

## SHORT REVIEW OF ELECTRONIC TRADE

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### **Abstract:**

*For most e-commerce it is online shopping, but scientists are a modern business technology. E-commerce is a very diverse field, involving a range of activities, different organizations and technologies. There are also a number of e-commerce applications. The process of globalization has also penetrated e-commerce, becoming a particular and spectacular component. Apps have been created and created, and their use involves appropriate information, infrastructure, and support. In the paper are presented the main aspects regarding the electronic commerce infrastructure and its insecurity.*

**Key words:** e-commerce, infrastructure, insecurity, business process, communication

**JEL classification:** M1, M15

### **1. INTRODUCTION**

For most, the term "ecommerce" means making online purchases on the World Wide Web. However, electronic commerce - Electronic Commerce or E-Commerce, is more than the process of buying / selling products and services. It may include many other activities, such as: exchanges and bargaining between companies, internal processes of companies that they carry out as support for buying / supplying, selling, hiring, planning. Also, electronic commerce involves the transfer of documents - from contracts or orders to images or voice recordings (Fingar, 2000).

From a scientific point of view (Plesa, 2000), e-commerce is defined as "a modern business technology that addresses the needs of organizations, traders and consumers to reduce transaction costs while improving the quality of goods and services and increasing delivery speed. can also be used when using computer networks to search for and retrieve information to support human or institutional decision-making. "

From a pragmatic point of view, other concepts and ways of defining are also important. Among these, a particular interest is as follows (Timofte, 2002):

- all on-line activities in order to excite consumer interest before selling and to ensure consumer support after sales;
- trading transactions taking place within open networks;
- Form the vast network of small companies, government agencies, large corporations and individual entrepreneurs in a single community that offers the possibility of communicating with each other via computers;
- doing business online. This includes purchasing products, online and Internet services, and exchanging electronic data, where an organization's computer informs and transmits purchase orders to the computer of another company;
- Commercial transactions using automatic processing procedures combined with automatic information exchange procedures;
- e-commerce technologies include all forms of electronic trading, electronic message transmission, electronic data exchange (SDE), electronic money transfer (EFT), electronic mail, electronic catalogs, electronic databases, electronic news and information services, electronic payment systems, other forms of electronic communication (FEC), on-line access

to services via the Internet and other forms of electronic data transmission for commercial purposes;

- e-commerce generally refers to all forms of business-related, business-to-business or purchaser-based transactions that rely on the processing and transmission of digital information, including text, sound and images (Organization for Economic Cooperation and Development - OECD -, 1997), (OECD, 1997);
- e-commerce is the electronic realization of commercial activities. It includes various activities, including electronic commerce of goods and services, network delivery of goods, electronic capital transfer, e-commerce with shares, e-mail dispatching, direct marketing, and warranty and post-warranty service; involves both products (household, medical) as well as services (informative, financial, legal); such as health, education and virtual mall-type activities, given by the European Commission, 1997 (1);
- e-commerce is the realization of commercial activities, which involve exchanges of values through telecommunication networks. (European Information Technology Observatory - EITO, 1997) (2);
- trade supports a whole range of activities - product design, realization, advertising, trade transactions, account management - made through computer networks, given by the Electronic Commerce Promotion Council in Japan – 1996 (3);
- internet-based business activity that will also revolutionize retail and direct marketing. Consumers view products through TVs or computers, access data about them, view how they combine, order, and pay, all at home, the US President's Executive Office, 1997 (4);
- a broad term describing the commercial activities and the electronic data transfer associated with them. E-commerce brings together the small-business network in a community, providing the opportunity to communicate via dedicated platforms provided by the Electronic Commerce Resources Center;
- in the broadest sense, e-commerce can mean any form of use of electronic technology in any aspect of commercial activity, given by the NTIA of the U.S. It uses a broader definition than the previous one, it also includes the final consumer whose participation is materialized in the electronic shopping that it carries out.

## 2. E-COMMERCE INFRASTRUCTURE

The term e-commerce is also used to describe the use of the information infrastructure to achieve the following functions (fig. no.1), (5):

1. bringing products onto the market (eg cybermarketing);
2. Buyers' meeting with vendors (e.g., electronic shopping vans, virtual stores, electronic money transfer);
3. payment of obligations towards the state (electronic collection of taxes and duties);
4. delivery of electronic goods (eg information).

E-commerce can be defined from the following perspectives (Timofte, 2002):

- Communications - e-commerce is the delivery or payment through computer networks or other electronic means.

- Trade, exchange - e-commerce is done through the Internet and through other online services.

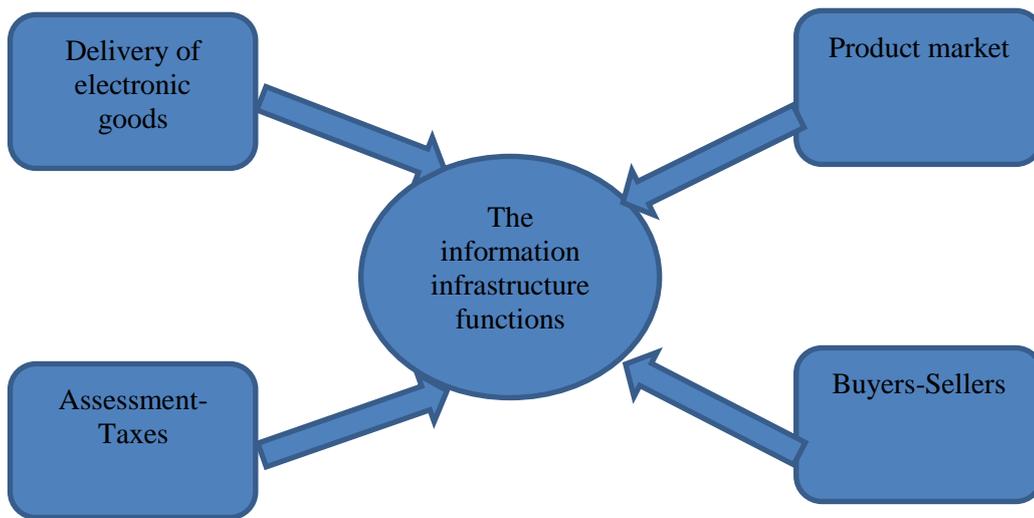
- Business Processes - business processes taking place over electronic networks, thus replacing physical business processes with information.

- Service - e-commerce is a means of reducing service costs, while improving the quality of the customer relationship and the speed of delivery of the service.

- Learning process - e-commerce provides online education and training in schools, universities and other organizations, including businesses.

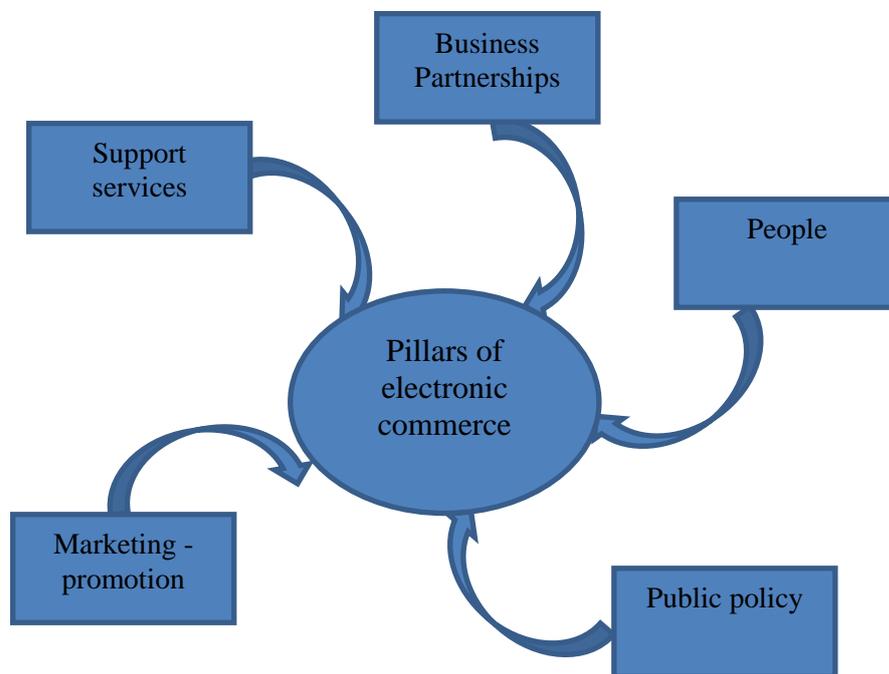
- Collaboration - e-commerce is the basis of inter-and inter-organizational collaboration.

- Community - From a community perspective, e-commerce offers a place where members of various communities can learn, trade, and collaborates.



**Figure no.1. The information infrastructure functions**

E-commerce is a very diverse field, involving a range of activities, different organizations and technologies. There are also a number of e-commerce applications. E-commerce applications are feasible through its infrastructure and with the help of five categories of factors (e-commerce pillars) (fig. no. 2).



**Figure no. 2 Categories of electronic commerce factors**

These are (Timofte, 2002):

- People - Vendors, buyers, intermediaries, IT specialists, employees of all kinds and other participants covering an important area of support for e-commerce;

- Public policy - Laws and regulations, data privacy protection, the issue of technical standards that are set by the government or those in the industry mandated to legislate on these standards;

- Marketing and promotion - Like any other activity, e-commerce needs advertising, especially in B2C online transactions where buyers and sellers are unaware;

- Support services - A range of services are needed to support e-commerce. These range from creating a site's content to making payments and delivery orders;

- Business partnerships - are very common in e-commerce. They often appear on the distribution channel, consisting of interactions between the company and its suppliers, customers and other partners.

The rapid expansion of e-commerce (Ravi & Andrew, 1996) is the source of companies to international competitions actively participating in the global information economy.

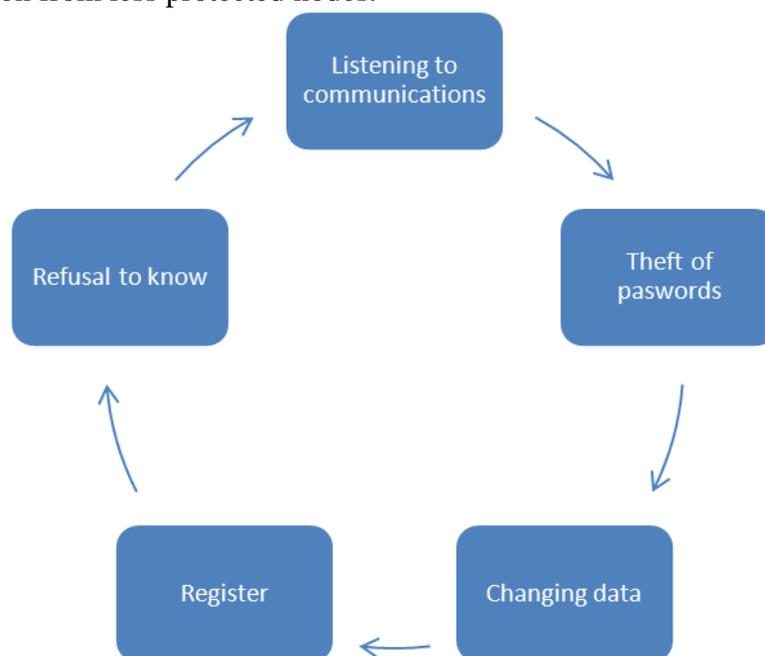
### 3. ELECTRONIC COMMERCE INSECURITY

A major factor behind the current development of e-commerce is insecurity. The original Internet was designed for research and not for commercial transactions. More specific security issues can be identified, which can be considered as real obstacles to the development of Internet commerce (fig. no.3)

In the context of e-commerce, attacks on security are predominantly manifested through the following keys (Patriciu, 2001):

- Listening to communications - leads to the theft of customer information such as credit card number, bank account number, payment notes or financial balances. Such attacks also lead to the theft of some services, normally accessible only to those who pay, such as information or software distribution. These things can, for example, inform a company about the business dealings of other competing firms, or can generate the disclosure of personal data of buyers, data transmitted only to the firms they are doing business with.

- Theft of passwords. Attacks of this type allow access to systems where important information or services exist. The use of increasingly powerful cryptographic algorithms to protect this data has moved the target of attacks from attempts to "break" the protocol into attempts to obtain clear information from less protected nodes.



**Figure no. 3. Specific security issues**

- Changing data. These attacks are used to change the content of transactions.

- Register. This type allows a communicating party to act as another. The attacker places a computer on the Internet to collect hundreds of thousands of credit card numbers, account numbers or other information, attackers can make important payments on behalf of people who do not even suspect or collect fees from various merchants.
- Refusal to know. Repudiation or refusal of knowledge of network transactions creates serious damages to the parties involved. For example, the receipt of a bankcards check, refused not because it does not have coverage in the account, but simply because the bank does not have the means to authenticate it.

#### 4. ANALYSIS OF THE ELECTRONIC COMMERCE MARKET

The unprecedented development of information technology has revolutionized global trade, delivery or retail trade, redefining classical marketing principles. It is noted that today, for more and more businesses in different countries, electronic commerce has become synonymous with profit growth (Iancu, 2017). This is because e-commerce consists of running a business as a value-generating activity, supporting the Internet and using specific software packages. Worldwide, e-commerce has become a core component of the economic development policies of the governments of the developed countries, Japan, the US, the EU Member States, etc., and government-led measures by these countries to regulate unique in making e-commerce transactions, e-commerce has become a fundamental component of world trade.

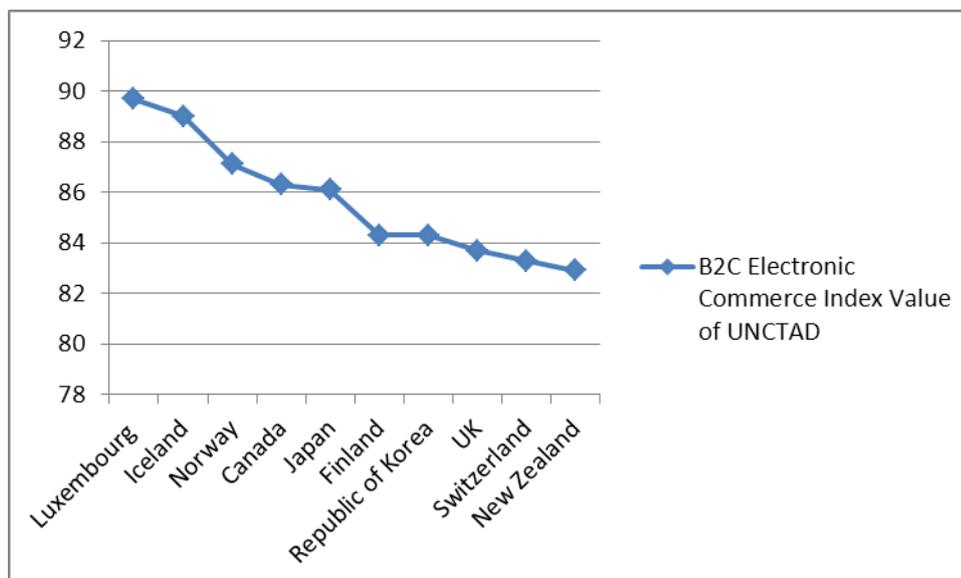
Table no. 1 shows that in Europe there are six countries with the highest B2C index, three countries in Asia, and in America only one country.

**Table no. 1. B2C Electronic Commerce Index of UNCTAD**

Nr.crt.	Countries	People who use the Internet	B2C Electronic Commerce Index Value of UNCTAD
1	Luxembourg	95	89,7
2	Iceland	98	89
3	Norway	96	87,1
4	Canada	87	86,3
5	Japan	91	86,1
6	Finland	92	84,3
7	Republic of Korea	84	84,3
8	UK	92	83,7
9	Switzerland	87	83,3
10	New Zealand	86	82,9

Source: Elaborated by author after <http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>

The best placed is Luxembourg with the highest index. This is also due to the fact that it has a large number of secure servers, being the European headquarters for global e-commerce companies.



**Figure no 4. Electronic Commerce Index of UNCTAD**

Iceland ranks second because it is a leader in the spread of the Internet, the holding of credit cards and the diffusion of secure servers. Norway and Finland represent other Nordic countries in the top ten with virtually the same features: broadly spreading the Internet, credit cards and secure servers. Like Luxembourg, Switzerland has a good financial sector, good logistics networks and high-level postal coverage. Britain has a relatively high degree of Internet spread. Its ranking in the B2C Index is due to the fact that its e-commerce market is well developed (it has the largest proportion of wholesale and retail businesses selling on the Internet in Europe), which is attractive to buyers abroad.

The pace of development of e-commerce is now more significant than that of world trade development as a whole, reflected in the work of the World Trade Organization. Reduced costs compared to traditional stores contribute to the opening of new companies. One of the main trends of this year were the changes that have occurred in the work of the great giants of the Internet. For the sake of possible growth, the largest companies are expanding towards 'real markets', for example, Amazon in the US and Singapore, Zalora. At the same time, a number of providers are expanding their online offers, such as Walmart, Nordstorm.

## 5. CONCLUSIONS

Concluding, e-commerce is changing the business world, threatening the existence of not only businesses but entire industries. Some industries have been forced into strong restructuring while other new businesses and other ways to drive older businesses are developing. This new business environment is both frightening and offering new opportunities.

At present, e-commerce is a modern business form that is geared towards meeting the needs of end-users, consisting in both the realization of trade and commercial logistics operations, and the realization of marketing actions meant to ensure the rationality of the flow of real-time consumer-friendly goods.

## END NOTES

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- (2) *European Information Technology Observatory*, Frankfurt, 1997, <http://www.eito.org>
- (3) *Electronic Commerce in Japan*, <http://www.ecom.or.jp/p/eng/ecjapan/ohp3.html>
- (4) *US Executive Office of the President, 1997, A Framework for Global Electronic Commerce*, <http://www.whitehouse.gov/WH/New/Commerce/read.html>

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