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ELECTRONIC COMMERCE AND PROBLEMS RELATED TO E-COMMERCE AND E-PAYMENT SYSTEM

Abstract. Electronic Commerce is changing people's culture of shopping and conducting business. Its impact reached the level of not only individuals, but also governments. Many experts believe that e-commerce has the bright future, and it impacts all levels of the society throughout the world. In this research paper, I discuss the impacts of e-commerce in the world from different perspectives including both positive and negative sides.

Keywords: Electronic commerce, regulation, e-payment, cyber-crime, phishing.

Аңдатпа. Электронды сауда сатып алу мәдениетін және кәсіпкерліктің жүргізуін өзгертеді. Оның әсері адамдардың өмірінде ғана емес, мемлекеттің жұмысында сезіледі. Көптеген сарапшылар электронды сауданың болашақта үлкен жетістікке жететінін санайды, және бұл бүкіл әлемдегі өмірдің барлық деңгейлерінде көрінеді. Мен осы зерттеу жұмысында электронды сауданың дүниелік әсерін зерттеп, әртүрлі, он және теріс тараптарынан қараймын.

Түйін сөздер: электрондық сауда, реттеу, электронды төлем, киберқылмыс, фишинг.

Аннотация. Электронная коммерция меняет культуру покупок и ведения бизнеса. Влияние электронной коммерции достигло уровня не только отдельных лиц, но и правительств. Многие эксперты считают, что у электронной коммерции светлое будущее, и это влияет на все уровни общества во всем мире. В этой исследовательской работе я обсуждаю влияние электронной коммерции в мире с разных точек зрения, включая как положительные, так и отрицательные стороны.

Ключевые слова: электронная коммерция, регулирование, электронные платежи, киберпреступность, фишинг.

Electronic Commerce is one of the dominating parts of the IT field and known as selling and buying products over electronic systems such as Internet. There are lots of e-commerce web-sites, such as eBay and Amazon, which work

24/7, which want to have comparative advantages. Thus these online shops add different kinds of features, like price comparison and easy checkout, to be user-friendly and unique. All these improvements attract customers and give new ideas to businessmen to conduct business with fewer expenses. These kinds of activities can be good for business owners, for people, but not for governments that force them to control the activities of the businesses in order to prevent the loss of millions of dollars through tax avoidance. This is an important aspect that e-commerce influences different levels of the society.

E-commerce is concentrated not only on the individual and business levels, but also on the governmental level. It allows its users to exchange services and goods without barriers of time and distance. This term is applicable for different kinds of “online” services, such as retail shopping, banking, auctions, ticket booking, and movie rentals. In other words, anything you can imagine in the real world can be reached via e-commerce over the Internet.

According to “Ecommerce-Land”, the history of e-commerce dates back to the invention of the Internet in 1991 when the Internet was open to public and commercial use. Since then, the number of e-commerce web-sites has been growing as well as the vendors’ e-commerce web-sites; the number of e-shopping customers has been increasing too. Nowadays, almost every company has a web-site that supports e-commerce, which plays an important role in their success and profit.

The Internet has changed our perspectives in the world, i.e. it shortened the distances between countries, people, and businesses, and made our lives easier. Then, e-commerce has become a part of it. Without the Internet, e-commerce could not exist.

E-commerce provides many new ways for businesses and consumers to communicate and conduct business. There are a lot of advantages and disadvantages for customers (no matter whether it is a company or an individual) in e-commerce. All companies and individuals look for benefits when they conduct business. If we look from the seller’s perspective, they want to sell their products with maximum profit, whereas consumers want to buy the products as cheap as possible. Each of them is trying to turn the face of profit toward them. In such a situation, online commerce is a very good way to make both of the parties satisfied.

The customer can gain maximum profit by comparing prices of any product from different web-sites and choose the cheapest one. A customer can compare the prices of the same product from different vendors while sitting in front of the PC. However, sometimes cheap does not mean a good quality. By buying goods and services from the unreliable sellers, the buyer might be fooled. Moreover, due to such an event, online commerce may lose some customers.

The prospective buyers do not need to go to the mall to buy something; they can purchase it while sitting at home or office after comparing prices.

Sometimes, they can obtain electronic book, music, video, or computer software by directly downloading them from the Internet. However, the problem that may occur is that the online buyer may receive the item, which does not look like she/he expects. Buyers cannot touch the item to evaluate it; they just rely on the item description, which must be provided for all items sold online. In other words, it is better to think twice whether it is a good idea to buy the product online, since some products, such as car or PC, may not work properly or can be refurbished. Therefore, it may cause a big trouble for the buyer, who cares more about its price than its quality or size.

Since e-commerce has become popular not long time ago, there are many holes in legislation of some developing countries, where the rights of the population can be infringed, retailers can escape from the governmental payments. Thus, the governments in developing countries need to concentrate more on electronic transactions to create the law as ideal as possible.

Take the Kazakhstani legislation. There is no Law on e-commerce, but still we have the Rules on implementation of electronic commerce, including the functioning of electronic trading platforms. Also, the e-commerce somehow was mentioned in the Law of republic of Kazakhstan On the regulation of trading. For the developing country like Kazakhstan, the holes in legislation is obvious.

Let me briefly list some advantages and disadvantages of e-commerce.

Some advantages that can be achieved from e-commerce include: Being able to conduct business 24 hours per day, 7 days per week, and 365 days per year; access the global marketplace; speed (there is no need to wait for receiving of some information); market space is global; opportunity to reduce costs; computer platform-independent; efficient applications development environment, allowing customer self-service and 'customer outsourcing'; stepping beyond borders to a global view; new marketing channel.

Some disadvantages and constraints of e-commerce include the following: time for delivery of physical products is long; physical product, supplier and delivery uncertainty; perishable goods; limited and selected sensory information; returning goods; privacy, security, payment, identity, and contract; personal service – although some human interaction can be facilitated via the web, e-commerce cannot provide the richness of interaction provided by personal service; size and number of transactions – e-commerce is most often conducted using credit card facilities for payments, and as a result very small and very large transactions tend not to be conducted online; the size of transactions is also impacted by the economics of transporting physical goods.

E-commerce has many other advantages in addition to some disadvantages. It is hard to mention all of them here, but the important ones are mentioned above. However, for some items (e.g. laptops, antiques, DVDs) advantages may weigh heavier than disadvantages and vice versa. Thus, it is

better to compare all advantages and disadvantages for the specific item to be sure for the correctness of the decision.

There are some problems caused by the development of e-commerce. I would like to list some of them that I arranged as important ones.

- Getting people to buy something at your site, people usually feel VERY uneasy about buying via Internet.
- Lack of legislative info.
- Legality concerning international e-commerce companies; business contracts are defined differently by law in every country; legal, institutional and cultural differences between countries with respect to many of the issues that fall under the e-commerce umbrella.
- Ownership, the copyright problem is really important.
- The failure to successfully include many developing countries in the development of overall e-commerce governance initiatives, as well as in action on many of the specific issues that fall under the general umbrella.
- Uncontrolled annoyances and criminal activities that undermine consumer acceptance and uptake (e.g. spam, phishing and identify theft, other forms of fraud).
- Protectionism (e.g. concerns in developed countries about outsourcing jobs to developing countries, concerns to protect established industries from online competition).
- Physical product, supplier and delivery uncertainty.
- Unable to examine products personally.
- Guaranty on goods and services.
- Perishable goods.
- Returning goods online can be an area of difficulty.
- Privacy, security, payment, identity, and contract.
- No information from Drupal is pre populated on the pay pal billing fields. For an anonymous purchase ecommerce asks for the email address and this should be pre-populated so they don't have to enter it again, same goes for a returning user, except more information is available on it should pre populate the PayPal form.
- When a user cancels a PayPal transaction it does not go back to the node defined.
- When the PayPal payment is complete it does not go back to the success page as defined and it puts all the IPN information in the address as a query string and is visible by the user.
- When the PayPal payment is complete and the user clicks the return to Company Name, it attempts to send back all the IPN information and pops up a box saying while this page is secure the information you are sending back is not, and again this goes back to the main page

regardless if you set up a node to handle it and all the IPN info is shown in the address bar as a HUGE query string. This query string also messes up the logon procedure if the user did it anonymously.

- Legacy technology.
- Getting certificates, patents, rights in order to open a new web page.
- Product was not delivered on time. The rights of consumer are violated.
- Online purchasing security: there are possibilities of credit card number theft.
- Website stickiness and customer loyalty
- Security: an e-commerce business exposes itself to security risks and may be susceptible to destruction and disclosure of confidential data, data transfer and transaction risks (as in online payments) or virus attacks.
- Problems with taxation and VAT.
- Standardization and certification
- Goods on credit.
- Solvency by e-money.
- Deferred goods.
- Transfer of money. E-payment system is not developed enough.
- Payments via check/cards.
- Population awareness of e-payment, e-money, e-commerce as a whole.

How reliable is e-commerce?

Reliability is a very important issue in e-commerce. Although many e-shops use improved encryption, they are still under danger. As an example, someone can steal someone's identity and financial information. Moreover, there are many web-sites that do not provide authentic transaction, which can be an easy fish for the online thieves. These thefts can be due to the unreliability of ISPs (Internet Service Providers), which is a business or organization that provides consumers or businesses access to the Internet and related services, phishing attacks, and non-trusted web-sites with e-commerce.

Nowadays, many ISPs provide reliability of their services, such as encryption of domain names (e.g. eBay.com or Amazon.com) and e-commerce features (e.g. tax and shipping calculation, fast Internet connection, and etc.). Companies, which are going to do their first steps in e-commerce world, have to find the reliable ISP because their business success will partially depend on their ISP reliability. People who are interested in your business failure try to attack your system and network by using different tools, such brute force attack (cracking using different kinds of symbols, characters, and numbers) and dictionary attack (attacking using words from a dictionary). If the attackers succeed, all financial and other information will be stolen, which may bring to bankruptcy and loss of the authority. Unfortunately, there is a lack of experience in cyber security and dealing with cyber-crime in our country.

Another point e-commerce users need to focus is financial and identity information theft, which is known as phishing. It is eroding e-commerce users' confidence in online banking and e-transactions. According to the survey that was performed during this work, more than half of responders said that they were less likely to do business online because of the fear of fraud. But still the e-commerce sales in Kazakhstan increased. Currently the market offers approximately 1 700 online shops and nearly about 20 e-marketplaces.

Online banking is necessary because some customers would not prefer to go to the bank and do some transactions or check balance, it is better and easier for them to do everything without visiting the banks. In order to prevent such customers from being fraud, banks implement different kinds of security barriers, such as secret question, long passwords with different characters and numbers, several levels of authentications to decrease the probability of phishing. Another solution can be a legislation of phishing being a crime, i.e. there must be zero tolerance for any kind of cyber-crime.

One of the most popular e-commerce web-sites, eBay and PayPal, also have become victims of phishers. There are many e-mails have been sent to their customers on behalf of them by fraudsters. In those e-mails, phishers tell different reasons to retrieve financial and identity information, such as updating profile including financial information or threatening to claim to eBay about the unpaid item that was not bought by you. However, according to the statistics provided by the anti-virus vendor Sophos, the number of users of eBay and PayPal, who become caught by the phishers, is decreasing every month. Every day, many e-commerce users become more familiar with the phishing, and next time when they do online activities, they are aware of the fraudulent. Thus, fraudsters target small credit card companies and retailers.

What is the prospective of e-commerce?

As the number of e-commerce users grows, businesses begin to focus on online transactions, and at the same time, they still do their general physical transactions. They started to realize that the Internet is viable source for their profits, because people spend more time in the Internet than watching television. In the close future, it would be hard to succeed unless a company has its own online web-site with e-commerce support. Everybody tells to order sunglasses when you look at e-commerce future because experts believe that e-commerce has a bright future.

Kazakhstan is one of the fast growing countries in the world. Along with Kazakhstan's economy, small businesses are also developing. And nowadays, they are not afraid to advertise their products online as it was several years ago, when Kazakhstan's information technologies sector was poor. Thank to Kazakh government and its intelligent strategy of 2030, Kazakhstan will develop its information technologies sector and hopefully reach other developed countries in terms of IT. Everyday more and more Kazakh people have access to the

Internet. Moreover, some of them do their businesses through the Internet. Even though e-commerce is not as developed as in the developed countries, people do risk, and this risk must come true someday.

Even though e-commerce has enveloped all levels of our society, it has many parts to fix until it become the major place of online activities. However, almost everybody believes in the bright future of it. As Google shows, there is almost no person who has pessimistic view at online activities. Even governments support online activities providing the submission of different governmental taxes and forms online for every e-business transaction.

According to Kazakhstani Government officials' announcement, e-commerce sales should have increased to \$5.25 billion within 5 years and push to 25 percent e-commerce's percentage of total retail. To reach these goals, officials should adopt the legislation to protect the rights of e-commerce participants while purchasing online. Some incentives were approved like tax incentives until 2023.

Despite e-commerce's disadvantages and while there are people and organizations that enjoy conducting online businesses and find it profitable. Thus, Kazakhstan is also not going to be behind developed countries, and investing a lot of money in IT. This plan of Kazakh government leads to improvement of Kazakhstani's IT field and especially e-commerce, which is going to be one of the investors in Kazakh economy. E-commerce can be born, but not dead, while a government wants to be up to date.

References

- 1 Chaudhury, A., Jean-Pierre Kuilboer. *E-Business and e-Commerce Infrastructure*. McGraw-Hill, 2002. – 480 p.
- 2 E-Commerce, Office for Technology, New York State. URL: <http://www.oft.state.ny.us/ecommerce/index.html>.
- 3 E-commerce Then and Now. About.com: Arts/Crafts Business. URL: <http://artsandcrafts.about.com/library/weekly/aa051001.htm>.
- 4 E-commerce advantages and disadvantages. URL: http://www.marcbowles.com/sample_courses/amc/ec1/ec1_3.html.
- 5 Inter-Parliamentary Assembly of Member Nations of the CIS States. "Model Law on E-Commerce". URL: <http://www.nwapa.spb.ru/model.html>.
- 6 Miller, R. *The Legal and E-Commerce Environment Today*. Hardcover, Thomson Learning, 2002. – 741 p.
- 7 Pombriant D. (November 14, 2007). Fighting phishing. Ecommercetimes. URL: <http://www.ecommercetimes.com/story/60301.html>.

- 8 Richardson W.T.G. (2007). Benefits and Limitations of e-business. Witigar.com. November 28, 2007. URL: <http://www.witiger.com/ecommerce/benefits-limitations.html>.
- 9 The More Time People Spend Using the Internet. The Internet Study. URL:http://www.stanford.edu/group/siqss/Press_Release/press_detail.html.
- 10 Tittel, E., Chappell, L. Securing TCP/IP Environments, Guide to TCP/IP, 2004. – P. 391- 434.
- 11 Vostrikova L. (2005), U.S.Commercial Service Almaty. URL: [http://ommercecan.ic.gc.ca/scdt/bizmap/interface2.nsf/vDownload/ISA_3748/\\$file/X_2639688.DOC](http://ommercecan.ic.gc.ca/scdt/bizmap/interface2.nsf/vDownload/ISA_3748/$file/X_2639688.DOC).
- 12 Wikipedia, Internet Service Provider, URL: <http://en.wikipedia.org/wiki/ISP>.
- 13 Wikipedia, Electronic Commerce, URL: <http://en.wikipedia.org/wiki/E-commerce>
- 14 The Astana Times, URL: <https://astanatimes.com/2019/05/kazakhstan-seeks-to-boost-number-of-e-commerce-buyers-to-15-million-by-2025/>.