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THE ROLE OF ELECTRONIC COMMERCE IN THE DEVELOPMENT OF ENTREPRENEURSHIP THROUGH STATISTICAL ANALYSIS

Rina ȚURCAN¹, PhD., Assoc. prof.

ORCID: 0000-0002-6001-2025

Iuliu ȚURCAN², PhD., Assoc. prof.

ORCID: 0000-0002-2930-6682

¹ Technical University of Moldova, bl. Stefan cel Mare, 168, Chisinau, Republic of Moldova

² Technical University of Moldova, bl. Stefan cel Mare, 168, Chisinau, Republic of Moldova

Abstract. The development of global entrepreneurship nowadays cannot even be imagined without the use of digital technologies, namely e-commerce techniques. E-commerce has managed to radically change the business strategies of enterprises and their development vision, giving them the opportunity to expand globally, easily conquering markets around the world. On the one hand, e-commerce has managed to infiltrate companies around the world, but on the other hand, the degree of use of these digital tools differs considerably in the regional profile, being influenced by multiple influencing factors. In this context, this article aims to examine the theoretical approaches of various scholars regarding electronic commerce and its role in the development of entrepreneurial activity, based on the analysis of statistical data that aims to argue the theoretical assertions. In order to argue the development trends of e-commerce, in this paper there are presented the analysis of the statistical data related to the dynamics of retail e-commerce sales worldwide and the dynamics of e-commerce as percentage of total retail sales worldwide, also examining their spatial distribution. As a particular case, this article examines the dynamics of the e-commerce revenue in the Republic of Moldova by category of goods, which argues that even in developing countries e-commerce is enjoying a fierce development. An important role in this article belongs to the examination of the main benefits of online shopping worldwide argued from the point of view of consumers and from the point of view of economic agents.

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Introduction

Nowadays e-commerce is approached as an absolutely common tool that is widely used all over the world. E-commerce involves the use of digital technologies in conducting purchase and sale transactions. Considering that we currently live in the digital age and digital technologies are developing at very high rates, e-commerce involves the using of an increasing number of digital tools.

Regarding the geographical area of use of e-commerce, it has managed to cover the entire globe, but the level of using of digital technologies and respectively the development of e-commerce differs considerably from region to region and from one country to another. In this way, those countries that managed to be among the first to integrate into global e-commerce networks, today have become the leaders in this field.

The development of e-commerce throughout the entire period of evolution was uneven. If at the beginning of its evolution e-commerce started a slow development, then over time the pace of its development and expansion became increasingly higher.

Literature review

Electronic commerce involves the use of various digital tools and technologies that allow businesses to effect sales-purchase transactions without the physical presence of the participants in this process.

E-commerce is a relatively young tool that has been around for three decades, but it has managed to make major changes in the field of entrepreneurship. Nowadays it is not problematic to organize the production of different goods or to launch the provision of different services. The biggest problem is to find and develop the market, so that the business is scalable and can be expanded over time, covering more and more niche markets.

The development of electronic commerce has changed the way of doing business all over the world. Nowadays, more and more companies and more and more customers are resorting to the use of e-commerce, using e-commerce as a simplification solution that saves a lot of time and expenses related to physical travel [B, p.35].

In the electronic commerce evolution, the several events that left a strong impact are mentioned in the next figure (figure 1).

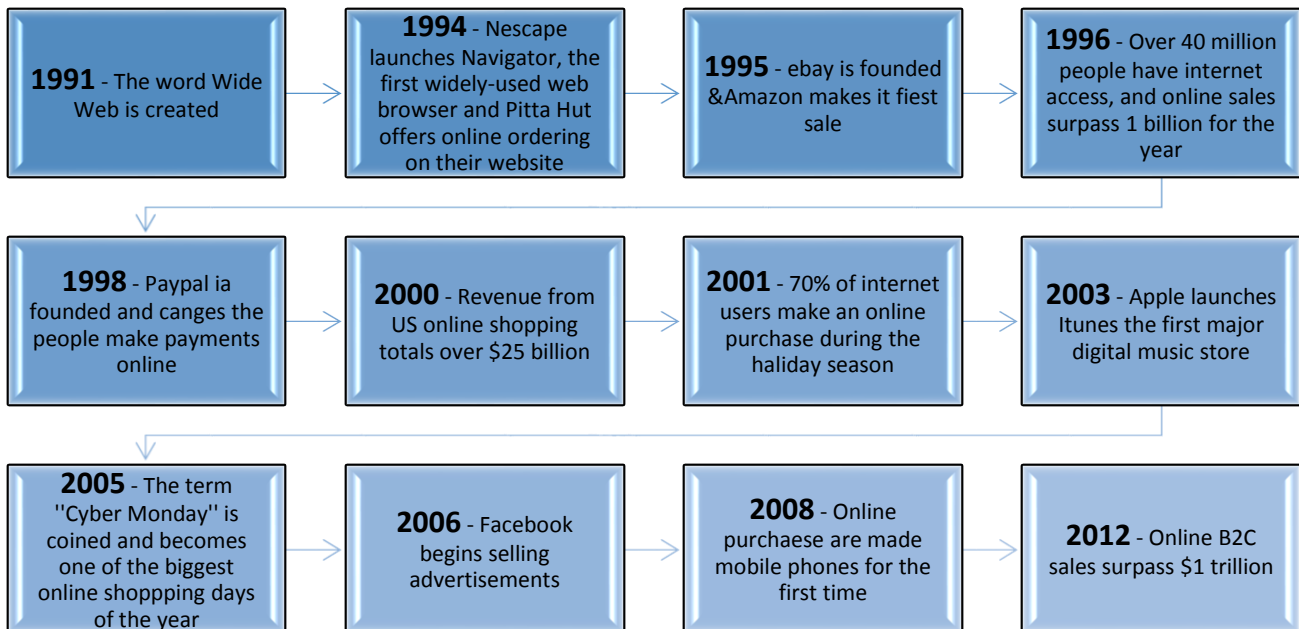


Figure 1. Evolution of e-commerce

Source: [3, p.35]

In the last ten years, the pace of development of electronic commerce has become much higher, so that multiple tools have appeared for its realization.

One of the weak points of e-commerce remains the issue of security, so some companies face this problem and finally consider e-business as "imperative" for business success [2]. In this case, once again, there are highlighted the needs to identify the right tools and develop online trading strategies adapted to the specifics of the company's activity, thus reducing the risk of failure and increasing security.

Several scholars believe that one of the main disadvantages of e-commerce is ensuring consumer's privacy. Keeping in mind that personal information is collected and recorded digitally, it creates a profile of consumers with sensitive information such as address, email, bank details that could later be used by some criminals or other people with bad intentions [1, 5].

On the other hand, this disadvantage that affects the consumer is an asset for companies that carry out electronic commerce, collecting multiple information about their consumers. That information constitutes a valuable tool that allows to segment the market, identify the target audience and study its behavior, developing the most effective marketing strategies.

E-commerce has become a priority for many corporations, through this tool entrepreneurs see a way to overcome many obstacles of traditional distribution channels [3].

Online commerce in B2C format has a key impact on changing the existing actors and structures in traditional markets, ensuring a series of essential following changes in the market:

- Well-known manufacturers whose brands are well established on the market and the consumer perceives them as a very good product are at an advantage, even if their prices are higher than the little-known brands in the same market.
- For sellers, the efforts and costs of entering online markets are much lower compared to entering an offline market.
- Many actors who were only intermediaries in the chain between producers and distributors are disappearing. That is, producers give up working with wholesalers, but try to go directly to the consumer through e-commerce.
- Many brick-and-mortar stores are closed, as they become unprofitable and, in many cases, do not even reach the break-even point.

With all the advantages and disadvantages that are specific to electronic commerce, it has registered a rapid evolution, essentially breaking the traditional organization of savings, which further confirms the analyzed statistical data.

Statistical analysis of e-commerce results

Figure 2 shows the dynamics of retail e-commerce sales worldwide in the period 2014–2021, with forecast from 2022 to 2026.

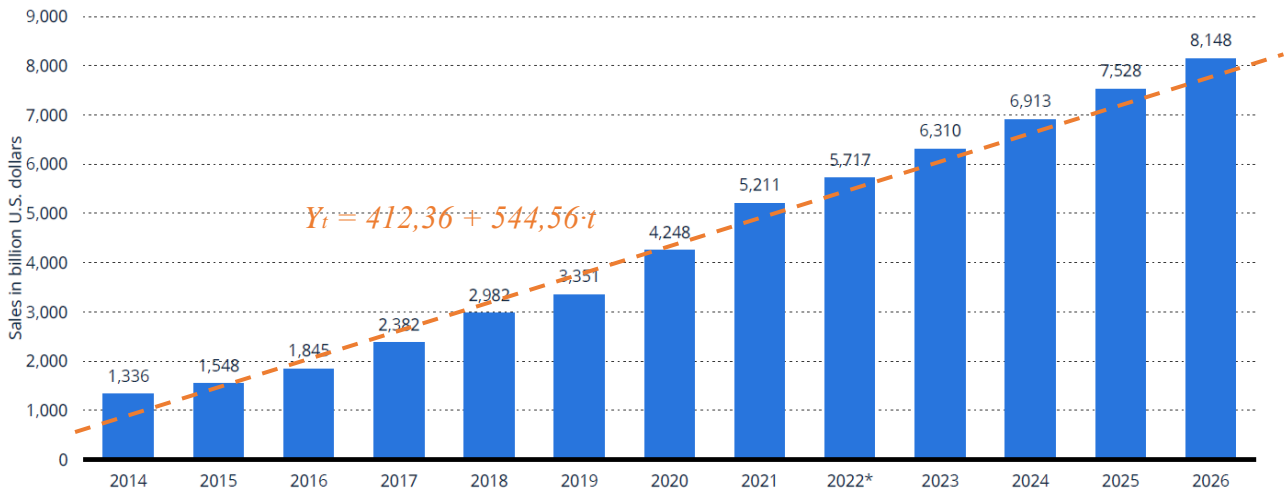


Figure 2. The dynamics of retail e-commerce sales worldwide in the period 2014–2021, with forecast from 2022 to 2026, billion U.S.

Source: <https://www.statista.com>

The phenomenon of globalization has led to a continuous increase in online transactions, so that the dynamics of retail e-commerce sales worldwide register a continuous increase. As the data show, the retail e-commerce sales worldwide increased in the period 2014-2021 from 1336 to 5717 billion USD, i.e. 4.27 times. As the trend line equation confirms, annually the volume of the retail e-commerce sales increases by about 412.36 billion USD. The forecasts made for the next 5 years show that in 2026 the retail e-commerce sales would reach a volume of 8148 billion USD, which is 56.4% more than the level of 2021.

In order to argue the importance of online trade, there is proposed the dynamics of e-commerce as percentage of total retail sales worldwide (figure 3).

The dynamics of e-commerce as percentage of total retail sales worldwide confirms the gradual increase in the share of e-commerce in the total volume of retail sales worldwide. If in 2015 e-commerce as percentage of total retail sales worldwide constituted 7.4%, then in 2021 this indicator reached a level of 18.8%. If we analyze the annual rates of growth of the share of e-commerce, the highest rate of growth in the chain is observed in 2020, this situation being influenced to the greatest extent by the COVID-19 pandemic, which has often restricted travel possibilities, imposing home isolation of people.

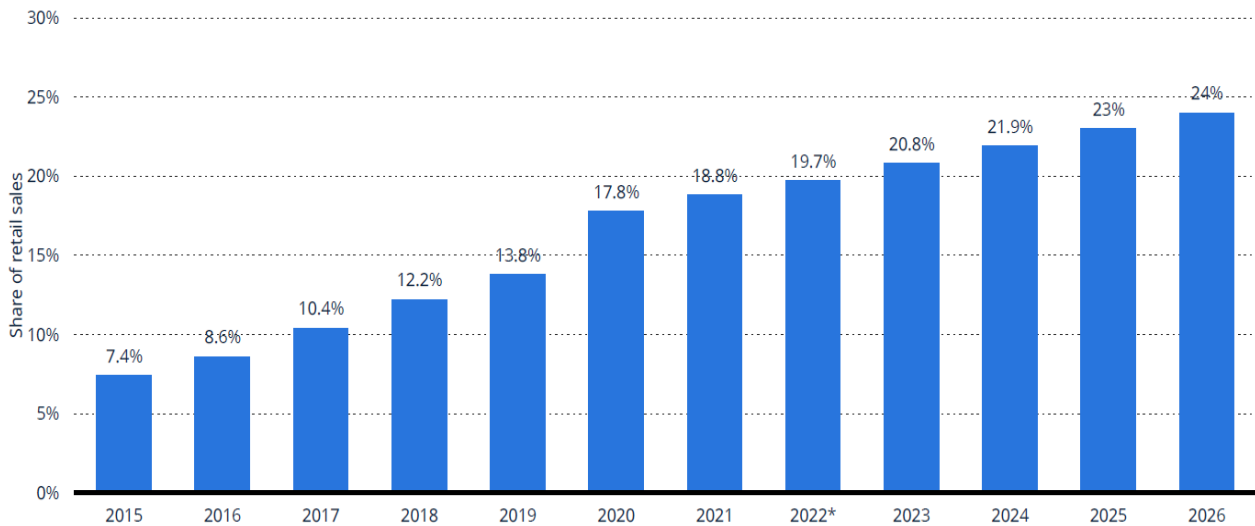


Figure 3. The dynamics of e-commerce as percentage of total retail sales worldwide in the period 2014–2021, with forecast from 2022 to 2026, billion U.S. dollars

Source: <https://www.statista.com>

Starting from 2020 and until 2026, as confirmed by the data, e-commerce as percentage of total retail sales worldwide increases annually by approximately 1%. If these rhythms are maintained, then in 2050 the share of e-commerce will reach 50% of total retail sales worldwide.

The following figure shows how retail e-commerce revenue worldwide is distributed by region, thus highlighting those regions where the volume of online commerce is maximum .

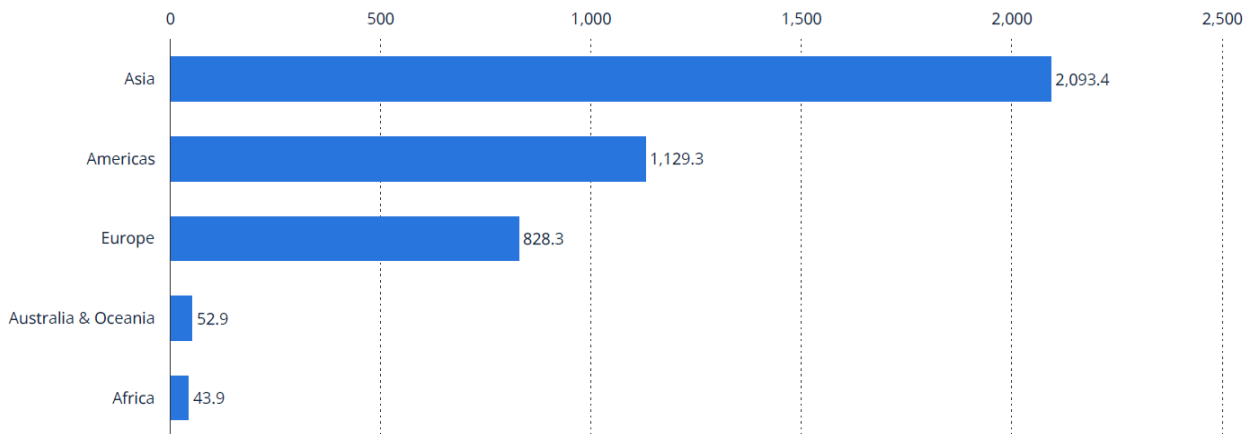


Figure 4. The distribution of total retail e-commerce revenue worldwide by region in 2022, billion U.S. dollars

Source: <https://www.statista.com>

The distribution of total retail e-commerce revenue worldwide by region demonstrates a considerable priority of the Asia region which holds around 50% in the total volume of sales. Such a large share of the Asia region is explained by the concentration of the large number of population in this area and by the results of China, which is the world leader in trade. The second position is held by the Americas with about 27.2% and Europe holds about 20% in that structure. It is obvious that America is much ahead of Europe in terms of the use of digital skills, digital tools and e-commerce techniques.

Such high rates of development of e-commerce and the growth of e-commerce as percentage of total retail sales worldwide are due to a large extent to its advantages in relation to traditional commerce. Studies carried out worldwide based on an opinion poll in which samples of 1000 people from various countries participated, such as: the USA, Canada, the United Kingdom, Germany, France, the Netherlands, etc. In the result of that survey, the main benefits of online shopping worldwide were identified (figure 5).

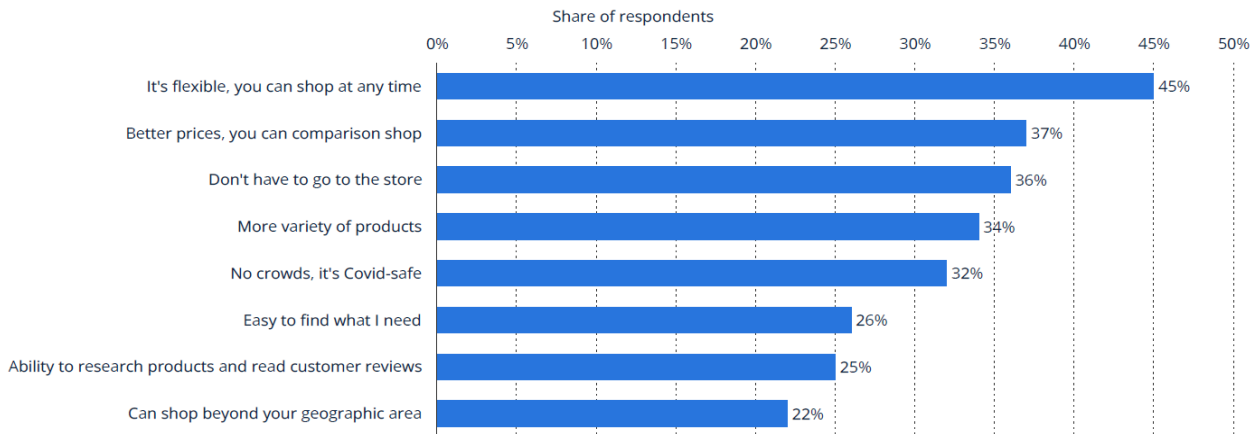


Figure 5. The main benefits of online shopping worldwide 2022

Source: <https://www.statista.com>

In the list of the main benefits of online shopping worldwide 2022, the first position goes to the answer "It's flexible, you can shop any time" which was selected by 45% of respondents. For many people, especially those who have an intense schedule of activities, flexibility is a very important criterion, when you can make transactions at any time from any place. As a rule, online sales are characterized by the lower level of prices compared to the prices that are in the store or salon, because the distributor in this case bears less expenses in relation to the maintenance of a store with the physical presence of customers. Another advantage of e-commerce is that the customer doesn't have to go to the store, so the customer saves his own time and reduces the expenses related to transport for going to the store. At the same time, quite a few respondents highlighted as benefits more variety of products, no crowds, easy to find what you need, ability to research products and bad customer reviews, etc.

Even if the growth rates of e-commerce are different by regions and countries, there is a positive trend in this regard all over the world, so that e-commerce is becoming an increasingly used tool both in developed countries and in developing countries.

Table 1 reflects the dynamics of the e-commerce revenue in the Republic of Moldova by category of goods in 2017-2025.

Table 1. The dynamics of the e-commerce revenue in the Republic of Moldova by category of goods in the period 2014 - 2021, with forecast from 2022 to 2025, million USD

Category of goods	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beauty, health, personal & household care	36,06	42,29	50,29	64,79	77,84	89,58	104,00	120,70	141,20
Beverages	9,37	11,94	16,62	27,79	43,18	45,59	52,14	60,28	70,22
Electronics	84,87	98,18	114,60	152,50	169,00	195,40	215,90	239,10	261,80
Fashion	105,60	119,60	143,20	199,60	244,70	287,60	339,80	401,80	476,10
Food	14,74	18,10	22,73	36,00	54,44	70,17	91,42	119,50	155,30
Furniture	11,61	13,51	16,28	21,63	26,98	31,68	37,37	44,12	52,13
Media	3,54	4,96	6,49	9,3	11,80	12,90	13,79	14,47	15,09
Toys, Hobby & DIY	32,15	38,01	45,99	6,28	80,86	92,88	107,250	124,10	144,00
Total	297,90	346,60	416,10	577,40	708,80	825,80	961,50	1124,00	1316,00

Source: <https://www.statista.com>

Table 1.1 reflects the dynamics of the e-commerce revenue in the Republic of Moldova by category of goods in the period 2014 - 2021, with forecast from 2022 to 2025.

As the data presented in the table shows, in the period 2017-2021 e-commerce revenue in the Republic of Moldova increased from 297.90 to 708.80 million USD, the increase being 2.38 times. Over the next 5 years, an increase in e-commerce revenue is expected to double. The following figure reflects the structure of the e-commerce revenue in the Republic of Moldova.

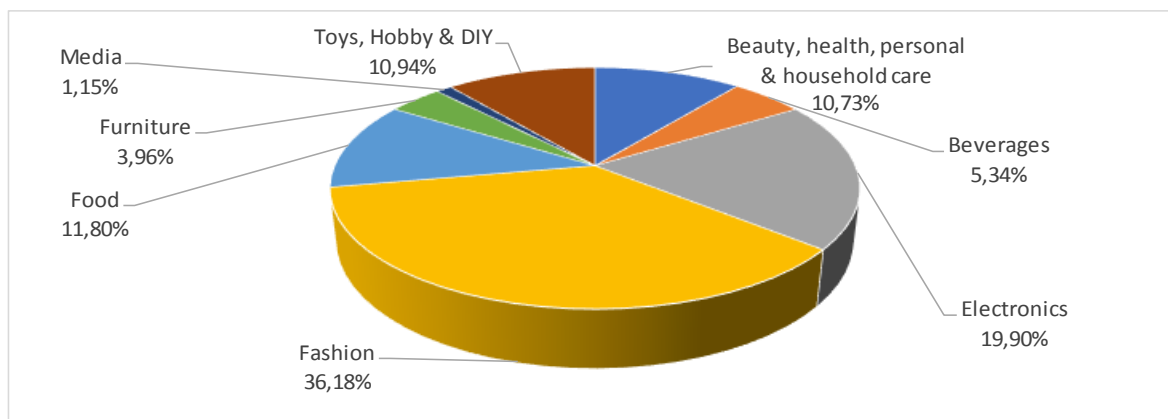


Figure 6. The structure of the e-commerce revenue in the Republic of Moldova in 2022

Source: <https://www.statista.com>

As the presented structure expresses, the largest share belongs to the "fashion" goods category, which holds 36.18%. In recent years, the procurement of fashion items online is becoming more and more widespread. On the one hand, it would seem that it is quite complicated to purchase clothing without measuring, but the advantages of purchasing from online stores, ordering products from global platforms, offer a much larger assortment and much more advantageous prices. The second important position belongs to electronics products with a weight of 19.9%. Residents of the Republic of Moldova purchase electronics products both on the websites of specialized stores and on global platforms. For example, in terms of food sales, in the Republic of Moldova this category has a fairly small share, but with a continuous increase, because the culture of making provisions is changing and in addition to ordering pitta/pies, more and more world orders food products from supermarkets online.

Conclusions and suggestions

The strong impact of e-commerce techniques on the development of entrepreneurial activity at company, country and regional level is absolutely firm. Digital tools, and especially those of e-commerce, allow companies to rapidly develop and expand their markets, forming ever-wider databases of their customers and continuously adapting their marketing strategy. Finally, the companies that practice e-commerce techniques are those companies that will survive and bring a considerable impact in the development of the national economy. In this context, it is favorable for the national economy to promote electronic commerce by which economic agents, thus the state should support the digitization of the economy with all possible instruments.

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