability. As a result, the quality of financial decision-making is significantly improved [2].

Today, large e-commerce companies such as Amazon, Alibaba, and eBay are widely using artificial intelligence and big data technologies in financial management. They are increasing financial efficiency by forecasting product demand, managing inventories, optimizing pricing policies, reducing costs, and providing individualized customer service. In particular, predicting future cash flows and revenues using predictive analytics is an important source of information for investors. Therefore, modern financial analysis is not limited to evaluating

financial statements, but also serves to determine the strategic development prospects of the enterprise.

In Uzbekistan, the e-commerce market has been developing steadily in recent years. The state is implementing a number of reforms to develop the digital economy, support e-commerce, expand electronic payment systems, and improve logistics infrastructure. According to Statista forecasts, the Uzbek e-commerce market will maintain high growth rates in the coming years. The increase in the number of Internet users, the improvement of mobile Internet quality, and the development of online payment systems are contributing to the expansion of the domestic e-commerce market.

At the same time, there are some problems in organizing financial analysis on e-commerce platforms. In particular, the insufficient development of large-scale data processing systems, restrictions on the implementation of international financial analysis standards, the lack of real-time financial monitoring systems, and the low level of use of artificial intelligence technologies can negatively affect the financial efficiency of e-commerce entities. Therefore, an in-depth study of the experience of developed countries and their adaptation to national conditions is one of the important scientific and practical tasks [3].+

Experts from the United Nations Conference on Trade and Development (UNCTAD) have stressed the need to improve statistical bases on e-commerce and the digital economy, noting that reliable data is essential for making effective decisions on taxation, competition policy, digital trade, consumer protection, and support for small businesses. This indicates the growing scientific and practical importance of modern financial analysis methods on e-commerce platforms.

The purpose of this study is to scientifically study modern approaches to financial analysis in e-commerce platforms, analyze the best practices of developed countries, and develop scientific and practical recommendations for their application in the e-commerce system of Uzbekistan. The results of the study will serve to improve financial management in e-commerce enterprises, increase investment attractiveness, reduce financial risks, and ensure sustainable development in the digital economy.

Literature review

Financial analysis issues in electronic trading platforms have become one of the main research areas of economists in recent years as a result of the acceleration of the global economy and digital transformation processes. In particular, the issues of assessing financial stability in electronic commerce, increasing profitability, managing cash flows, reducing risks, and implementing financial

analysis systems based on artificial intelligence have been widely studied by foreign and domestic scientists. An analysis of the existing scientific literature shows that the use of modern digital analytics tools, along with traditional financial indicators, in assessing the financial performance of electronic trading platforms is becoming increasingly relevant.

Foreign scholars Efraim Turban, Judy Outland, David King, and Jae Lee, in their work *Electronic Commerce: A Managerial and Social Networks Perspective*, evaluated electronic commerce as a key element of the digital economy and justified the need for a comprehensive assessment of financial analysis, logistics costs, transaction costs, and customer lifetime value when determining the efficiency of platforms. According to the authors, financial analysis in electronic commerce should not be limited to calculating revenues and costs, but should also include user activity, conversion rates, and platform value [4].

Kenneth Laudon and Carol Traver, in their seminal work *E-commerce: Business, Technology, Society*, emphasize that the success of e-commerce platforms depends on the quality of financial management, the combination of digital technologies and innovative business models. In their study, real-time financial monitoring on e-platforms, forecasting customer behavior using artificial intelligence, and managing financial risks are considered an integral part of modern financial analysis [5].

Dave Chaffey, in his research on digital business management, substantiates that the use of modern financial indicators such as KPI (Key Performance Indicators), ROI (Return on Investment), CAC (Customer Acquisition Cost) and LTV (Lifetime Value) in e-commerce platforms increases the competitiveness of enterprises. The scientist notes that the use of Business Intelligence and Big Data technologies in making strategic decisions in e-commerce significantly improves the quality of financial analysis [6].

In their research on the economics of e-commerce, Robert J. Kauffman and Eric Walden proposed complex analytical models for evaluating e-commerce platforms in terms of economic efficiency. They believe that in addition to profit indicators, network effects, transaction costs, and information asymmetry should also be taken into account when evaluating e-commerce activities.

In their review of the literature on digital financial services, Tariq Abbasi and Hans Weigand scientifically substantiate that digital financial technologies have a significant impact on increasing the profitability, operational efficiency and market share of enterprises. The authors emphasize that most studies are focused

on the banking sector, and the issues of financial analysis on electronic trading platforms have not yet been sufficiently studied [7].+

Among Uzbek scholars, Fakhridin Isayev, studying the theoretical foundations of e-commerce taxation, notes that the development of digital commerce imposes new requirements on financial management and tax administration. The scientist justifies the need for transparency of financial reporting and the use of modern analytical methods for the effective development of e-commerce.

Munira Isokho'jayeva has proposed econometric models and artificial intelligence-based forecasting methods for e-commerce management. Her research focuses on assessing the economic efficiency of management decisions, forecasting financial indicators on e-commerce platforms, and the benefits of using AI technologies [8].

O'g'iloy Muqimova, studying the development potential of e-commerce in an innovative economy, showed that the use of robotization, artificial intelligence, and machine learning algorithms increases the financial efficiency of e-commerce platforms. The author emphasizes that the introduction of innovative technologies in e-commerce improves the quality of financial management.

Komil Urazov and Madina Khushmurodova analyzed consumer behavior in the Uzbek e-commerce market and scientifically substantiated the possibility of using Big Data technologies to forecast demand, optimize marketing strategies, and improve the financial performance of platforms. They believe that analyzing consumer preferences helps increase revenue and reduce costs [9].

Madina Abdujabborova and Nozima Zufarova also analyze the stages, main drivers and prospects of e-commerce development in Uzbekistan, emphasizing that state policy, digital infrastructure and electronic payment systems directly affect the financial stability of e-commerce platforms. They emphasize the need to introduce modern financial analysis tools in the development of e-commerce.

Literature analysis shows that foreign scholars have focused mainly on the use of artificial intelligence, Big Data, predictive analytics, and real-time financial monitoring systems in e-commerce platforms, while local scholars have studied more the legal framework of e-commerce, taxation, management mechanisms, and development trends in the national market. However, in the conditions of Uzbekistan, the issues of a comprehensive assessment of modern international approaches to financial analysis in e-commerce platforms, the integration of AI and ESG indicators into the financial analysis system, and the development of a single methodological approach to assessing the effectiveness of platforms have

not been sufficiently studied. This scientific gap determines the relevance of this study and constitutes its main scientific direction.

Research methodology

This study used systematic analysis, comparative analysis, statistical analysis and generalization methods to study modern approaches to financial analysis on electronic trading platforms. International and domestic scientific literature, as well as data from Statista, UNCTAD, World Bank, OECD and the National Statistics Committee of the Republic of Uzbekistan were analyzed. The financial indicators of electronic trading platforms were comparatively evaluated and the effectiveness of modern analytical approaches was determined. Based on the results obtained, scientific and practical conclusions and recommendations were developed to improve financial analysis on electronic trading platforms in Uzbekistan.

Analysis and results

The rapid development of e-commerce platforms is increasing the need to assess their financial performance using modern methods. In the digital economy, the financial stability of enterprises is now determined not only by revenue and profit indicators, but also by transaction volume, customer activity, conversion rate, logistics costs, the efficiency of payment systems, and management decisions made based on artificial intelligence. Therefore, financial analysis on e-commerce platforms is moving from traditional financial ratios to modern digital analytics tools.

According to Statista, the global retail e-commerce market is expected to reach \$6.4 trillion in 2025, a significant increase from 2024. It is projected to reach \$9 trillion by 2030. Today, e-commerce accounts for 23.5% of total retail sales. This highlights the need to improve financial management systems and implement real-time financial monitoring for e-commerce platforms.

Table 1

Indicators for assessing the financial competitiveness of UZEX in the Uzbek e-commerce market[10]

No.	Indicator	Content on UZEX	Calculation method	Impact on competitiveness
1	E-commerce volume	Trading volume on UZEX electronic platforms	billion soums	+
2	Growth rate of e-commerce volume	Annual change in e-commerce volume	%	+

3	Income	Total revenue of UZEX	billion soums	+
4	Revenue growth rate	Annual revenue growth	%	+
5	Net profit	UZEX's net profit for the reporting period	billion soums	+
6	Net profit margin	Net profit as a percentage of revenue	Net profit / Revenue × 100	+
7	ROA	Efficiency of using UZEX assets	Net profit / Total assets × 100	+
8	ROE	Efficiency of using UZEX private capital	Net profit / Equity × 100	+
9	Cost efficiency	Income to expenses ratio	Income / Expenses	+
10	Transaction efficiency	Financial result per transaction	Net profit / Number of transactions	+
11	Participant activity	Dynamics of participants in the UZEX electronic trading system	% or people	+
12	Dividend payout ratio	Percentage of net profit paid out as dividends	Dividend / Net profit × 100	+

The table above systematizes the main indicators that allow assessing the financial competitiveness of UZEX in the Uzbek e-commerce market. These indicators serve as a comprehensive assessment of UZEX's activities in the e-commerce market in terms of trading volume, financial results and resource efficiency. In this regard, the indicators were directly adapted to UZEX's activities, taking into account its unique exchange and e-commerce model.

First of all, the volume of electronic trading is the main indicator of UZEX's activity in the electronic trading market. The increase in this indicator from year to year indicates that the scope of use of UZEX's electronic platforms is expanding and the volume of trading transactions is increasing. Therefore, the growth of electronic trading is considered a factor that positively affects the competitiveness of UZEX.

The growth rate of e-commerce volume shows the speed of UZEX's development in the market. Assessing not only the absolute value of the sales volume, but also its growth compared to the previous period allows us to determine the dynamic position of UZEX in the e-commerce market.

The growth rate of revenue and profit reflects the ability of UZEX to convert its e-trading activities into financial results. The steady growth of revenue along with the increase in trading volume indicates that the platform is operating

financially efficiently. If trading volume is growing rapidly and revenue is growing relatively slowly, this indicates the need to separately study the monetization efficiency of trading activities.

Net profit is the main indicator that reflects the final financial result of UZEX's activities. The increase in net profit indicates that the enterprise's ability to generate income and manage expenses is improving. At the same time, the net profit margin allows us to determine how much of the income received by UZEX remains as net profit. This indicator is important in assessing the financial performance of UZEX.

ROA and ROE indicators characterize the efficiency of UZEX in using its existing assets and equity. ROA shows how much net profit assets have generated, while ROE shows the efficiency of using shareholders' equity. A high level of these indicators indicates that UZEX is using financial resources efficiently.

Cost efficiency was introduced to determine how rationally UZEX manages costs in the process of generating income. A high ratio of income to costs means that more financial results are being created per unit of cost. Therefore, the increase in this indicator is considered positive for UZEX's financial competitiveness.

Transaction efficiency allows us to assess the financial results of electronic trading activities in relation to the number of transactions. An increase in net profit per transaction indicates that the efficiency of operations on UZEX electronic platforms is increasing not only quantitatively, but also financially.

Participant activity characterizes the market coverage of the UZEX electronic trading system. An increase in the number of electronic trading participants can expand competition and the volume of transactions on the trading platform. Therefore, this indicator is used as an additional criterion in assessing the position of UZEX in the electronic commerce market.

The dividend payout ratio shows the level of distribution of net profit generated by UZEX to shareholders. This indicator allows us to assess UZEX's profit distribution policy and financial attractiveness for shareholders.

Thus, based on these indicators, the competitiveness of UZEX is assessed in three main areas: market activity, financial stability and financial efficiency. The first area is the volume of electronic trading, its growth rate and the activity of participants; the second area is revenue, net profit and dividend indicators; and the third area is ROA, ROE, net profit margin, costs and transaction efficiency.

As a result, the competitiveness of UZEX in the e-commerce market is determined not only by the size of trade volumes, but also by the degree to which this trade volume is converted into revenue, profit and capital efficiency. This approach will serve as a methodological basis for standardizing indicators and

forming a single UZEX Financial Competitiveness Index (EPFCI) at the next stage.

The financial competitiveness of UZEX can be comprehensively assessed in terms of trading activity, profitability, cost efficiency and capital efficiency. At the next stage, it is advisable to standardize the indicators and, based on their overall results, form the UZEX Financial Competitiveness Index (EPFCI) and assess the dynamics for 2020–2025. This will allow us to determine the financial position of UZEX in the e-commerce market and forecast competitiveness prospects for 2026–2027.

The competitiveness of e-commerce platforms is largely determined by their financial indicators. In particular, revenue growth rate, operating cost efficiency, profitability, cash flow stability, investment opportunities and the effectiveness of using digital infrastructure are the main factors determining the platform's position in the market. Therefore, financial analysis is an important tool for identifying the internal capabilities of e-commerce entities and assessing their competitive advantages.

The e-commerce market in Uzbekistan has developed significantly in recent years, with the number of new digital platforms, marketplaces, and online service providers increasing. As competition in the market intensifies, platforms are focusing not only on increasing sales volume, but also on improving the quality of financial management. Because platforms with high revenue performance but ineffective cost management cannot achieve long-term competitive advantage.

Table 2

Dynamics of key financial indicators of global e-commerce platforms in 2020–2028 [11]

Indicators	2020	2021	2022	2023	2024	2025	2026 (Prediction)	2027 (Forecast)	2028 (Forecast)
Global e-commerce volume (trillion US dollars)	4.28	4.93	5.29	5.82	6.09	6.40	6.82	7.29	7.81
Share of e-commerce in retail sales (%)	18.0	19.7	20.7	22.0	23.0	23.5	24.3	25.1	26.0
Number of online shoppers (billion people)	2.14	2.30	2.42	2.55	2.69	2.77	2.90	3.03	3.15

Average order value (USD)	103	111	118	123	129	134	139	145	151
Conversion rate (%)	2.8	2.9	3.1	3.2	3.3	3.4	3.5	3.6	3.8
Share of digital payments (%)	56	62	68	73	77	80	82	84	86
Percentage of platforms using AI-based financial analysis (%)	18	25	34	43	51	60	68	75	81

The table data shows that the financial development of e-commerce platforms in 2020–2028 has a steady growth trend. In particular, the global e-commerce volume is forecast to reach 7.81 trillion US dollars in 2028 from 4.28 trillion US dollars in 2020. At the same time, the share of e-commerce in retail is expected to increase from 18% to 26%, and the number of online shoppers is expected to increase from 2.14 billion to 3.15 billion people. The share of platforms using artificial intelligence-based financial analysis systems is forecast to increase from 18% in 2020 to 81% in 2028. This shows that modern financial analysis tools are significantly increasing the efficiency and competitiveness of e-commerce platforms.

Mobile technology is one of the key factors shaping financial results in e-commerce platforms. In 2025, almost 80% of visits to e-commerce sites were made via smartphones. In addition, digital wallets have become the most widely used payment method in e-payments and are projected to account for 63% of e-payments by 2030. These trends allow e-commerce platforms to manage cash flows, reduce transaction costs, and increase liquidity.

The level of digital technologies is one of the key factors shaping the competitive advantage of e-commerce platforms. The use of ERP, CRM, BI systems, Big Data and artificial intelligence technologies allows platforms to analyze data in real time, identify customer needs and make quick financial decisions.

The assessment results in the table indicate the need for a comprehensive approach to increasing the competitiveness of e-commerce platforms. Improving financial performance, widespread implementation of digital technologies, and the

formation of effective management mechanisms will ensure the stable position of platforms in the market.

When assessing the competitiveness of e-commerce platforms, financial growth indicators are analyzed first. Year-on-year growth in revenue, an increase in the number of sales transactions, and an expansion of the customer base indicate the level of demand for the platform in the market. At the same time, revenue growth should be compared with the growth in costs.

Table 3

Growth dynamics of the e-commerce market in Uzbekistan (2020–2027)
[12]

Year	E-commerce market size, billion soums	Annual growth rate, %	Number of Internet users, million people	Volume of electronic payments, trillion soums	Market development stage
2020	2,800	34.8	22.5	120	The formation stage of digital commerce
2021	4 200	50.0	26.5	165	Growing demand for online services
2022	6,500	54.8	29.5	220	Development of marketplaces
2023	9,000	38.5	31.5	285	E-commerce infrastructure expansion
2024	12,500	38.9	34.0	360	Digital payment and platform growth
2025	16,000	28.0	36.5	450	Financial technology integration
2026 (forecast)	20,500	28.1	38.5	560	Development based on AI and Big Data
2027 (forecast)	26,000	26.8	40.5	700	Sustainable digital market formation

As can be seen from the table, the e-commerce market in Uzbekistan has been experiencing a high growth trend in recent years. In 2020, the volume of the

e-commerce market conditionally amounted to 2.8 trillion soums, while by 2024 this figure will reach 12.5 trillion soums. During this period, the volume of e-commerce increased by almost 4.5 times, which is explained by the level of use of online shopping among the population and the expansion of digital payment systems.

The high market growth rates in 2021–2022 indicate the rapid development of e-commerce platforms, marketplaces, and mobile payment services. Although the growth rate has stabilized relatively in recent years, the increasing absolute value of the market size indicates that the investment attractiveness of the e-commerce sector remains.

One of the main factors influencing the growth of the e-commerce market is the increase in the number of Internet users. The expansion of the Internet audience allows the formation of new customer segments for electronic platforms. At the same time, the growth of electronic payments is an important factor ensuring the financial stability and reliability of online trading operations.

Forecast indicators for 2026–2027 indicate that the e-commerce market will continue to grow due to the widespread introduction of artificial intelligence, Big Data, automated analytics systems, and digital financial services. This means that the importance of financial analysis in assessing the competitiveness of e-commerce platforms will further increase.

Digital indicators are also important in assessing competitiveness. The financial results of e-commerce platforms are largely related to user activity, online payment volume, number of orders, customer acquisition costs, and digital marketing effectiveness. Therefore, a modern financial analysis system should include digital KPI indicators in addition to traditional financial ratios.

To increase competitiveness in the Uzbek e-commerce market, it is advisable for platforms to digitize financial analysis processes, use Big Data technologies, and introduce forecasting models based on artificial intelligence. Such an approach will allow not only to assess the current financial situation, but also to identify future development opportunities, anticipate potential risks, and make effective management decisions.

Financial analysis is an important strategic tool in assessing the level of competitiveness in the e-commerce markets of Uzbekistan. An integrated approach that combines financial indicators, digital activity indicators, and forecast analysis creates the opportunity for e-commerce platforms to ensure sustainable growth, strengthen their market position, and adapt to the international competitive environment.

The share of e-commerce in the retail system in the United States has shown a steady growth trend in recent years. The annual increase in the share of e-commerce in total retail sales is explained by the formation of online shopping habits of consumers, the widespread development of Internet and mobile technologies, and the activities of large e-commerce platforms such as Amazon, Walmart, eBay, and Shopify. The introduction of electronic payment systems, fast logistics services, and recommendation algorithms based on artificial intelligence are contributing to a significant increase in online sales. As a result, e-commerce has become an important segment of the US retail market, serving as an important factor in increasing enterprise revenues, optimizing operating costs, and improving financial efficiency. This trend is forecast to continue in the coming years, and a further increase in the share of e-commerce will become one of the main drivers of the development of the digital economy.

According to UNCTAD, the volume of business transactions conducted through e-commerce in 2024 amounted to 28 trillion US dollars. This figure is 4.4% higher than in 2023, indicating that the pace of e-commerce development is maintained. At the same time, improving statistical data on e-commerce is becoming increasingly important for making effective tax policies, digital trade and investment decisions in developing countries.

The role of artificial intelligence and big data technologies in improving the financial efficiency of e-commerce platforms is increasingly growing. With the help of modern algorithms, customer behavior is analyzed, demand is forecasted, inventory is optimized, and pricing policy is automatically managed. As a result, excess costs are reduced, profit margins are increased, and financial risks are reduced. Scientific studies conducted on Walmart and Tmall platforms have confirmed that LSTM and other artificial intelligence models increase the efficiency of financial planning by accurately forecasting sales volumes.

The e-commerce market in Uzbekistan has also been developing steadily in recent years. The reforms implemented by the state to develop the digital economy, expand electronic payment systems, and improve logistics infrastructure are contributing to the growth of domestic e-commerce. However, the level of real-time financial monitoring, artificial intelligence-based analysis, and the use of Big Data technologies in local e-commerce platforms is still insufficient compared to developed countries. Therefore, adapting international experiences to national practice remains an urgent task.

Conclusion

The results of the study showed that e-commerce platforms are one of the fastest growing segments of the digital economy, and the use of modern digital technologies, along with traditional financial analysis methods, is becoming increasingly important in assessing their financial performance. World experience has shown that the use of artificial intelligence, Big Data, Business Intelligence and predictive analytics tools in the activities of large platforms such as Amazon, Alibaba, eBay and Shopify significantly increases the efficiency of financial management.

The analysis revealed a consistent growth in global e-commerce volumes, an increasing share of e-commerce in retail sales, and an increasing number of online shoppers in 2020–2025. The development of electronic payment systems, mobile commerce, and artificial intelligence technologies is expanding the opportunities for platforms to reduce operating costs, manage financial risks, and increase profitability.

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