

THE IMPACT OF THE INFORMATION ECONOMY ON FOREIGN TRADE MODELING

¹Hasanova Natavan Filman ²İsayev Elnur Qanimat, ³Mahmudova İlhamə
Mohammadnabi, ⁴Gurbanova Farida Ahmed

¹ Ph.D-student of Azerbaijan National Academy of Science Institute of Economics, lecturer of
Department of Computer Sciences Azerbaijan State Pedagogical University,
<https://orcid.org/0009-0007-3983-2444>

²UNEC, Head teacher of the department of international economy and business Azerbaijan State
Economical University (UNEC) <https://0000-0002-8240-7482>

³Candidate of economic sciences. Associate Professor, Azerbaijan State Economical University
(UNEC) <https://0000-0003-3775-4853i.e.n>

⁴ Assoc. Azerbaijan State Economical University (UNEC) <https://orcid.org/0000-0002-9747-5488>

Abstract

Nowadays, there have been many changes in social and economic life as a result of developments in IT technologies. From a marketing perspective, this has led to major changes in consumers and businesses. With the development of Internet technology, the fields of use and benefits of e-commerce are increasing day by day. This further affects the development of bilateral communication. Internet communication is very important for human relations because of its features such as convenience and cheapness. The emergence of electronic commerce has created a fiercer competitive environment. Today, the top 500 largest companies have dozens of websites that were created a few years ago. In trading markets, time plays an important role for both the business and the consumer. From a business perspective, more transactions can be achieved in the same day with less time spent per transaction. From a business point of view, E-commerce is more efficient than traditional trading method. It is a fact that any company and person can sell their products through e-commerce sites without putting them on the market. This also significantly reduces the time spent on bargaining. Both consumers and businessmen play a key role in defining business here. In terms of business, E-commerce provides a better connection to their potential customers as you can access their web pages from anywhere on the internet. In this way, more potential customers can be interested in the company's work and thus the limitations of geographical location are removed.

Key words: E-commerce, economy, information, consumer, business, trade.

Introduction

Another form of information business is related to the mass arrival of various print publications on the Internet. At this time, the publishing company organizes the Web-server on which the materials of the printed publication or the electronic version are hosted. The main goal is to increase the number of readers of the publication.

In addition, you can subscribe to the electronic version of the publication. In this case, after transferring certain funds to the publisher's account, the user gets a certain name and password to access the information. However, it should be noted that attempts to charge for the use of information usually resulted in customers abandoning this service and switching to the free service of similar information. In connection with this, it is necessary to find a golden mean: in general, more recent and operational information is made available on a paid basis, and release archives are accessible to any user.

More fundamental electronic publications in the network were analogues of large printed publications realized in WWW technology, in other words, hyperinternet books, encyclopedias. An example is the implementation of "Britannica", one of the oldest encyclopedias in the world, as a hypertext multimedia encyclopedia.

There is a fee to access it, but you can use it for free for a week to familiarize yourself with the work of the system.

Another option of information commerce in the network is the presentation of business information. Quotations of these securities, exchange rates, prices on stock exchanges, operational news can be. Recently, special information systems or business services have been organized.

Creating a virtual store does not require special efforts or financial costs, and at the same time, e-commerce is already starting to enter the business. In order not to be on the edge of the competition, every organization and every businessman needs to think about the options for organizing such a trading point.

Means of payment on the Internet. The ever-growing army of Internet users spend most of their time searching "cyberspace" for information they need for work, study, or just for fun. Accordingly, the marketing potential of the network increases on the one hand with the increase of WWW users and on the other hand with the increase of organizations interested in placing commercial advertising on the Internet.

Since the second half of 1994, commercial advertising has occupied a significant portion of the hypertext information available on the WWW. However, the business uses of global digital communications are not limited to advertising. The goods or services must be presented to the potential buyer, but there must be an opportunity to obtain the goods "without leaving the window". Since 1994, the ability to settle and pay with the use of computer networks has become a practical problem.

The basis of settlement and payment systems offered today with the use of the Internet are the most advanced cryptographic technologies for ensuring the confidentiality of information and the authenticity of communications.

For today, electronic means of settlement on the Internet (their number is slightly more than ten) can be divided into three categories: surrogate means of settlement, expansion of existing non-account settlement systems such as checks and plastic cards, electronic cash.

Digital coupons and tokens—surrogate means of payment for online payments—are offered today by several companies, the most prominent of which are First Virtual Holdings and Software Agents (more commonly known under the NetBaik trademark). The client receives some amount of the sequence of symbols from the "bank" for cash or non-cash settlement (for them, the bank ensures the non-triviality of the algorithm and the uniqueness of each copy). The trader returns this amount to the "bank" after deducting commissions. At this time, the "bank" has the obligation to control the validity of the incoming tokens.

Such a scheme is simple in implementation and operation. However, the legal status of transactions using such surrogates remains uncertain, as do the fiscal obligations of customers acquiring goods and services from traders.

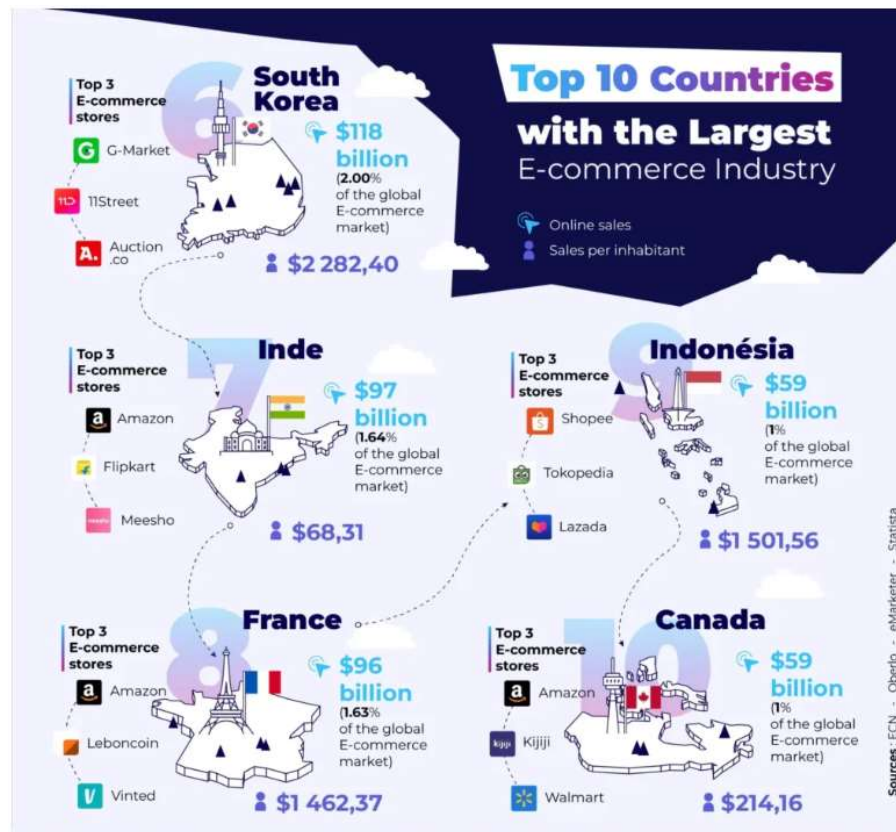
CyberCash went the other way, offering the first technology to expand non-network payment systems that help plastic cards be used for online payments.

The software offered by this company uses public key cryptography to transmit data about the plastic card from the buyer to the merchant.

David Chaum (David Chaum), a famous scientist-cryptologist and businessman, as well as a number of his colleagues, came up with the idea of electronic (or digital) cash - a means of payment that combines the convenience of electronic settlements with the convenience of cash. Two technologies that realize this idea have been presented on the Internet. The company Mondcx, led by Timothy Jones, offers a network version of an electronic wallet, realized as a hardware-software complex. Under the leadership of D. Chom, DigiCash company presented the ccash network electronic money technology in software version.

The basis of the technology is the crimp protection cable with open switches. An electronic cash issuer (bank) has a sequence of key sets designated by "digital money" in addition to the regular key set.

Scheme 1. Top ten e-commerce markets

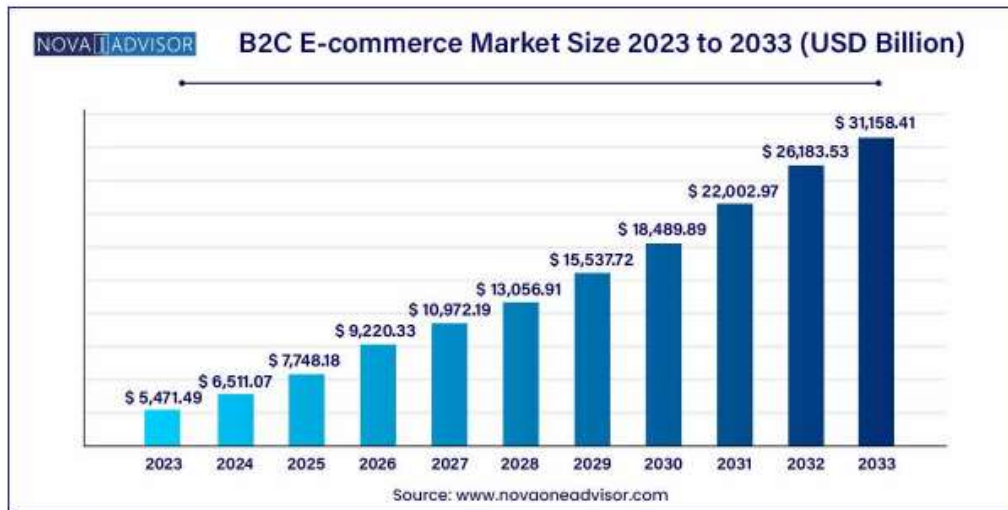


Source: <https://www.ecommerce-nation.com/top-10-countries-with-the-largest-e-commerce-industry/>

The use of the blinding factor is the core of Chotn's proposed "blind signature" adoption as an addition to the cryptoprotection method with conventional public keys. By not being able to collect information about bank payments in the field of using "blind signature", it allows to control the one-time use of each "money" by that customer and to identify the recipient of each payment. The buyer cannot be identified even when the seller agrees with the bank. At the same time, if the buyer wants, he can identify himself and confirm the fact of the transaction. Such logic is intended to prevent the criminal use of electronic cash.

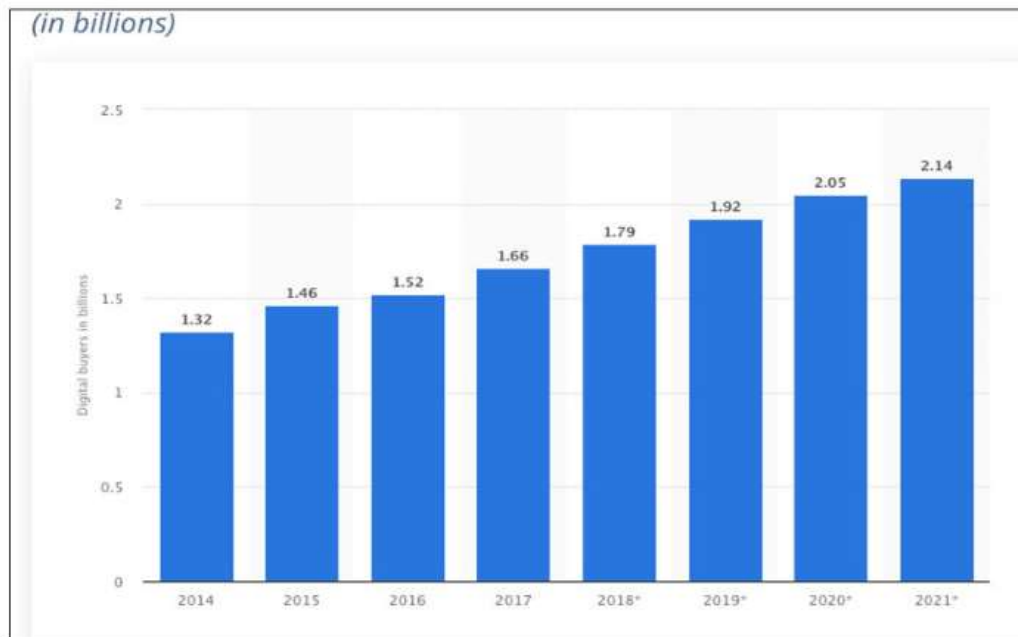
In order to pay cash, the customer contacts the bank and sends the received "money" to the "bank" with the opening number. "Bank" controls whether it is used or not, enters the number in the incoming register and transfers the corresponding amount to the client's account.

A transaction between 2 buyers involves only the transfer of "money" from the buyer to the seller, the seller will immediately try to deposit it in the bank or accept it without verification at his own risk. Along with the "money", some additional information is transferred, this information can help to identify the payer, but if he wants to use the same "money" twice, he can be identified.

Diagram 1. Global e-commerce sales volume (B2C - billion \$)

Source: <https://www.novaoneadvisor.com/report/b2c-e-commerce-market>

Currently, the Internet is an integral part of our lives. The simplest example of this is that 3.2 billion of the world's population use the Internet and 9 billion of their devices are connected to the Internet. Since the creation of the Internet, the emergence of more than 10,000 service providers around the world, the registration of more than 300 million domain names, and the presence of 2.1 billion social network users confirm the benefit of its role in the development of the world economy. The fact that the Internet has progressed so much has determined new goals and priority directions that are evident in the system of economic relations. For example, it is possible to show the creation of digital currency in the stage of progress of the modern era as an example. The positive side of this currency is related to elimination of inflation, protection of privacy, not tied to any state and open to all in the market. In addition, another widely used digital currency is bitcoin, due to the increase in the number of its users worldwide, the value of 1 bitcoin increased by more than 0.07 cents in the last 6 years to \$680.

Diagram 2. The number of buyers in the digital economy

Source: https://www.researchgate.net/figure/Number-of-Digital-Buyers-Worldwide-from-2014-to-2021_fig1_344737735

From what we have listed, it is clear that the role of "digital economy" in the progress of the general economy is very large. In the recent past, the capacity of e-commerce worldwide was set at 1 trillion 700 billion dollars. Three countries (China, Great Britain, America) account for more than 50% of this trade turnover, to be more specific, 61%. It can be seen from the value of the taxes paid by these companies that it plays an important role in the complex revenues of the states where the largest digital enterprises on earth are registered: "Facebook" company 1.4 billion dollars, "Apple" company 13.2 billion dollars, "Google" paid \$2.3 billion in taxes, and eBay paid \$610,000,000 in taxes.

E-commerce has advantages for both buyers and sellers as well as the government. Thus, since payments are made online during e-commerce, all settlements are recorded and taxed, as a result, tax evasion is practically impossible. Buyers also save time and money. Because he can buy products and pay from the place he wants by spending the time to go shopping on the ready-made website. The good thing for the government is that if most of the purchases are made online, its steps will be recorded and tax evasion will also decrease. Also, the funds spent by the state on the production of cash will be reduced.

Certain tax incentives may apply to e-commerce, such as exempting e-commerce from VAT. Taking into account the world practice, American and European countries have given a number of tax concessions for the population to switch to e-commerce and to create this desire in them, and even exempted companies engaged in e-commerce from VAT taxes for a while. Thus, shopping

with e-commerce is cheaper than traditional shopping. This policy eventually leads to the formation of e-commerce habits in people and the development of this field in the country. In Azerbaijan, e-commerce accounts for only 4% of traditional trade operations. The main reason for tax revenue evasion to the state budget is the low implementation of non-cash payments. Thus, through cashless payments, every step is registered and tax evasion is reduced to a minimum, and the state's income from taxes increases significantly.

The Internet environment, with the opportunities it provides to both consumers and businesses, has made it possible for activities to acquire a more flexible, rich and fast content and to grow in size regularly. Especially from the point of view of small and medium-sized enterprises, the Internet, with the "equal opportunities" it provides, enables such enterprises to take a comfortable place in global markets in the same way as large companies. Internet marketing enables businesses to be more customer-oriented, to consider customer wants and needs more in product policy, and to strengthen customer relationships that will gather more information about their customers. On the other hand, with the low cost opportunity it provides, it helps companies restore their competitive advantages by creating a basis for reducing the price level. In addition, the ease of global accessibility brought about by the Internet environment allows companies to acquire customers of universal sizes and provide their services, and the possibility of online distribution of some products ensures that the distribution function is performed more effectively and efficiently. On the other hand, the fact that companies have the opportunity to present on a global scale with very low costs compared to traditional sales is among the other advantages that the Internet environment provides to companies. In this work, internet marketing activities are dealt with in chronological order, from creating a suitable condition for launching, building a website, choosing a virtual store model, and providing logistical support.

As a result of the research, after seeing the success of some strategies tested in the world experience, I make some suggestions, concluding that these applications can be used in the development of the Azerbaijan e-commerce sector and support the development of the country's economy:

1. According to the statistical information of the Azerbaijan, it can be noted that 99.4% of the purchases carried out via e-commerce are non-food products. Taking advantage of such conditions, it is possible to trade food products over the Internet. It is possible to analyze this trade in 2 directions:

- a. Export and sale of agricultural products belonging to the nature of the Azerbaijan to local and foreign markets,

- b. In the monopolized food markets of the Azerbaijan, it is possible to create a competitive environment and offer products with alternative and minimum prices.

2. Websites are considered the place where e-commerce transactions take place. The design of the established website is very important. Visitors to a website should easily find the information or products they are looking for. For this reason, the development of websites should be entrusted to more professional designers, and at the same time, paying attention to the fact that the sites are easy to understand, enjoyable and entertaining can increase the number of visitors and

increase the cycle of the site.

3. In traditional trade, the return period of products is defined as 2 weeks, but this period is limited to 1 week for e-commerce. And in AR, e-commerce businesses do not accept the condition of returning products, causing dissatisfaction among buyers.

4. One of the advantages of shopping on the Internet is the possibility to buy any product in a few clicks without spending physical energy. Although this process has made great progress in the world, delivery to a specific address in Azerbaijan is carried out only by traditionally selling restaurants and flower shops for orders received directly or by phone. However, if e-commerce enterprises in Azerbaijan provide home delivery service, buyers will be interested in this field.

5. The tax system applied to the field of e-commerce slows down the development of the field, to prevent this, they should create a system for calculating the tax in the banking system according to the service and not the product. Including, the state can organize incentive enterprises and concessions for the progress of this sector.

6. When shopping is done on e-commerce in countries around the world, a contract is concluded and sold between the buyer and the seller. The proposal is to formalize the purchase and sale process by concluding a contract in Azerbaijan..

7. Designing special cards that can be used in the e-environment in the banking system and the low interest rate on these cards can be useful for the development of the field. In addition, I suggest that the globally known Bitcoin (bitcoin) electronic currency be implemented in Azerbaijan as well.

8.

REFERENCES

1. Law of the Republic of Azerbaijan "On Electronic Commerce" Ilham Aliyev President of the Republic of Azerbaijan Baku, May 10, 2005, No. 908-IIQ
2. MQAkbarov, Electronic commerce, Teaching aid for high school students. Baku: "Economics University" Publishing House, 2011, 212 pages. Q13
3. I.K. Musayev, MNLizadeh, ABMahmudov "Electronic business", "MSV PUBLISHING" publishing house, Baku 2016, 200 pages. 105
4. "History of the Internet: A Timeline," <http://www.wnpl.alibrary.com/train/tutorial/timeline.htm>.
5. "History of the Internet", <http://www.cs.rochester.edu/u/leblanc/internetcourse/history.htm>.
6. "The Internet," http://www.wuwien.ac.at:8082/rfc/rfc1462.hyx/rfc1462.3_bThe_bInterne.
7. Don Tapscott (1998), "The Digital Economy", Kochsis-tem Information and Communication Systems AS Publications, Istanbul.

8. Information Week (1998), "Electronic Commerce Ilis-Determining the Color of the Pantry", Issue: 15, AD Yayıncılık, Ankara.
9. Varian, Hal R., "The Information Economy: How Much Will Two Bits Be Worth in the Digital Marketplace?" <http://sims.berkeley.edu/~hal/pa-ges/sciam.htm>.
10. Suleymanov, E "Electronic commerce and IT's probable effects on Azerbaijan Economy" Application of Information and Communication Tech-nologies, 2009. AICT 2009. International Confe-rence 14-16 Oct. 2009.
11. <https://tr.vpnmentor.com/blog/abd-ve-duenya-capinda-yili-internet-trendleri-istatistikler-veriler/>
12. <http://www.internetworldstats.com/stats.htm>
13. <http://www.gaziantepusula.com/haber/jin-dunyanin-ikinci-buyuk-dijital-ekonomisi-oldu-haberi-38151.html>
14. The official website of the Statistical Committee of Azerbaijan (www.stat.gov.az)
15. <https://www.ecommerce-nation.com/top-10-countries-with-the-largest-e-commerce-industry/>
16. https://www.researchgate.net/figure/Number-of-Digital-Buyers-Worldwide-from-2014-to-2021_fig1_344737735