

## E-COMMERCE IN AZERBAIJAN: KEY INDICATORS AND PROSPECTS

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### Abstract

*The article examines the rapid growth of e-commerce within the context of Azerbaijan's ongoing digital transformation. It explores the influence of global digitalization, driven by advancements in internet technologies, mobile devices, and artificial intelligence, on the economic and social landscape of Azerbaijan. The research emphasizes how important legal frameworks have played a crucial role in enabling the growth of e-commerce in the country. Through an analysis of current developments, including the COVID-19 pandemic's effects on consumer behavior, the article provides a comprehensive overview of the existing and probable future states of e-commerce in Azerbaijan. The results highlight how crucial it is to keep funding ICT infrastructure and fostering international cooperation in order to sustain and enhance the growth of Azerbaijan's digital economy.*

**Keywords:** *E-commerce, Digitalization, ICT infrastructure, Azerbaijan, Digital economy, COVID-19 impact.*

### I. Introduction

The process of global digitalization, which began several decades ago, continues to develop actively, significantly impacting various aspects of the global economy. This process encompasses a wide range of changes affecting education, healthcare, government administration, commerce (business), and other spheres of public life. The emergence and development of digital technologies such as the internet, mobile devices, cloud computing, big data, and artificial intelligence have fundamentally changed the ways people interact, businesses operate, and governmental institutions function. The internet, for example, has become the primary means of communication and information exchange, providing access to knowledge and resources worldwide. One of the most notable phenomena during this process has been the strengthening of e-commerce. The global e-commerce market has shown steady growth over the past few years and is expected to continue growing, indicating an ongoing transformation of consumer preferences towards online shopping. As a result, traditional retail faces several challenges, including high rental costs, limited assortment, and the need to maintain substantial inventories. In contrast, e-commerce allows for significant reductions in operational costs and expanded geographical reach.

Azerbaijan has not been an exception in the ongoing process of digitalization. The country is undergoing changes as digital technologies are being integrated into all spheres of life, with e-commerce being one of the areas where digitalization has had a noticeable impact. However, in the academic literature, the correlation between the development of information and communication technologies (ICT) and the strengthening of e-commerce positions in Azerbaijan remains insufficiently studied. This article aims to fill this gap in scholarly research. To achieve this goal, the article employs various scientific methods, including the dogmatic (formal-legal) method, which allows for the analysis of existing legal norms and their impact; the comparative-legal method, which helps to trace the evolution of legal regulation; statistical analysis, and others.

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## II. Digitalization in Azerbaijan and legal framework

Like many other countries, Azerbaijan has not stayed on the sidelines of the global digitalization process and has actively engaged in this process. Since the early 2000s, significant legal reforms and technical preparations have been carried out to adapt the country to the digital era [1, p. 141-149]. As a major step, laws have been adopted to ensure the use of information technologies and to establish the necessary infrastructure for the development of digital services. The implementation of electronic government and the development of internet services have allowed state bodies to establish significant communication with citizens. Technical modernization in sectors such as education, healthcare, and finance, along with economic growth, has also contributed to increased efficiency and transparency. The commercial sector has not remained outside this digitalization process, and all necessary measures have been taken to develop electronic commerce and ensure the required factors.

The legal measures implemented in this regard include the Law of the Republic of Azerbaijan “On electronic signature and electronic document” adopted on 09.03.2004 [8]. This law has played an important role in the digitalization process by regulating the use of electronic signatures and electronic documents in the territory of the Republic of Azerbaijan. This law defines the legal power of electronic documents and electronic signatures and ensures their security and legal force, thus laying the foundation for the development of electronic commerce and digital services. The law defines the conditions for the use of electronic signatures, stipulates the requirements for their certification, and regulates the activities of relevant state bodies, administrative organizations, and other entities engaged in this activity. This law has greatly simplified and accelerated administrative and commercial processes, reduced paperwork, and increased trust in electronic services. The adoption of this law has contributed to the creation of modern information infrastructure in Azerbaijan and the improvement of relations between state bodies, businesses, and citizens through the development of digital economy.

In the context of the digitalization process and as we mentioned above, the transition of most enterprises to the internet has resulted in the adjustment of the state's economic policy and the implementation of significant legal measures to regulate these processes. Among these measures is the Law of the Republic of Azerbaijan “On electronic commerce” adopted on 10.05.2005 [7]. This law has played an important role in the legal regulation of electronic commerce in the country. Article 1 of this law defines the basic concepts of electronic commerce:

1) *Electronic commerce* - activities carried out using information systems for the purchase and sale of goods, provision of services, and performance of works (including through the Internet network), such as electronic books, music, audio-video materials, graphic images, virtual games, software downloads, placement of advertisements, and other similar works and services;

2) *Participants in electronic commerce* - legal and physical persons who participate in electronic commerce, including sellers (suppliers), buyers (customers), and electronic document circulation intermediaries;

3) *Seller (supplier)* - a participant in electronic commerce who sells goods (provides services, performs works);

4) *Buyer (customer)* - a participant in electronic commerce who buys goods (orders services, orders works);

5) *Electronic document circulation intermediary* - a physical or legal person who provides electronic document circulation services between the sender and the recipient of the electronic document.

This Law, which regulates e-commerce rules in the territory of the Republic of Azerbaijan and in trade relations with other countries, consists of 5 chapters and 14 articles in total. However, since its adoption, the Law has been regularly amended due to the continuous development of information technologies, payment services, and communication systems, resulting in new opportunities and tools. The latest such amendments were adopted on December 16, 2016, and came into force on January 1, 2017. The various directions of economic and commercial activities covered by the "Law on Electronic Commerce" of the Republic of Azerbaijan include the following [4, p. 42]:

- Any operation for the provision of goods (commodities) or services;
- Distribution agreements;
- Entrepreneurship and agency relations;
- Factoring;
- Leasing;
- Construction of industrial facilities;
- Providing consulting services;
- Engineering;
- Acquisition/sale of licenses;
- Investment;
- Financing;
- Banking services;
- Insurance;
- Operation and concession agreements;
- Joint ventures or other forms of industrial and commercial cooperation.

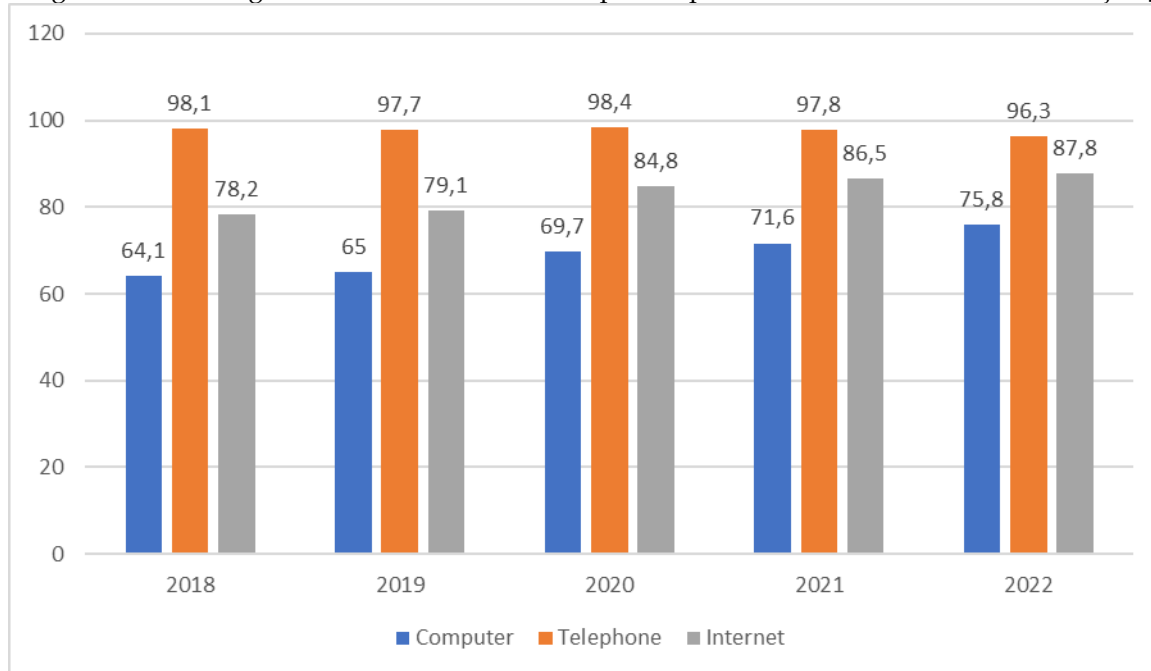
### *III. Current indicators of e-commerce development*

In addition to the legal measures taken, the provision of necessary technical equipment and tools for the development and expansion of e-commerce for enterprises engaging in various forms of economic activity has also been an important part of state policy. Detailed information about this can be found in the statistical compendium prepared and presented by the State Statistics Committee of the Republic of Azerbaijan. According to the compendium titled "Provision and Use of ICT in Enterprises," the number of enterprises with internet access and the number of computers connected to the internet have increased approximately 17 times, and the number of employees using the internet has increased approximately 15 times over the past 10 years (2013-2023) [11]. According to the compendium titled "Provision and Use of Computers in Enterprises," the number of computers available in enterprises has increased approximately 13 times, the number of enterprises using computers has increased approximately 14 times, and the number of employees using computers has increased approximately 12 times [12]. On December 2, 2008, "SilverKey Azerbaijan" company established the first online payment system called "GoldenPay" in Azerbaijan [13, p. 41].

As seen from Diagram 1, significant development in the field of information and communication technologies (ICT) has been observed in Azerbaijan during the years 2018-2022. According to the State Statistics Committee, the percentage of computer users increased from 64.1% in 2018 to 75.8% in 2022. This increase indicates that the use

of digital devices in daily life, especially in work, education, and entertainment, has risen. The number of mobile phone users has remained consistently high, decreasing slightly from 98.1% in 2018 to 96.3% in 2022. Mobile phones continue to be the primary means of communication and internet access for most citizens. Internet access increased from 78.2% in 2018 to 87.8% in 2022, indicating improvements in internet infrastructure and accessibility, making internet access easier for the wider population. Despite this overall development, a difference in access to the digital world between urban and rural areas remains. High-speed internet and modern digital devices are more widely available in urban areas due to better infrastructure, education levels, and economic opportunities. In rural areas, there are challenges such as limited access to quality internet services, limited resources for purchasing and maintaining digital devices, and digital illiteracy. Efforts to bridge this gap include expanding broadband internet coverage, increasing digital literacy, and developing ICT infrastructure in remote areas, undertaken by the government and representatives of the private sector. These measures aim to ensure equal access to technology and its benefits, including improved education, healthcare, and economic opportunities.

Diagram 1. Percentage of access to and use of computers, phones, and the internet in Azerbaijan [9]



Additionally, to determine the success of the digitalization process, the **ICT Development Index (IDI)** created by the **International Telecommunication Union (ITU)** is used to assess the level of ICT development in various countries. This index consists of three main components: 1) ICT access; 2) ICT use; 3) ICT skills. The first component, ICT access, covers infrastructure and availability of access opportunities such as fixed telephone lines, mobile subscribers, and internet access. The second component, ICT use, evaluates the actual use of technologies, including the internet and mobile devices. The third component, skills, measures the population's education level and digital literacy, which are crucial for the effective use of technologies. Starting from 2020, ITU has begun developing a new index related to the **Sustainable Development Goals (SDGs)**. This new index includes updated indicators and calculation methods to provide a more comprehensive assessment of digital development and its impact on

society. This transition aims to better understand how digital technologies contribute to sustainable development and improve the quality of life. For the year 2023, Azerbaijan's IDI score was determined to be 79.0 [2]. This index indicates steady progress in ICT development in Azerbaijan, although there is still potential for improvement in increasing digital literacy and expanding internet access in remote areas.

As observed, since the beginning of the 2010s, a positive trend in business digitalization has been observed in Azerbaijan. This process is accompanied by the provision of necessary technical equipment for the development of e-commerce and access to the global digital economy. Modern technologies and infrastructure enable entrepreneurs and enterprises to use digital tools to connect the domestic market with foreign markets, integrate into international markets, and increase competitiveness. To stimulate this process, Azerbaijan has also hosted international events dedicated to the future of e-commerce and its development trends. For example, on September 24-25, the "Baku E-Trade Forum" was held for the first time in Azerbaijan, initiated by the Ministry of Transport, Communications, and High Technologies of the Republic of Azerbaijan (renamed Ministry of Digital Development and Transport in 2021) with the support of the European Union and the United Nations Conference on Trade and Development. This forum brought together representatives of small and medium-sized enterprises, startups providing services in e-commerce, electronic payments, and logistics, as well as representatives of state bodies and international agencies involved in the development of various aspects of e-commerce [3].

As seen in Diagram 2, the volume of e-commerce turnover in Azerbaijan increased approximately 29 times between 2012-2017, clearly demonstrating the high efficiency of active implementation of ICT support and new technologies with state support. In 2012, 46 physical and legal entities engaged in economic activities used electronic payment tools for trade, with firms and companies accounting for 799% of sales in consumer goods electronic commerce, 201% by citizens, and 933% of e-commerce turnover constituted by non-food products [16].

Diagram 2. Growth of e-commerce turnover in Azerbaijan in million AZN (Qasimzade, 2021, p. 43)

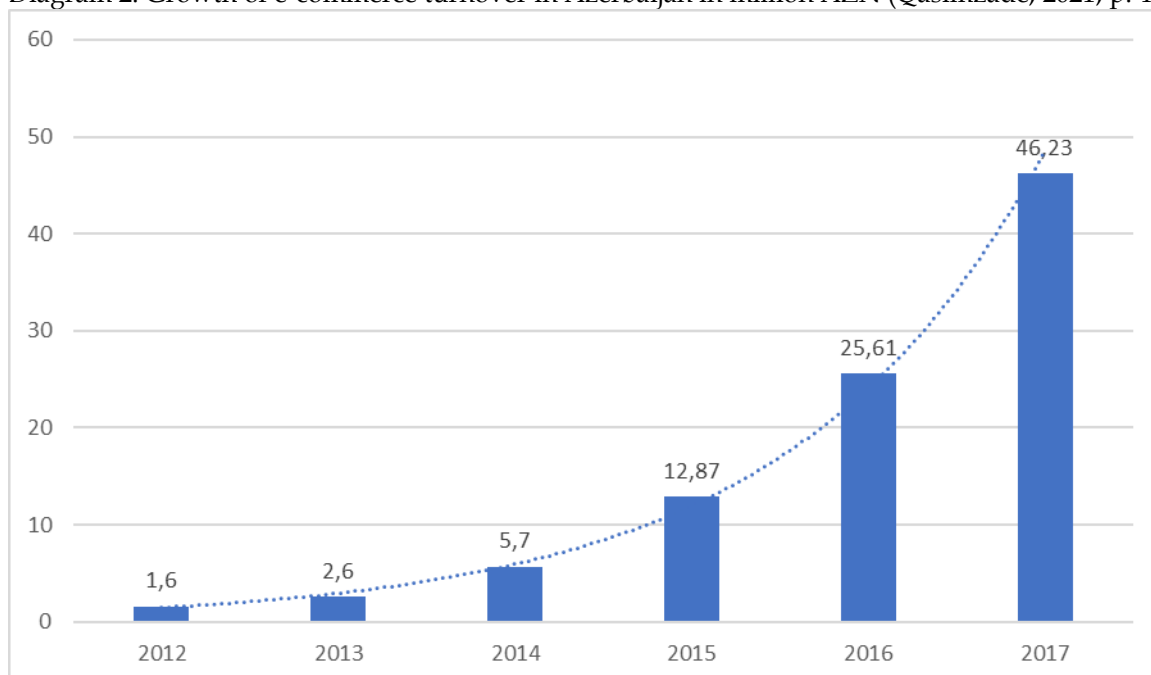
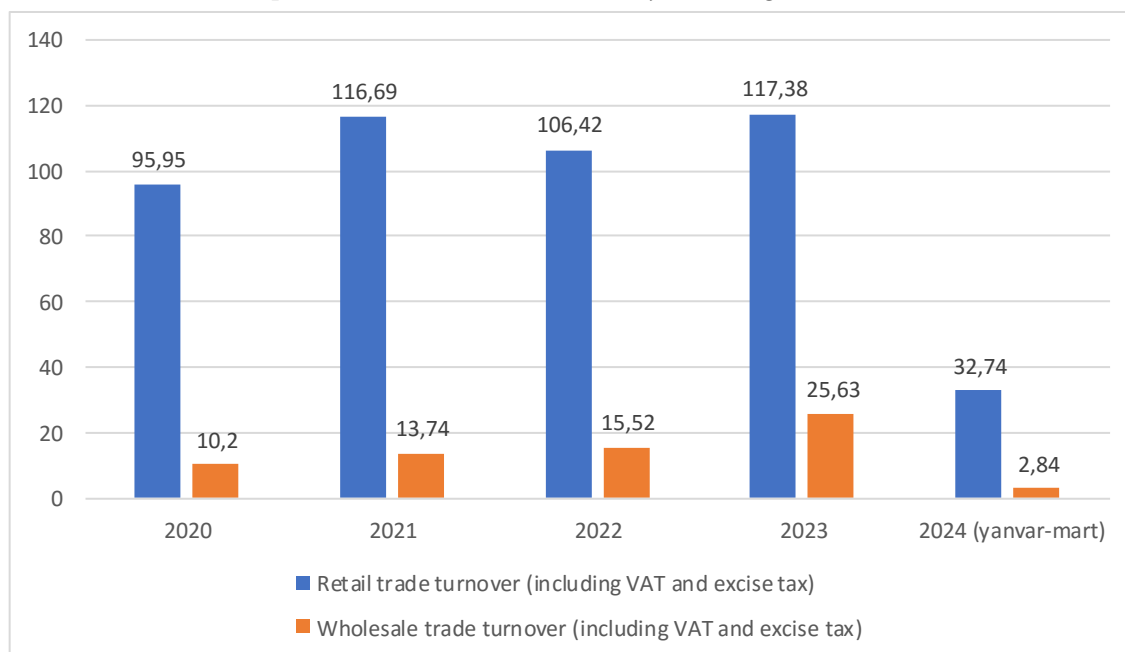


Diagram 2 shows the main indicators of trade enterprises in e-commerce for the years 2020-2024 (for legal entities), and it can be seen that the share of e-commerce turnover increased during the period coinciding with the COVID-19 pandemic [6, p. 123-128]. During the pandemic, customers increasingly preferred online shopping due to safety concerns. The pace of online buying and selling increased, and some researchers recommended investing in new technologies to attract more customers to both traditional and online stores [15, p. 47-68]. After the lockdown and social isolation were implemented, the activity of internet users and the number of active and new users of online and mobile applications increased significantly. This growth was already observed in March 2020. A similar trend can be seen in online-mobile applications. Applications offering food delivery services and other services began to form a large part of the new and active audience of online-mobile applications. The increase in demand from online consumers shows that e-commerce was already expanding rapidly before the COVID-19 pandemic. However, with the pandemic, more consumers turned away from traditional commerce and towards online shopping. The global consumer survey, *Pulse Survey*, indicates that people initially leaned towards online shopping due to quarantine restrictions and later because of the ability to work from home. Among the additional trends of this shift to "digital consumption" are online shoppers looking for better deals and choosing healthier alternatives [5].

Diagram 3. Main indicators of trade enterprises in e-commerce in Azerbaijan (for legal entities) [10].



According to the information presented by the *United Nations Conference on Trade and Development (UNCTAD)*, the e-commerce sector showed a significant increase in the share of total retail sales during the pandemic. The "B2C E-commerce Index" presented by UNCTAD in 2020 ranks countries based on their ability to support online shopping, corresponding to their economic power. In this index, Azerbaijan ranked 65th out of 152 countries and was shown as a "transition economy" in the table displaying the highest-rated economies in each region. The table also presented the share of the population using the internet (81%), the share of the population over 15 with personal accounts (29%), the index indicator for secure internet servers (49), and the index indicator for postal reliability (82) [14, p. 7-15].

### Conclusion

The process of digitalization in Azerbaijan is advancing quickly and changing many facets of the social and economic landscape. Still, in spite of this overall rapid progress, Azerbaijan's e-commerce development is not keeping up with the rate of other countries. The COVID-19 epidemic acted as a catalyst, speeding up the shift to digital and greatly increasing e-commerce. Even so, there are still issues facing the industry that prevent it from reaching its full potential. To encourage and maintain the growth of e-commerce, fundamental changes and tailored public policy incentives are still crucially needed. By tackling these issues, Azerbaijan can make sure that its e-commerce industry strengthens and contributes more significantly to the country's economy while also maximizing the advantages of digitalization.

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