

THE EVOLUTION AND OPTIMIZATION OF E-COMMERCE IN THE REPUBLIC OF MOLDOVA: TRENDS, CHALLENGES, AND OPPORTUNITIES

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Abstract: E-commerce is one of the most important and dynamic economic sectors of the modern world. In the context of rapidly evolving technology and changing consumer behavior, the importance of e-commerce is becoming increasingly evident. E-commerce opens up the possibility for any business, regardless of its size, to reach customers worldwide. This means that small businesses can compete in the same global markets as industry giants without being limited by geographical barriers. This creates significant opportunities for growth, expansion and market diversification.

Key words: ICT Development Index, internet, e-commerce, e-commerce sales, e-commerce payment.

Abstract. Comerțul electronic este unul dintre cele mai importante și dinamice sectoare economice ale lumii moderne. În contextul evoluției rapide a tehnologiei și al schimbărilor comportamentale ale consumatorilor, importanța comerțului electronic devine din ce în ce mai evidentă. Comerțul electronic deschide posibilitatea ca orice afacere, indiferent de mărimea acesteia, să ajungă la clienți din întreaga lume. Aceasta înseamnă că micile întreprinderi pot concura pe aceleași piețe globale ca și giganții din industrie, fără a fi limitate de bariere geografice. Acest lucru creează oportunități semnificative de creștere, extindere și diversificare a piețelor.

Cuvinte cheie: Indicele de Dezvoltare TIC, internet, comerț electronic, vânzări online, plata e-commerce.

E-commerce is a key factor for the competitiveness of companies in the digital age, facilitating access to new market segments, accelerating the pace of business development, providing greater flexibility in commercial policies and reducing costs for sourcing, sales and advertising. It also simplifies operating and management procedures.

In 2023, B2C e-commerce revenues in Europe grew modestly by 3%, from €864 billion in 2022 to €887 billion. However, developments varied considerably between regions. Western Europe, Europe's largest e-commerce market, saw a slight decline of 1% to €596 billion. In contrast, Southern and Eastern Europe saw strong growth of 14% and 15% respectively, reaching €166 billion and €17 billion. Central Europe held up with 8% growth, totalling €79 billion, while Northern Europe suffered a 5% decline to €56 billion. From this perspective, Eastern Europe, which includes the Republic of Moldova, has the smallest share of total revenues.

Analyzing the e-commerce usage rate, we observe that the highest values are recorded in the Netherlands (92%) and Norway (91%). In contrast, the penetration rate of online shoppers remains below 50% in many countries, suggesting significant growth potential. The Republic of Moldova has a penetration rate of only 26%, followed by Montenegro (29%), Albania (33%), Bosnia and Herzegovina (35%), North Macedonia (44%), and Bulgaria (45%). For comparison, Ukraine has a penetration rate of approximately 60%.

In the Republic of Moldova, the ICT sector plays an essential role in driving transformations in society and the business environment, maintaining steady growth. The country falls within the category of those with moderate ICT Development Index (IDI) values, with the ICT sector continuing to develop steadily in recent years.

According to the international ICT development rankings, the Republic of Moldova holds the 78.3 position out of 174 countries, marking an increase of 1.2 points compared to the previous assessment.

Although progress has been made in some areas, Moldova lags behind world leaders in the IT sector. The IDI shows that Moldova ranks below the European average and below its neighbor Romania (9.3).

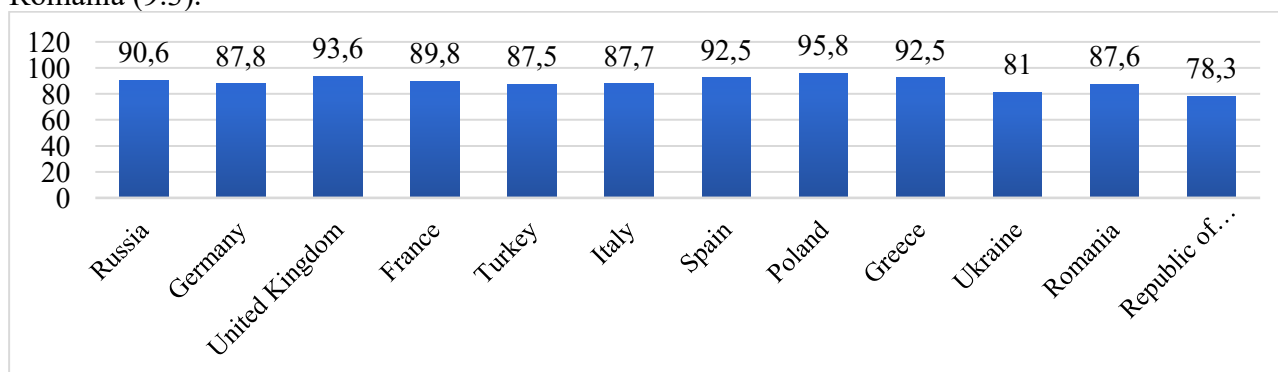


Figure 1. ICT Development Index in 2022

Source: elaborated by the author based on the source [4].

The examination of the data in figure 1 regarding the ICT Development Index allows for the identification of technological progress levels and the accessibility of information and communication technology (ICT) infrastructure in different countries. Poland has the highest ICT development index with 95.8, followed by the United Kingdom (93.6) and Spain (92.5). Russia (90.6), France (89.8), Germany (87.8), Italy (87.7), Turkey (87.5), Romania (87.6) and Greece (86.5) have values close to each other, suggesting a moderate but steady development in the ICT area. The Republic of Moldova (78.3) has the lowest values, which could reflect challenges in ICT adoption and development, either due to underdeveloped infrastructure or for economic or socio-political reasons.

The values in most of the countries analyzed are above 80, indicating a general concern for ICT development in the region, but there are variations that could be related to economic priorities and the level of investment in the ICT sector. These values provide insight into the state of ICT development in each country and can be useful to identify opportunities for improvement in countries with lower scores.

The electronic communications sector makes a significant contribution to Moldova's GDP, accounting for about 2.1% of GDP based on total revenues realized in 2023. Revenues generated by this sector amounted to RON 6,286.5 million in 2023, marking an increase of 2.6% compared to the previous year.

Analyzing the data in figure 2, we note that in 2023, revenues from the provision of electronic communications networks and services increased by 185.1 million lei, representing a 3.0% increase compared to the previous year, highlighting the continued positive trend in revenues on the electronic communications market.

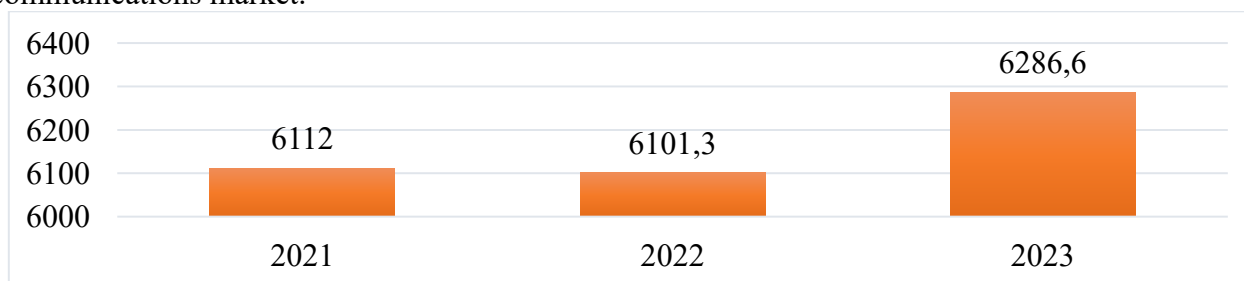


Figure 2. Total revenues obtained from the provision of electronic communications networks and services in the Republic of Moldova, million lei

Source: elaborated by the author based on the source [1].

The total volume of revenues from electronic communication services in 2023 was mainly driven by revenues generated from mobile telephony services. During the year, the consumption of services in this segment continued to grow, registering an increase of 5.3% (equivalent to RON 157.7 million), and its share in total revenues increased by 1.3 percentage points.

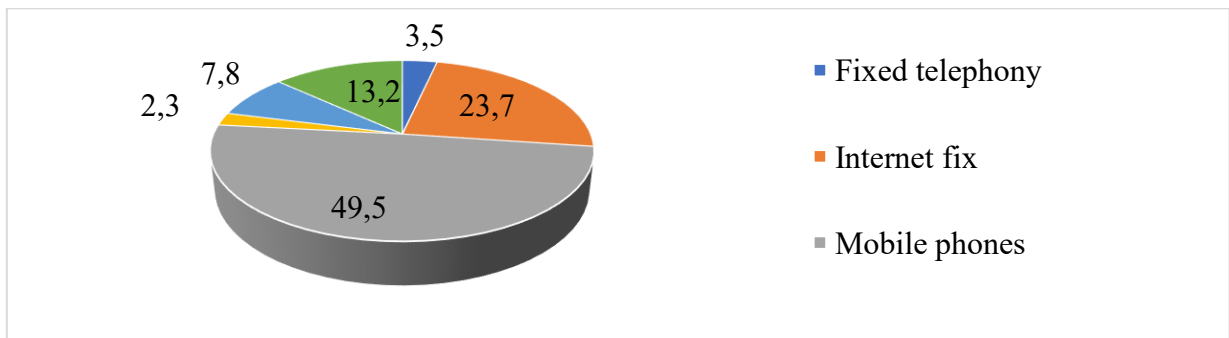


Figure 3. Structure of total revenues by type of service provided in the Republic of Moldova in 2023, %

Source: elaborated by the author based on the source [1].

Revenues from fixed telephony services continued to decline, decreasing by approximately 17.6%, which represents a decrease of RON 47.6 million compared to the previous year, and their share in total revenues decreased by 0.9 percentage points. In contrast, revenues from fixed Internet access services and retransmission of audiovisual programs increased by 1.4% (equivalent to RON 21.1 million) and 16.0% (RON 67.9 million), respectively. Analyzing the revenues from the dedicated mobile internet services market (via modems, cards, and USB) in 2023 compared to 2022, we observe a decrease of 12.5%, equivalent to a drop of 20.4 million lei.

Based on data from the National Bureau of Statistics of the Republic of Moldova, it is evident that the national electronic communications market is approaching maturity. The penetration rates for mobile telephony and mobile internet are 159.6% and 115.5% per 100 inhabitants, respectively, and the penetration rate for fixed internet maintains its upward trend.

In 2023, the electronic communications market continued to grow in the internet segment, while the voice and SMS messaging segment saw declines. Of over 4 million active mobile SIM cards, almost 2.9 million (72.5%) also used mobile internet. Voice traffic on mobile networks fell by 3.5% compared to 2022, and the average number of minutes spoken per SIM per user per month fell by 3.3%.

Encouragingly, the electronic communications market has continued to grow in key segments, indicating a high degree of adaptability and resilience to economic change.

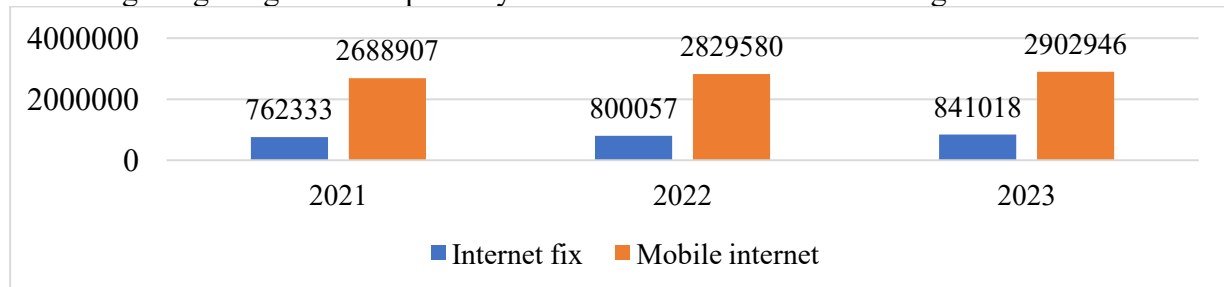


Figure 4. Evolution of the number of subscribers with access to internet services in the Republic of Moldova, no. subscribers

Source: elaborated by the author based on the source [3].

Examining the trend of internet service subscribers, it is noted that in 2023, in the Republic of Moldova, the number of subscribers to fixed internet services (for individuals and businesses) increased by approximately 41,000, equivalent to a 5.1% rise compared to the previous year. During the same period, the number of SIM cards with mobile internet access via smartphones increased by 86.5 thousand (an increase of 3.2%), while the number of cards for dedicated mobile internet decreased by 13.2 thousand, equivalent to a decrease of 10.4%. Compared to the end of 2022, the penetration rate for fixed internet access services per 100 households increased by 4.7 percentage points, while the rate for dedicated mobile internet services decreased by 0.4 percentage points.

E-commerce in the Republic of Moldova accounts for only 4% of domestic trade, compared with the world average of 19%. The annual volume per capita is around €155, almost four times less than in Romania.

Analyzing the e-commerce market in the Republic of Moldova, we observe that it has an estimated value of approximately 320 million euros annually. Meanwhile, in Romania, the e-commerce market reaches around 6.5 billion euros, with estimates suggesting significant growth, reaching 7 billion euros by the end of the year.

Currently, 1.8 million Moldovans are active online, and just over half a million of them shop online. The share of online shoppers is growing, creating opportunities for a rapid development of this sector.

The annual volume of online purchases per capita is €155, four times lower than in Romania, but the gap is likely to narrow in the coming years. In the last 12 months, Romania recorded total sales of €71.6bn, of which €4.3bn was online.

Examining the data presented in figure 5, we find that online sales of physical products and commercial services in the Republic of Moldova in 2023 reached approximately 358.6 million euros (excluding VAT), representing a 15.2% increase compared to the previous year.

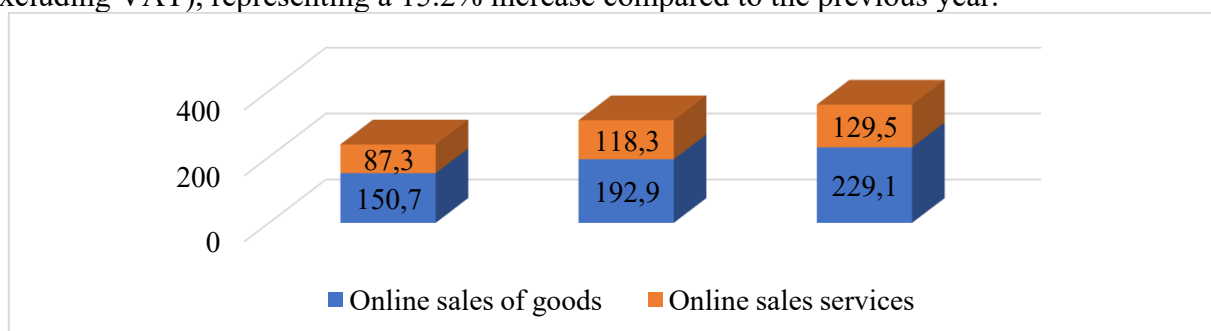


Figure 5. Evolution of online sales of tangible products and commercial services in the Republic of Moldova, EUR million, excluding VAT

Source: elaborated by the author based on the source [1].

Analyzing the structure of online sales of tangible products and commercial services in 2023, we observe that the share of tangible products in online sales in the Republic of Moldova has shown an upward trend, accounting for 63.9%, while the distribution of goods and commercial services within the e-commerce market structure has remained relatively stable in recent years. In december 2023, there were between 950 and 1,000 e-commerce platforms active in Moldova, half of which sell tangible products and the other half offer commercial services.

The share of online sales accounts for only 5.6% of the total sales of goods and commercial services in the Republic of Moldova, suggesting that they have not yet had a major impact on the retail market. The concentration of consumers in the two main cities - Chisinau and Balti, where physical shops are easily accessible, reduces the motivation for online purchases. At the same time, the low share of digital natives in the population structure is another obstacle for the development of e-commerce.

Moldova's rural population, representing 56.4% of the 18-65 demographic, is largely absent from the online market. Digital retailers report that rural residents generate a negligible percentage of sales revenue, partly explained by the lack of delivery services or the high cost of delivery to more remote locations.

In urban areas, Moldovan consumers comfortably use online payment for utility and telecommunication bills. About 230,000 of them (32.7%) used the internet to pay energy, water and gas bills in the second half of 2023. However, the number of those purchasing tangible products from local or international online platforms is lower, with around 100,000 consumers purchasing food and fashion items.

In the Republic of Moldova, the banking system has been a pioneer in the use of IT networks for business intermediation, as e-commerce transactions usually require online payments. These payments are facilitated by electronic payment systems managed by banking structures. The banking system in Moldova is characterized by an advanced degree of economic development compared to other sectors, with a significant contribution in the e-commerce sphere.

Banks offer customers the possibility to manage their accounts and make payments online, but in order to take advantage of these services, users must be customers of the banking institution. Initially, accounts were managed through "Client-Bank" programs, which have gradually evolved into the modern "Internet Banking" and "Telebanking" solutions available today on banks' online platforms. Access to these services only requires an internet connection.

Foreign-issued bank cards were used for spending approximately 87.2 million euros on e-commerce platforms in the Republic of Moldova, accounting for 24.3% of total online retail sales. In 2023, an estimated 195,500 foreign tourists visited Moldova, making online payments for flights and accommodation. In addition, many Moldovans living abroad purchase their airline tickets online using cards issued in their countries of residence. Business visitors and expats also contribute to the volume of e-commerce sales in Moldova. These groups are relatively small but active online.

This trend is also reflected in the banking data, where only 14% of active bank cards, representing just over 270,000 cardholders, were used for online transactions on Moldovan or foreign platforms in Q1 2024. Online payments in the Republic of Moldova are primarily directed towards utility services, transport ticket purchases, and other services, while for physical goods, the majority of transactions are made through cash on delivery or card payments.

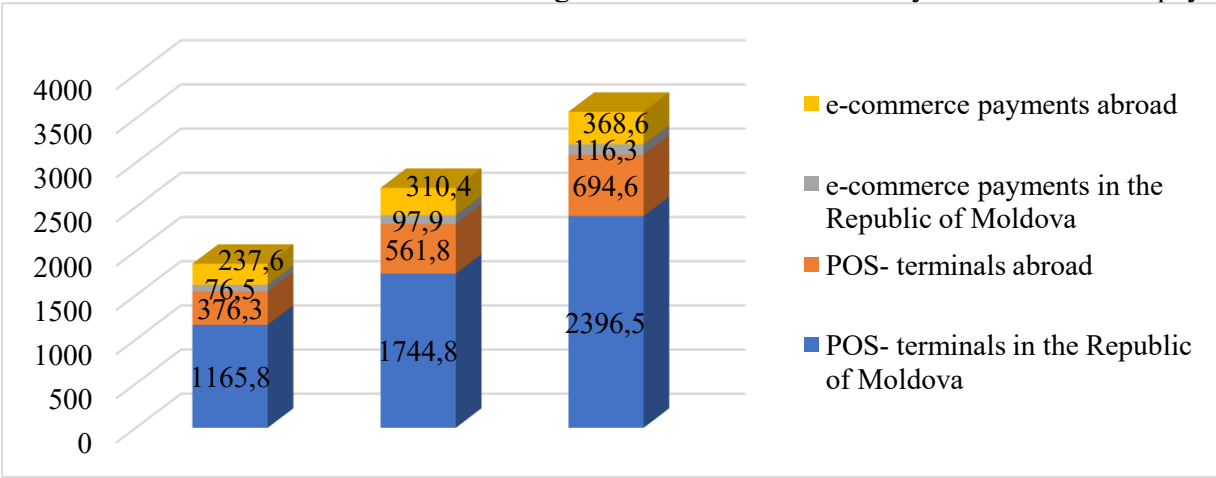


Figure 6. Structure of non-cash payments with bank cards by cardholders of bank cards issued by banks in the Republic of Moldova, EUR million, excluding VAT

Source: elaborated by the author based on the source [1].

Examining the data in figure 6, we observe that in the Republic of Moldova, consumers make more payments through POS terminals within the country than those abroad. However, in the e-commerce sector, this trend is reversed. In 2023, the total value of payments made for products and services on e-commerce platforms abroad was about three times higher than card payments for online purchases in Moldova.

In terms of the demographic profile of online shoppers, women represent 52% and men 48%. Consumers from Chisinau make up 57% of all online shoppers, and 67% of them are Romanian speakers. Also, 77% of online shoppers in Moldova have an average or above average income (more than €250 per family member).

Generation Z, aged 18-26, dominates the online market, with an e-commerce adoption rate of 57%, compared to just 42% for those aged 43-58 by the end of 2023.

In terms of frequency, around 47% of online shoppers, equivalent to 154,000 people, make purchases monthly or more frequently. However, the majority of Moldovan consumers prefer to shop offline if the product is available in physical format, including 39% of young Generation Z.

Analyzing the average value of online transactions in the Republic of Moldova, we find that in the first quarter of 2024, it amounted to 32.3 euros (excluding VAT), with considerable variability depending on the type of transaction. Shops selling mobile and electronics had higher average values for both payment methods: cash on delivery and online.

The average monthly per capita spending on online purchases was €91.4 in 2023, of which €58.4 was for tangible goods. Around 327,000 Moldovans, representing just over 20% of the adult population, support this spending, while the rest of the population remains largely outside the Moldovan e-commerce market.

The Republic of Moldova has also seen an increase in the number of online shops, most of which are focused on selling ICT products such as computers, mobile phones and household appliances. However, the number of niche online shops remains limited, with sites such as farmacie-online.md, medicamente.md, maximum.md, bomba.md and elefant.md. Although the Internet is growing, there is still a reluctance towards e-commerce among citizens due to a lack of trust in card processing systems and fears about the security of personal data. Comparing the number of online stores, it is noted that there are about 1,700 online stores in the Republic of Moldova, while in Romania this number reaches approximately 60,000 online stores.

Online commerce is growing three times faster than offline, reaching a share of 15% compared to 5% for traditional commerce. However, this growth rate is slower than during the COVID-19 pandemic, when it reached 50% per year in 2020, gradually falling to 25% in 2021, 20% in 2022 and 15% in 2023.

Recent trends in online commerce include placing orders and making payments from mobile devices, as well as including additional products and services for free to increase customer satisfaction.

In conclusion, e-commerce is not only transforming the way we do business, it is also having a considerable impact on the global economy, contributing to economic efficiency, innovation and improving the consumer experience. Its importance continues to grow as technology advances and consumers adapt rapidly to new ways of shopping.

In the coming years, the evolution of the e-commerce market in the Republic of Moldova will experience expansion driven by the increase in consumers' disposable incomes and the initiatives of online retail companies to diversify and expand their product offerings. Improving the online shopping experience for customers and offering more competitive prices than traditional retail will also play a key role. The implementation of the MIA instant payment system at the beginning of 2024 has the potential to reduce e-commerce transaction costs in the Republic of Moldova, especially for B2C payments, and is expected to significantly contribute to the market's development.

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