

E-COMMERCE AND E-CONTRACTS: CHALLENGES, RISKS AND OPPORTUNITIES IN THE CROSS-BORDER MARKETS

Artur GOLBAN

Commercial Bank `Victoriabank` Joint Stock Company, 141, 31 August 1989 Street, Chisinau, MD-2004, Republic of Moldova, E-mail: aaartgolb@gmail.com

Corresponding author: aaartgolb@gmail.com

Abstract

The popularity of e-commerce is growing more and more, being widely accepted and promoted by both consumers and businesses. The scientific investigation has the purpose to study the commercial relations which take place in the virtual environment, where people buy and sell products and services, using more and more e-contracts and e-commerce platforms. In this scientific research are analyzed types and advantages of e-commerce, the categories of e-contracts, the consent and the validity of e-contracts, the legal framework of the Republic of Moldova in the area of study and the risks related to them and the opportunities in the cross-border markets. In the research was used statistical data from the National Bank of Moldova, the National Bureau of Statistics of the Republic of Moldova and other sources. The main conclusion of the scientific analysis is that electronic contracts have a high importance in the development of the cross border markets but they generate risks which need to be managed. The main results of the scientific paper consist of the highlighting the necessity of additional algorithms, questions before signing the electronic contracts in order to reduce the risks and to be more protected.

Key words: e-contracts, e-commerce, legal framework, online shopping, risks

INTRODUCTION

The Information Technologies Sector is among the booming economic sectors, registering one of the fastest developments and growths. The sustainable economic development of a country depends primarily on its ability to effectively use information and communication technologies that contribute essentially to increasing the productivity of the labour force.

In this way, the Information Society also integrates the objectives of sustainable development, based on social justice and equal opportunities, freedom, cultural diversity and innovative development.

Contracts from the online environment and the contractual relationships that exist in the online environment have become the object of scientific researches of many scientists all over the world.

The domain of research of the present article is not very well studied, being of high interest. The article will bring more light to the domain of e-contracts and e-commerce, by the analysis performed by the authors on the risks

connected to the area of study and how to mitigate them.

MATERIALS AND METHODS

This scientific research was elaborated based on the scientific literature in the field of electronic contracts, e-commerce and the analysis of legislation of the Republic of Moldova:

-The Civil Code of the Republic of Moldova, Law no. 1107-XV of 06.06.2002;

-Law no. 284/2004 of 22.07.2004 on electronic commerce;

-Consumer Protection Law No. 105 of March 13, 2003;

-Law No. 91 of 29.05.2014 of the Republic of Moldova on electronic signature and electronic document;

-Law No. 114 of 18.05.2012 of the Republic of Moldova on payment services and electronic currency;

-Law No. 133 of 8 July 2011 on Personal Data Protection, etc.

At the elaboration of this scientific paper was used the following research methods: analysis

and synthesis, induction, deduction, logical presentation of the ideas and results.

RESULTS AND DISCUSSIONS

The development of the Internet has led to the development of a new form of commerce - electronic commerce.

Electronic commerce, in recent years, has registered an impressive upward evolution, with e-commerce sales in 2021 of about 5 trillion USD, which represents a spectacular growth, considering that this industry began to exist in 1991, when the Internet was opened for commercial purposes.

In Moldova, in 2021 the number of transactions performed through e-commerce compared to 2020 increased from 11 mln to 15 mln transaction (Figure 1).

According to Figure 2, the number of e-commerce platforms in 2021 increased by 59 platforms compared to 2020 and by 176 platforms compared to 2019.

E-commerce has its beginnings back in the 60s, being characterized by electronic technologies of transfers of funds within networks with high value added, where different data are changed electronically.

According to the studies of some authors, e-commerce represents the virtual place where suppliers meet - with electronic catalogues of products and services - with potential buyer companies, in order to exchange information, business and collaborate in order to achieve joint business [18].

In the opinion of Miron Alexandru Dumitrescu, *electronic commerce* means, in the "traditional" sense, the use within value-added networks of applications such as electronic document transfer (EDI), fax communications, barcodes, file transfer and electronic mail [7].

E-commerce, in our view, essentially means the conduct of commercial, governmental and personal activities through computers and telecommunications networks and includes a wide variety of activities involving the exchange of information, data or value between two or more parties with the involvement of electronic means.

Many scientists around the world performed researches related to e-commerce including: Clarke (1999) [6], Hoffman and Novak (2006) [8], Poon (1998), Riggins & Rhee (1998) [20], Swatman (1996) [21], Wigand (1997) [22, 23] and Zwass (1996, 1999) [25, 24] etc.

According to Figure 3, we distinguish 6 types of electronic commerce which are very well described in the professional literature :

- a) *B2B (Business-to-Business) electronic commerce;*
- b) *B2C (Business-to-Consumer) electronic commerce [7];*
- c) *C2C (Consumer-to-Consumer) electronic commerce;*
- d) *C2B (Consumer-to-Business) electronic commerce;*
- e) *B2A (Business-to-Administration) e-commerce;*
- f) *C2A(Consumer-to-Administration) e-commerce.*

According to the researches of several scientists, we distinguish the following models of e-commerce (Figure 1) [1, 16, 17]:

✓ *Online stores (e-stores)* – managed by a company for the marketing and sales of its own products/services. It contains a catalogue of services/products, where technical/commercial descriptions are presented for each item in the catalogue. The biggest motivation for creating e-stores is to attract a large number of customers without distance being a problem.

✓ *Electronic procurement (e-procurement)* – represents the electronic offering and procurement of goods and services. Among the benefits sought – a greater range of suppliers which will lead to lower costs, higher quality and a shorter delivery time.

✓ *Electronic auction (e-auction)* – the traditional auction mechanism is implemented with the help of the Internet. Online auctions require the existence of a real-time auction site and take place in various time periods (hours, days or weeks). Once the auction period ends, the most attractive offer receives the auctioned object.

✓ *Virtual superstore (e-mall)* – consists of a collection of small electronic stores that are united by common products, common means of payment or a well-known company name.

✓ *Business Concession (Third Party Marketplace)* – is a very common form of online store, which assumes that a company decides to leave its activities on the Internet to other companies specialized in the field, usually companies that deal with the creation and maintenance of virtual stores for the companies with which they have contracted.

✓ *Virtual Communities (Virtual Communities)* – the greatest added value of virtual communities is given by their members who add their information in a virtual environment created by the company that owns the virtual community. The purpose of creating virtual communities is to gain advantages on the market or on certain segments, to increase the loyalty of community members.

✓ *Value Chain Service Provider for e-commerce channels (Value Chain Service Provider)* – these providers specialize in certain specific functions – logistics, electronic payment, inventory production management expertise.

✓ *Value Chain Service Providers* – specialize in certain specific functions in the value chain, such as electronic payment or distribution logistics, with the aim of turning this into their competitive advantage.

✓ *Value Chain Integrators* – multimodal transport companies, travel agencies that sell services offered by third parties (transport companies, hotels).

✓ *Collaboration Platforms (Collaboration Platforms)* – contain a set of tools and information media for collaboration between companies.

✓ *Information brokerage and other services;*

✓ *Trust Services* – guarantee services for certain products/services offered by third parties (Trust Service), which increases the degree of trust of the buyer.

From the types of electronic commerce described above, in the Republic of Moldova the concept of e-store (online store) is very widespread.

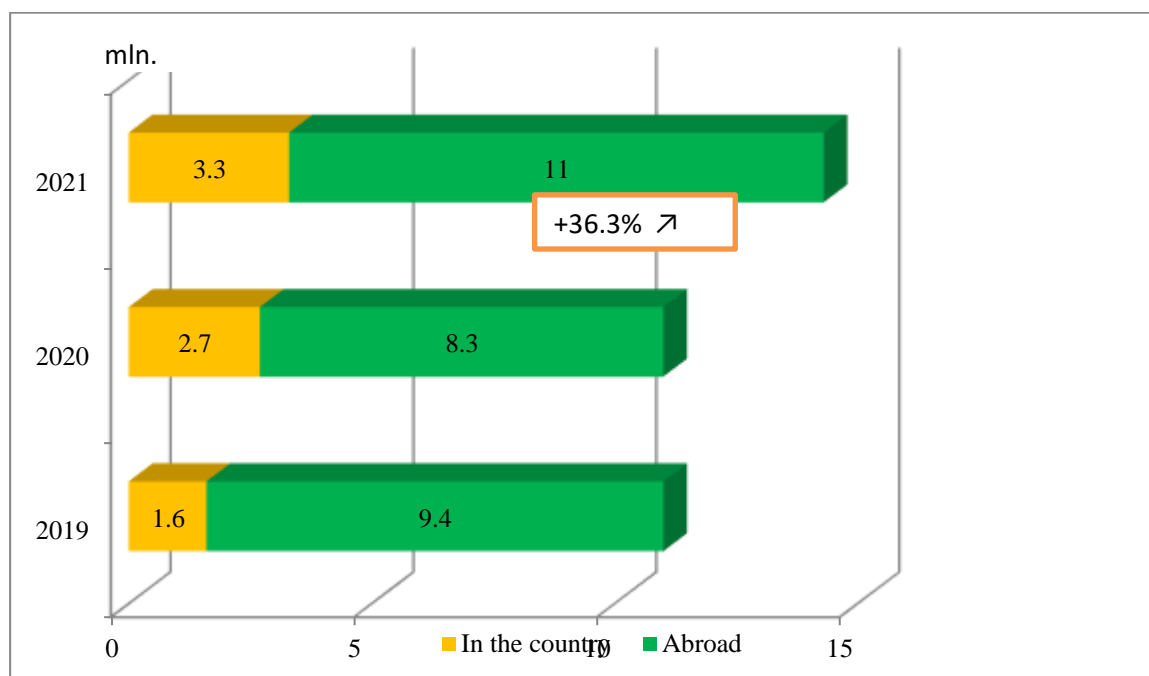


Fig. 1. The evolution of e-commerce transactions performed in banks during 2019-2021
 Source: elaborate by the author based on the data from the National Bank of Moldova [15].

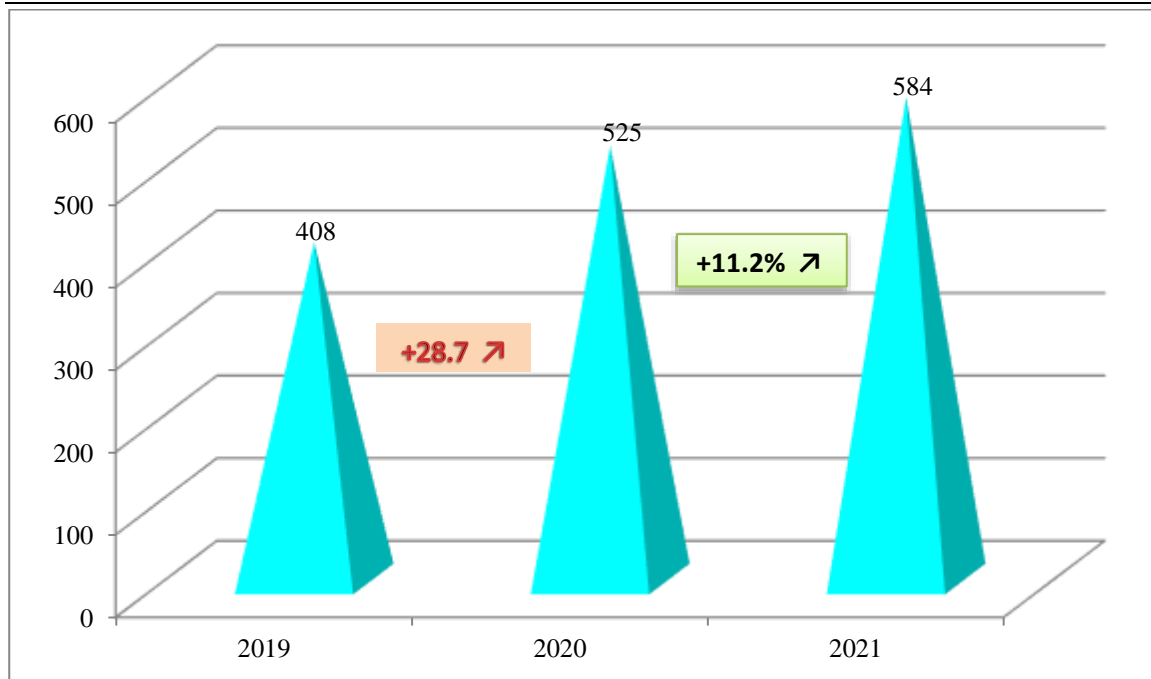


Fig. 2. The evolution of e-commerce platforms during 2019-2021
 Source: elaborate by the author based on the data from the National Bank of Moldova [15].

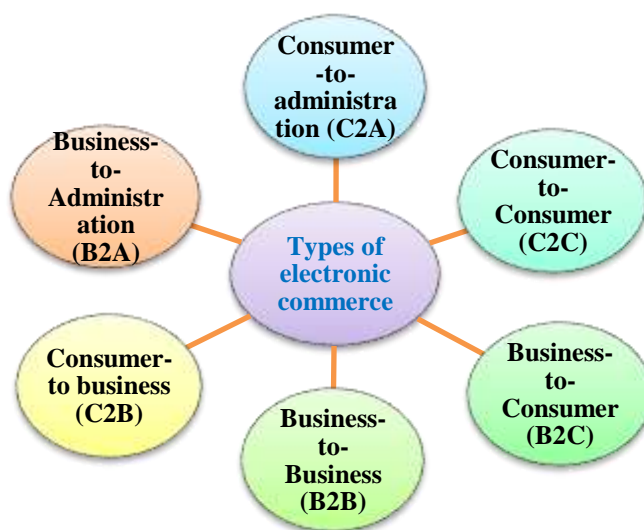


Fig. 3. Types of electronic commerce (e-commerce)
 Source: elaborated by the author.

Electronic commerce in the Republic of Moldova is regulated by Law no. 284/2004 of 22.07.2004 on electronic commerce [9]. In accordance with Law no. 284/2004 of 22.07.2004, electronic commerce represents *"the entrepreneurial activity of natural and legal persons for the sale of goods, the execution of works or the provision of services, carried out with the use of electronic communications and/or electronic contracts* [9]. The provisions of the Civil Code of June 6, 2002 and the Consumer Protection Law no.

105 of March 13, 2003 [5, 10] apply to the relations between the buyer and the e-commerce agent. Also, electronic commerce is subject to all the normative acts that regulate economic activity, namely: how to register the company, keeping accounts, paying taxes and duties, labor protection, etc. In accordance with art. 9 of Law no. 284/2004, the right to carry out electronic commerce appears with the state registration of the legal person or the individual entrepreneur, with the exception of the cases

provided by the legislation that refers to the licensing of certain types of activity.

Thus, for the registration of a legal entity, it is necessary to submit the following documents to the Public Services Agency: the application for registration; the deed of incorporation in two copies; copy of the identity cards of the founders; proof of payment of the state tax. The founders draw up the act of incorporation, which is notarized as a condition of validity. The content of the act of incorporation is described in art 247 of the Civil Code (headquarters of the legal entity, type of activity, etc.).

Once the legal entity is registered, it is necessary to select a domain name (site name), a domain type (.md), which must be registered in accordance with the law. It is very important to check if the selected domain name ".md" is available. This can be verified by accessing the website www.nic.md. The domain name is registered by addressing to Î.S. "MoldData", after which the website platform is developed and the content about the products sold is added.

In the Republic of Moldova there are a multitude of companies specialized in the creation of e-commerce sites.

In accordance with art. 9 of Law 284/2004, for the creation of a business in the online environment, it is not necessary to obtain a license, but if it is intended to sell products that fall under licensed types of activity (alcoholic products, fertilizers), obtaining a license is mandatory.

According to the definition of the *Law on electronic commerce*, we find that an essential element of electronic commerce is the use of electronic communications and electronic contracts.

By **electronic communication** is meant "*information in electronic form, which does not constitute an electronic document, sent, received and stored with the help of electronic means*" (e.g. fulfilling the online order and receiving the payment confirmation), and by **electronic contract** - "*all the electronic documents that constitute the civil law contract, aiming at the establishment, modification or suspension of certain civil rights and obligations, the object of which may be goods, works or services*".

At the same time, according to art. 882 of the Civil Code of the Republic of Moldova, the contract is the agreement of will made between two or more persons by which legal relations are established, modified or extinguished. Unlike the traditional contract, an electronic contract represents the voluntary agreement of two or more parties concluded in the electronic space of the Internet.

In art. 318 of the Civil Code of the Republic of Moldova, the legal document has an electronic form if it is included in an electronic document that complies with the legislation [2].

The legal act in electronic form has the same value as the legal act in written form, regardless of how it was signed, depending on how the parties agreed.

Table 1. The register of companies issuing electronic money to which the license of the National Bank was issued/withdrawn for the activity of issuing electronic money

N/O	Name of the company issuing the electronic currency	Fiscal code, headquarters of the electronic money issuing company	License revocation/suspension information
1.	„Paymaster” SRL	1013600034592, 42, Aleea Gării, Chişinău, MD -2001, Rep. of Moldova	-
2.	„Paynet Services” SRL	1013600036596, 6, Decebal Boulevard, Chişinău, MD-2002, Republic of Moldova	-
3.	ÎM OMF „Microinvest” SRL	1003600053518, 12, Renaşterii Naţionale Boulevard, 2nd floor, Chişinău, MD-2001, Republic of Moldova	License withdrawn, according to the Decision of the Executive Committee of the National Bank no. 62 of 04.04.2018
4.	“BPAY” S.R.L.	1010600040527, 23/2 of. 17A , Decebal Boulevard, Chişinău, MD-200, Republic of Moldova	-
5.	„QIWI-M”	1008600018031, 32 , Petricani Street, Chişinău, MD – 2059, Republic of Moldova	-
6.	„FINTECLY” SRL	1018600050409, 800/2, Munceşti Avenue, Apt. 19, Chişinău, MD-2029, Republic of Moldova	-
7.	Î.M. „MOLDCCELL” S.A.	1002600046027, 3, Belgrad Street, Chişinău, MD-2060, Republic of Moldova	-

Source: adjusted by the author based on [19].

In the sense of the legal act concluded through the use of electronic means, art. 319 of the Civil Code of the Republic of Moldova regulates the situation when the subject of law does not use the electronic signature, in cases where he procures goods online, plane tickets, reserves an accommodation online and other situations. In these cases, the legal act concluded by using electronic means, in the situation when the person did not sign with the electronic signature provided for in art. 318 of the Civil Code of the Republic of Moldova, it is assumed that the person gave his consent until he contested its existence [3, 4].

Electronic contracts can be categorized according to the scientific literature in three categories:

a) **click wrap contract** - It appeared during the development of information technologies in the late 20th century in the United States. The concept of "click-wrap contract" was not enshrined in law, but it was actively used by lawyers in court practice. In the scientific literature of the USA, the following definition of the concept of «click-wrap agreement» can be found: «This agreement, fully concluded in an online environment, such as the Internet, in which the rights and obligations of the parties are set out». This agreement is intended to reduce the time of concluding the contract and is used for:

- ✓ the establishment of conditions for downloading and using software through the Internet;
- ✓ the rules by which users can access the website or part of it;
- ✓ the establishment of conditions for the sale of goods and services online.

Next we will analyze the "click-wrap" contract features:

- ✓ the "click-wrap" transaction mechanism completely deprives the party of the opportunity to negotiate or make changes to the proposed terms of the contract. Such a principle was named «take-it-or-leave-it»;
- ✓ no paper documents, handwritten signatures or personal communication between the parties are required to conclude a "click-wrap" agreement;

✓ «click-wrap» agreements allow the offeror to conclude the maximum number of contracts with minimal economic costs;

✓ click-wrap» is equally applicable to any type of contract, as it mediates non-specific types of rights.

b) **Shrink-wrap contract** — or «packaging» agreement — represents the purchase of a box that contains inside a program. When opening the box, the user has two options: agree to the conditions that he will find in the box when installing the program, or return the goods to the seller.

c) **Brows-wrap contract** — a faster way to conclude a contract: the user is provided with a link to the text of the agreement together with the "accept agreement" window.

The electronic contracts mentioned above, signed in the absence of individuals are very sensitive and may also be subject to the risk of the consent being vitiated.

In order to reduce the risks, it is important to set filters/algorithms to ask questions related to the capacity of person to sign such kind of contracts, the age and other details. In case when there are not set algorithms to identify the consumer's age, in case of minors the transaction is under the risk to be cancelled.

In the Civil Code it is expressly stipulated the cases when a minor can sign contract mentioned above – for example in case of low-value acts and preservation acts

In electronic commerce and electronic contracts, an essential element is the **electronic signature**.

On 27.06.2014 was approved the Law no. LP91/2014 regarding the electronic signature and the electronic document. This law "establishes the legal regime of the electronic signature and the electronic document, including the main requirements for their validity and the main requirements for certification services [11]."

E-commerce takes place through payment service providers. In the Republic of Moldova, the activity of payment service providers is regulated by Law no. 114 of 18.05.2012 regarding payment services and electronic money. According to art. 5 (1) of Law no. 114/2012, the following categories of

payment service providers are distinguished [12]:

a) banks and bank branches from other states, which operate in accordance with Law no. 202/2017 on the activity of banks;

b) payment companies;

c) companies issuing electronic money;

d) postal service providers operating in accordance with the Postal Communications Law no. 36/2016;

e) The National Bank of Moldova (hereinafter - the National Bank) - if it does not act as a monetary policy authority or as another public authority;

f) The State Treasury within the Ministry of Finance (hereinafter - the State Treasury).

In Republic of Moldovam according to the art. 8 of the Law 114/2012 the payment servies are provided in the national currency, with exceptions stipulated in the Law mentioned above.

In the same time, the e-commerce can be realized in electronic currency as well as in paper currency. The money in electronic form according to the Law 114/2012 is an equivalent of the Moldovan Leu [12]. The National Bank of Moldova has the authority to issue/withdraw the licenses to payment companies [14].

Also, according to the provisions of Law no. 114 of 18.05.2012 regarding payment services and electronic money, the National Bank of Moldova keeps the public registers of payment companies, postal service providers and companies issuing electronic money, which have been issued /withdrawn/suspended the license of the National Bank for the activity of providing payment services, respectively for the activity of issuing electronic currency [19].

Analysing the table 1, we can reveal that in Republic of Moldova, there are 6 companies („Paymaster” SRL; „Paynet Services” SRL; „BPAY” S.R.L.; „QIWI-M”; „FINTECLY” SRL; Î.M. „MOLDCELL” S.A.) issuing electronic money to which the license of the National Bank was issued and 1 company (ÎM OMF „Microinvest” SRL) to which the license was withdrawn according to the Decision of the Executive Committee of the National Bank no. 62 of 04.04.2018.

In the same time, a special role in realization of electronic commerce belongs to the Law no. 133 of 08-07-2011 on the protection of personal data. According to art. (3) of Law 133/2011, *“the consent of the subject of personal data, is a manifestation of the free, specific, informed and unambiguous will of the subject of the data by which he accepts, through a statement or through an action without equivocal, that the personal data concerning him be processed [13].”*

When a person buys goods in online stores it is requested the consents from that person to process its personal data and after the buyer gives his consent to process personal data, after that the transaction is processed, meaning that the good/service is procured.

Also, it is very important to mention that in order to be an electronic merchant, it is necessary to be registered as operator at the National Center for the Protection of Personal Data. Therefore, when somebody wants to buy a good/service from a website, this persons is informed about the fact that the personal data will be used only and exclusively with the purpose and the level of security to buy the goods/services and that the data of the cards the site do not save.

We also mention that in the process of registration at Public Services Agency, the process of fiscal, statistical, medical and social registration of the legal entity will be carried out automatically. The owner of the online store will keep the accounts, issue receipts, pay taxes and fees similar to a traditional (ordinary) store.

Thus, in accordance with the performed analysis regarding electronic contracts within e-commerce, we can reveal that this is a modern way of establishing business relationships due to the advantages offered by them (there is no need to present physically while signing the contract; low transaction costs; time-saving contracts) as a result of the development of information technologies. Goods/services purchased online through e-commerce bring more advantages to the purchasers: access 24 hours to international markets just a click away distance, no time and space barriers, the customers having possibility to log in and to buy at any time of

the day or night anything they want. E-commerce is directly responsible for the competitiveness and development of national economies.

CONCLUSIONS

The rapid development of the Internet has increasingly determined the transition from traditional businesses/stores to virtual businesses/stores and the replacement of traditional commerce with a new form of commerce – electronic commerce.

More and more people initiate online business relationships, which has a multitude of advantages: it can be accessed anywhere, anytime via computer/mobile phone or other mobile device using wireless services.

In 2021, the sales via e-commerce constituted 5 trillion USD, which represent an extraordinary increase compare to 1991, when this industry began to exist, when Internet was opened for commercial purposes.

An important role in performing e-commerce is assigned to electronic contracts, which has multiple advantages, being a relative new form of expressing the consent of parties to buy/sell products/services.

According to the scientific literature, electronic contracts can be categorized in: *click wrap contracts*, *shrink-wrap contracts*, *brows-wrap contracts*.

All mentioned electronic contracts are very sensitive, because they are signed in the absence of individuals and may be subject to the risk that the consent to be vitiated.

Thus, to reduce the risks, it is recommended, before signing the contracts, to set algorithms/additional questions to check the capacity of the person who signs the electronic contract. It is very important to be careful and vigilant in the process of signing electronic contracts.

In the light of the performed investigations we can conclude that people all over the world more and more are oriented to online stores, which have multiple advantages compared to traditional ways of performing business: new digital technologies making possible to access, store and transmit information in an increasingly simple and accessible way,

electronic commerce, being directly responsible for the competitiveness and development of national economies.

REFERENCES

- [1]Bucur, C.M., 2002, Comerț electronic (Electronic commerce), ASE Publishing House, Bucuresti, pp.10.
- [2]Cara-Rusnac, A., 2020, Cadrul legislativ al contractelor în mediul online (Legislative background of the contracts in online environment) <https://juridicemoldova.md/10266/cadrul-legislativ-al-contractelor-in-mediul-online.html>, Accessed on 10.02.2023.
- [3]Cara-Rusnac, A., 2020, Consimțământul în cadrul contractelor încheiate în mediul online (The consent within the contracts concluded online) <https://juridicemoldova.md/5827/consimtamentul-in-cadrul-contractelor-incheiate-mediul-online.html>, Accessed on 20.12.2022.
- [4]Cara-Rusnac, A., 2020, Obiectul contractului în mediul online. În: Conferința științifică națională cu participare internațională „Integrare prin cercetare și inovare”, USM, 10-11 noiembrie 2020. (The object of the online contract. In: National Scientific Conference with international participation " Integration by research and innovation") Chișinău: State University of Moldova, Vol.2. 2020, https://ibn.idsi.md/ro/vizualizare_articol/114220, Accessed on 02.11.2022.
- [5]Civil Code of the Republic of Moldova, Law nr. 1107-XV din 06.06.2002. Official Monitor of the Republic of Moldova. 22.06.2002. nr. 82-86.
- [6]Clarke, R., 1999, Electronic Commerce Definitions. <http://www.rogerclarke.com/EC/RogersBibl.html> Accessed on 05.09.2022.
- [7]Dumitrescu, M.A., 2001, Comerț electronic. Suport de curs pentru învățământ deschis la distanță. (Electronic commerce. Course support for distance learning education) „Hyperion” University Publishing House, București, 115 p.
- [8]Hofmann, D., Novak, T., Schlosser, A., 2006, The Evolution of the Digital Divide: How Gaps in Internet Access May Impact Electronic Commerce. <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1083-6101.2000.tb00341.x>, Accessed on 15.10.2022.
- [9]Law on electronic commerce no. 284 of 22.07.2004.Official Monitor of the Republic of Moldova. 14.11.2004. nr. 138-146.
- [10]Law on consumer protection no. 105-XV of 13.03.2003.Official Monitor of the Republic of Moldova. 27.06.2003. nr. 126-131.
- [11]Law on the electronic signature and the electronic document no. 91 of 29.05.2014.Official Monitor of the Republic of Moldova. 04.07.2014. nr. 174-177, art. 397.
- [12]Law on payment services and electronic currency no. 114 of 18.05.2012. Official Monitor of the Republic of Moldova.14.09.2012.nr. 193-197, art. 661.

[13]Law on personal data protection no. 133 of 08.07.2011.Official Monitor of the Republic of Moldova. 14.10.2011. nr. 170-175, art. 492.

[14]National Bank of Moldova, Decision of the National Bank of Moldova no. 217 of August 19, 2019 regarding the approval of the Regulation regarding the activity of non-bank payment service providers. Modified through: NBM Decision no.4 of 20.01.2022, Official Monitor of the Republic of Moldova. 04.02.2022. nr. 34-38 from art.106 (in force from 04.04.2022).

[15]National Bank of Moldova

[16]Priescu, I., 2008, Comerț electronic: de la paradigmă la implementare (Electronic commerce: from paradigm to implementation), "Titu Maiorescu" University Publishing House, București, p.35.

[17]Priescu, I., 2008, Comerț electronic (e-commerce). Curs de comerț electronic (Electronic commerce- e-commerce. Course of electronic commerce) "Titu Maiorescu" University Publishing House, București, p.58.

[18]Radoi, D., 2005, Locul și rolul comerțului electronic în noua economie (The place and role of electronic commerce in the new economy), *Oeconomica*, Issue 02. <http://oeconomica.org.ro/files/pdf/120.pdf>, Accessed on 18.12.2022.

[19]Registrul societăților emitente de monedă electronică (Register of the societies issuing electronic currency), 2022, <https://www.bnm.md/ro/content/registrul-societatilor-emitente-de-monedea-electronica-1>, Accessed on 18.12.2022.

[20]Riggins, F., Rhee, S., 1998, Toward a Unified View of Electronic Commerce. <https://dl.acm.org/doi/10.1145/286238.286252>, Accessed on 10.01.2023.

[21]Swatman, P.M.C., 1996, Electronic Commerce: Origins and Future Directions. 1st Australian DAMA Conference. Melbourne, Victoria, December 2-3.

[22]Wigand, R., 1995, The information superhighway and electronic commerce: effects of electronic markets. Paper presented to the Annual Conference of the International Communication Association. 1995. Albuquerque, NM, May 25-29.

[23]Wigand, R., 1997, Electronic Commerce: Definition, Theory and Context. *The Information Society*. Vol. 13(1), 1 - 16.

[24]Zwass, V., 1996, Electronic Commerce: Structures and Issues. *International Journal of Electronic Commerce*, Vol. 1(1), 3 - 23. <https://www.semanticscholar.org/paper/Electronic-Commerce%3A-Structures-and-Issues-Zwass/9f36c5cea1838378b66b102c6afb996b77e78233>, Accessed on 17.01.2023.

[25]Zwass, V., 1999, Structure and macro-level impacts of electronic commerce: from technological infrastructure to electronic marketplaces. In: *Emerging Information Technologies*. Thousand Oaks. CA: Sage Publications, pp. 289-315.

