

PROBLEMS AND PROSPECTS OF ELECTRONIC COMMERCE DEVELOPMENT

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Abstract

This article analyzes the development process of e-commerce, its advantages, problems and future prospects. E-commerce is one of the most rapidly developing sectors of the modern economy, and its development directly affects the economic stability of countries and the competitiveness of the business environment. E-commerce offers new ways of doing business and creates opportunities for small and medium-sized businesses to enter global markets. Taking this into account, the article analyzes global and national trends in e-commerce and identifies promising directions based on the experience of developed countries. Factors hindering the development of e-commerce in Uzbekistan, in particular, the underdevelopment of the Internet infrastructure, low digital literacy of small and medium-sized businesses, and lack of diversification of payment systems, are discussed in detail.

Keywords: E-commerce, digital economy, online shopping, electronic payment systems, internet marketing, logistics, blockchain, mobile applications, fintech, cybersecurity, digital transformation, electronic contracts, cross-border trade, global market, electronic platforms, internet infrastructure, business models.

Introduction

E-commerce is today one of the fastest growing areas of the world economy. As a result of the rapid development of digital technologies, traditional trading systems are changing, and business processes are becoming more automated. In particular, the widespread availability of the internet, the development of modern payment systems and the improvement of logistics infrastructure are laying the groundwork for a further expansion of e-commerce. Today, various business entities, from large transnational companies to representatives of small and medium-sized businesses, are actively using online trading platforms. At the same time, e-commerce is also providing new opportunities for consumers, simplifying their process of purchasing products and services.

However, along with the rapid development of e-commerce, various problems also arise. First of all, issues related to information security and protection of personal data are gaining relevance. There is an increasing risk of fraud cases, cyberattacks, and illegal dissemination of information in Internet trading processes. In addition, inadequate digital infrastructure, especially low internet speed and quality in developing countries, are preventing e-commerce from gaining widespread popularity. The inadequate development of Legal Regulation, and the



lack of refinement of consumer rights protection mechanisms in online trading are also cited as major challenges in the field.

And the prospects for the development of e-commerce depend on technological innovation. Modern technologies such as artificial intelligence, blockchain, cloud technologies and large-scale data analysis can take e-commerce to a new level. In particular, a system of recommendations based on artificial intelligence provides customers with the opportunity to offer customized services. And blockchain technology provides reliability, increasing the transparency of transactions. Also, for the development of cross-border trade in e-commerce, it is important to expand international cooperation and simplify customs processes.

Although e-commerce has not yet fully developed in the conditions of Uzbekistan, significant changes in this regard have been observed in recent years. A number of regulatory legal acts are adopted by the state and measures are taken to attract entrepreneurs to digital business. At the same time, work is underway to improve the infrastructure of the internet in the country, introduce modern payment systems and increase the digital literacy of entrepreneurs. In this context, the study of problems in the development of e-commerce and the development of promising solutions is currently an urgent issue.

LITERATURE REVIEW

The development of e-commerce occupies an important place in the system of modern economic relations. Therefore, in this direction, problems related to various aspects – in particular, infrastructure, reliability, payment systems, legal environment and digital literacy – have been studied in depth by many scientists and researchers. For example, Kh.T.Abdurahmonov argues that inadequate e-commerce infrastructure and poor logistics systems are one of the main factors that prevent the large-scale development of e-commerce. In his view, “the key elements of e – commerce infrastructure are digital payment systems, wide coverage of the internet, an electronic signature system, and security guarantees. If these elements are not perfect, the reliability and popularity of electronic trading will be slow.” These opinions indicate the need to improve the technical and institutional framework of e-commerce [4].

Also, M.A.Rahimova acknowledges that the low digital literacy of e-commerce subjects and inequality in the use of Information Technology are deepening the problem. According to him, “the digital gap limits the introduction of e-commerce not only in large cities, but also in rural areas. This prevents the inclusive development of the digital economy”. In his analysis, special attention is paid to the social aspects of e-commerce [5].

Another researcher, A.X.Turgunov, argues that the weak legal framework in e-commerce and the lack of compliance with international standards reduces the level of security and reliability of e-commerce transactions. He makes the following point: “as the legal power of electronic contracts and electronic signature is not fully strengthened in the conditions of Uzbekistan, disputes are arising between e-commerce participants. This leads to a decrease in the confidence of investors and users” [6].

In their work “fundamentals of Marketing”, P.Kotler and G.Armstrong from international scholars evaluate e-commerce as an important tool of modern marketing strategy. They believe



that " e-commerce allows markets to communicate directly with consumers, monitor their behavior, and provide personalized services on that basis. This ensures an advantage in the competition". In their approach, e-commerce is analyzed in integration with marketing [7].

Several Russian scientists and researchers on the problems and prospects of the development of e-commerce have also been investigated. A.V.Baranov argues that information security is one of the most important factors in e-commerce. In his opinion,"along with modern technologies used in e-commerce systems, security measures must always be improved, otherwise there will be a risk of losing the trust of users." It focuses in particular on the issues of vulnerability of data transmission channels and the openness of electronic payment systems to fraud. As a consequence, buyers are afraid of buying goods on the internet, which reduces activity in the general market [8].

Y.V.Kryukova, on the other hand, notes that there are significant differences in the development of e-commerce by region. According to him,"the low speed of the internet in remote regions of Russia, the weakness of the delivery infrastructure and the low human resources in the use of Information Technology prevent the full-fledged development of electronic trade." He also notes that public policy should focus on modernizing regional infrastructure [9].

A.A.Kotlyarchuk, on the other hand, argues that e-commerce infrastructure is based not on centralized management, but on a model of open cooperation between market participants. In his opinion, "to achieve success in e-commerce, it is necessary for companies to direct their information systems not only to internal operations, but also to constant communication with customers." It particularly emphasizes the importance of CRM systems and mobile applications [10].

In his study, A.S.Sivchenko specifically touched on the role of the legislative framework in the development of e-commerce. In his view, "existing regulatory documents are in many cases unable to fully cover modern forms of e-commerce, causing difficulties in the legal implementation of services in the new format". He particularly emphasizes the need to eliminate existing inconsistencies in the circulation of electronic documents, the legal power of digital signatures and online contracts [11].

The above studies show that for the successful development of e – commerce, a combination of multiple factors-infrastructure, digital literacy, legal framework and marketing strategies-is necessary. Each researcher has covered different aspects of the problem, indicating the need for an integrated approach to the field.

RESEARCH METHODOLOGY

This study examined the development of e-commerce, its problems and prospects. As a research methodology, a systematic approach was used and e-commerce processes were analyzed. Scientific papers, official statistical reports, and e-commerce reports from international organizations were used to collect data.

The study harmonized qualitative and quantitative methods. Through the qualitative method, the factors affecting the development of e-commerce were studied and analyzed. On the basis of the quantitative approach, however, digital data related to the growth rates of the e-commerce market, the number of users and payment systems were analyzed. Expert opinions and the



experiences of entrepreneurs were also used to accurately identify existing problems in the industry and set promising directions.

In the course of the study, important aspects such as e-commerce infrastructure, cyber security, legislation and consumer confidence levels were studied in detail. This methodology made it possible to analyze e-commerce in more depth and identify the factors that prevent its development.

ANALYSIS AND RESULTS

The importance of e-commerce today is enormous. It is not just the sale of goods or services over the Internet, but a modern economic instrument that is changing the entire trading system. People are now able to go to the markets and shop in a matter of minutes without queuing, finding their desired product by phone or computer. This is a very convenient solution, especially for busy people, people with disabilities or those who live in remote areas. E-commerce has a number of advantages over traditional trading methods (Table 1):

Table 1 Benefits of e-commerce¹

Advantages	Note
<i>Convenience</i>	Buyers will be able to make purchases at any time, anywhere
<i>Cost reduction</i>	Online department stores cost less than traditional stores
<i>Market expansion</i>	Products and services can be offered globally
<i>Data analysis</i>	There is an opportunity to collect and analyze information about the shopping habits of buyers

In this table we can see the useful aspects of e-commerce in our daily lives. First of all, convenience is created for buyers, that is, there will be an opportunity to shop anywhere and at the time. This will save time. Through e-commerce, entrepreneurs cost less than traditional stores because they do not have a place to rent, the number of workers is less. At the same time, products can be offered at a global level, which helps to find more buyers in the market. Another of the most important aspects is the analysis of customer behavior, which makes it possible to improve the quality of services.

The development of e-commerce occupies a special place in the modern economy. At the same time, there are problems that are hindering its progress, which are associated with technological, legal, infrastructural and social factors. The table below summarizes the main problems inherent in the development of e-commerce in Uzbekistan, which are covered by their content, reasons and possible solutions methods (Table 2):

Table 2

¹ Prepared by the author

Key challenges and solutions for e-commerce development²

Problem	Content	Causes	Possible solutions
Inadequate infrastructure	Internet quality and supply system vulnerability	Limited coverage areas, small number of logistics companies	Expansion of Internet infrastructure, promotion of private logistics services
Lack of completeness of legal procedure	Slowness of laws and control mechanisms regarding online trading	Loss of relevance of the regulatory framework	Adoption of a separate law on e-commerce, introduction of international experience
Cybersecurity risks	Theft of confidential information, fraud in payment	Low digital literacy, vulnerability of security technologies	Strengthening the development and monitoring of state cyber security programs
Low user confidence	Care for online services	Fake products, improper service, lack of warranty	Creation of reliable platforms, implementation of rating systems
Restrictions on payment systems	Non-integration of all means of payment	Non-synchronicity of interbank systems, restrictions on international systems	Creation of a centralized and universal payment system, development of digital wallets
Low consumer literacy	Their difficulty in participating in online sales and payments	Lack of technical knowledge, distrust	Online shopping training, educational projects, mass explanatory work
Weakness of domestic brands	Small number of local e-commerce platforms and brands	Limited coverage areas, small number of	Expansion of Internet infrastructure

The problems presented in the table above serve as the main obstacles to the rapid development of e-commerce in Uzbekistan. Inadequate infrastructure, poor legal mechanisms, and risks associated with cybersecurity are undermining confidence in the industry. In particular, low user literacy and the inconvenience of payment systems prevent small and medium-sized business entities from actively participating in online trading. The problems presented in the table above serve as the main obstacles to the rapid development of e-commerce in Uzbekistan. Inadequate infrastructure, poor legal mechanisms, and risks associated with cybersecurity are undermining confidence in the industry. In particular, low user literacy and the inconvenience of payment systems prevent small and medium-sized business entities from actively participating in online trading. A systematic approach, public-private partnerships and innovative solutions are needed to overcome the problems. Trust and security are important factors in e-commerce.

The main problems that arise in the development of e-commerce have been observed not only in the experience of developing countries, but also in the experience of developed countries. But these states used different institutional, technological and legal approaches to solving problems. In the table below we can see the practical solutions given to e-commerce problems in the experience of foreign countries (Table 3):

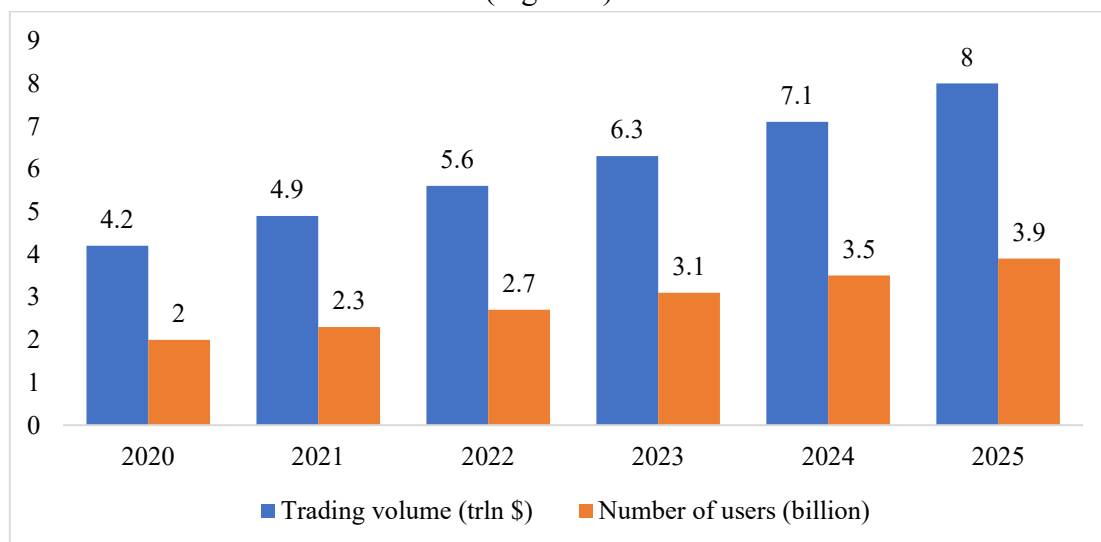
² <https://www.statista.com> – Statista, Inc. prepared by the author on the basis of the data on the portal of global statistics and market analysis belonging to the company

Table 3 Practical solutions to e-commerce problems in foreign countries 3

№	Problems	Countries	Description of solutions
1	Inadequate infrastructure	China	Delivery was optimized through the " Cainiao " logistics system; outlying areas were digitized
2	Lack of legal enforcement	Estonia	The "E-Commerce Act" and the "Digital Signatures Act" have supported e-commerce on a legal basis
3	Cybersecurity risks	USA	User data security has been enhanced through FTC and "PCI DSS" standards
4	Low user confidence	UK	Customer trust was increased through the Trustmark system and the Consumer Rights Act
5	Restrictions on payment systems	India	The UPI system was introduced, and all banks were integrated into a single platform.
6	Low digital literacy	Brazil	The "Internet para Todos" program provided the population with digital skills
7	Weakness of domestic brands	South Korea	Through the "K-Startup Grand Challenge", startups were given the opportunity to invest and export

As can be seen from this table, foreign countries have used integrated approaches to solving problems found in e-commerce. For example, while China solved the problem by developing logistics, Estonia emphasized improving legislation. The United States and the United Kingdom have paid special attention to cybersecurity and user confidence. While India has optimized payment systems, Brazil has attracted the general public by increasing digital literacy. These experiences provide an important basis for Uzbekistan in establishing strategic directions.

In recent years, e-commerce has been growing rapidly. Factors such as the expansion of the internet infrastructure, the improvement of online payment systems and the pandemic played an important role in this. The figure below shows the growth in global e-commerce volume and number of users between 2020 and 2025 (Figure 1):

**Figure 1. Global e-commerce volume and user numbers, 2020-2025 outlook⁴**

3 <https://www.salehoo.com> -prepared by the author on the basis of platform data on e-commerce and dropshipping, owned by SaleHoo Group Limited

4 <https://growthdevil.com> – GrowthDevil Media kompaniyasiga tegishli dropshipping va elektron tijorat bo'yicha

As can be seen from this picture, global e-commerce is maintaining a steady growth rate in 2020-2025. The volume of sales is increasing from \$ 4.2 trillion to \$ 8 trillion, while the number of users is growing from 2 billion to 3.9 billion. These indicators indicate an increase in demand for e-commerce.

Today, several countries are leading in the world in the field of e-commerce. Their experience can be an example for other countries. For example, China has made great strides in this regard. Alibaba and JD.com it has acquired not only domestic but also international markets through platforms such as. Small Chinese entrepreneurs are making a profit by trading online even in rural areas. In the US, however, Amazon remains the main driving force behind e-commerce. Through it, thousands of small business owners are offering their products to millions of customers. In Europe, countries such as Germany, the United Kingdom have developed e-commerce legally and technologically. In these countries, logistics, online payments and customer rights are strongly protected. This increased customer confidence and brought stability to the system. We can see the leading states in e-commerce below the state of ng (Figure 2):

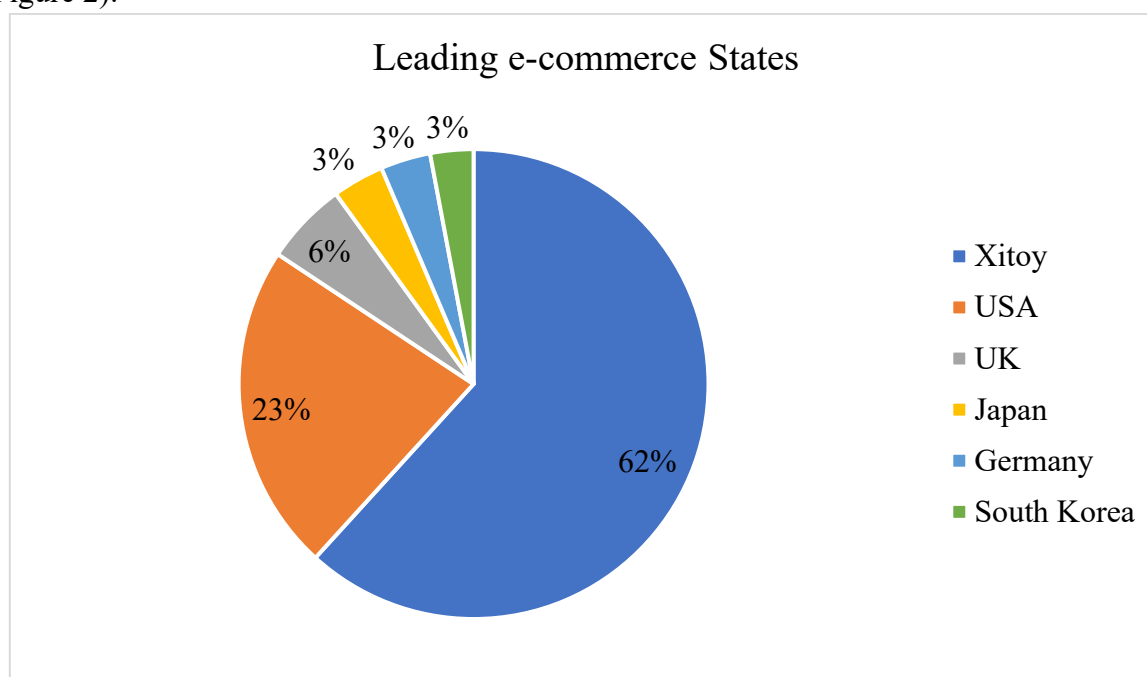


Figure 2. Leading countries in e-commerce⁵

As can be seen from this picture, in global e – commerce, China is the absolute leader-with a share of 52%. It is the country's home market digital services, payment systems (Alipay, WeChat Pay) and e-commerce giants (Alibaba, JD.com) plays a central role. The US is second with 19% and companies like Amazon, eBay are the main leaders.s can be seen from this picture, in global e – commerce, China is the absolute leader-with a share of 52%. It is the

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⁵ <https://www.euromonitor.com> – Euromonitor International Ltd. kompaniyasiga tegishli global bozor tadqiqotlari va tahlil platformasidagi ma'lumotlar asosida muallif tomonidan tayyorlandi

country's home market digital services, payment systems (Alipay, WeChat Pay) and e-commerce giants (Alibaba, JD.com) plays a central role. The US is second with 19% and companies like Amazon, eBay are the main leaders. While the UK, Japan, Germany and South Korea have a relatively small share, it remains in a strong position due to its technological infrastructure and high internet coverage. Competition in e-commerce is increasing.

Many factors are contributing to the development of e-commerce, and these factors are gaining their foothold in practical life. First of all, as a result of the deep penetration of modern technologies into our lives, most people have learned to actively use the Internet. Especially the widespread availability of smartphones, cheap and fast mobile Internet services have provided great opportunities along the way. People now prefer to buy products from home rather than go to markets. any factors are contributing to the development of e-commerce, and these factors are gaining their foothold in practical life. First of all, as a result of the deep penetration of modern technologies into our lives, most people have learned to actively use the Internet. Especially the widespread availability of smartphones, cheap and fast mobile Internet services have provided great opportunities along the way. People now prefer to buy products from home rather than go to markets. Because time is saved, choice options are expanded, and prices are easy to compare.

Secondly, the needs that arose during the pandemic made e-commerce more intensive. Online ordering of many services, including food, clothing, and Electronics, has become commonplace. Also, the development of payment systems – that is, bank cards, online banking, electronic wallets – has simplified and made the purchase process safer. Today, these systems are becoming more and more popular in Uzbekistan.

Another practical reason is the expansion of logistics services. Delivery of products to the door is a great convenience for buyers. At the same time, the interest of young entrepreneurs in e-commerce, the promotion of their products through social networks, is also serving the expansion of this industry. Due to these factors, e-commerce is gaining momentum day by day.

CONCLUSION

In conclusion, e-commerce has become an integral part of the modern economy, the development of which provides great opportunities for entrepreneurs and consumers. The rapid development of this industry is directly related to innovative technologies, the expansion of internet services and the improvement of digital payment systems. At the same time, the problems encountered in e-commerce prevent this process from developing more efficiently. Factors such as insufficient development of Internet infrastructure, cybersecurity issues, legal regulatory gaps, and consumer rights protection are affecting the sustainable growth of e-commerce.

For the development of e-commerce, it is necessary to pay attention to several important areas. First of all, it is important to further expand the internet infrastructure and provide high-quality internet services to all residents. Increasing access to the internet, especially in remote areas, will increase the number of new entrepreneurs entering e-commerce. At the same time, improving the quality of mobile applications and websites, creating user-friendly and fast services increases the efficiency of e-commerce.



The second important factor is the issue of cyber security. Currently, problems such as online trading fraud, theft of personal data and financial losses are considered relevant. To solve these problems, it is important to strengthen cooperation between the public and private sectors, introduce modern data protection technologies, and train consumers to comply with cybersecurity rules.

The third proposal also highlights the improvement of logistics and delivery services for the development of e-commerce. Fast and reliable delivery services, along with increasing customer confidence, cause e-commerce to become more popular. Therefore, it is necessary to cooperate with large logistics companies, develop local delivery services and introduce modern warehouse systems.

In the future, e-commerce is expected to further develop with the help of artificial intelligence, blockchain technologies and automated systems. Therefore, entrepreneurs should widely introduce digital technologies into their business processes. In particular, the use of personalized marketing strategies, the analysis of customer needs, and the offer of suitable products and services increase efficiency.

In general, the future success of e-commerce is largely due to improvements in infrastructure, cyber security, legal regulation and logistics. At the same time, confidence building between entrepreneurs and consumers is also an important factor. Further development of this sector can be achieved by applying innovative approaches, introducing advanced technologies and forming an e-commerce ecosystem.

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