THE IMPACT OF E-COMMERCE ON THE ECONOMICS ENVIRONMENT

ROBERT GABRIEL DRAGOMIR  
LECT UNIV PH.D., SPIRU HARET UNIVERSITY  
e-mail: robert73d@yahoo.com

DALIANA ECATERINA TASCOVICI  
LECT UNIV PH.D., SPIRU HARET UNIVERSITY  
e-mail: dalianatascovici@yahoo.com

ELIZA CON SUELA ISBAȘOIU  
LECT UNIV PH.D., SPIRU HARET UNIVERSITY  
e-mail: prof_vesel74@yahoo.com

Abstract

The present paper proposes to speak about the impact the e-commerce has within the economics environment. At first, we described the development of the digital technologies and the role of the browsers in the electronic commerce. Secondly, we aim at presenting, in brief, the history and the evolution of e-commerce. As concern the applicative part of the paper, several graphs comment on the up-to-date pieces of information connected to the issue. At last, the new concept of bit coin is referred to. In the end we draw up the conclusions.

Key-Words: global commerce, virtual coin, bit coin, economic environment

Classification JEL : M15, M41

1. History of e-commerce

Within this digital era, information is the key element and strategic resource for the harsh concurrence, the physical or virtual companies are implied in. The development of the digital technologies in the latest 30 years based on the massive investments made in this field. The start up moment of the electronic commerce is the years '60 - '70; at first it consisted in information changing between companies through the computerized networks. In the years '80, CompuServe created Electronic Mall, the first online shop. Once the browsers emerged during the '90s, this type of commerce expanded. A great contribution to its development was the apparition of World Wide Web in 1995. The electronic commerce became a good component of economics; its impact on the company is bigger and bigger. Due to its multiple forms of organisation and advantages, its amplitude is incontestable.

The e-commerce ranges all over imaginable types of activity, from selling – buying goods, to the most sophisticated financial operations. In its simplest form, the e-commerce requires network, company promotion, preliminary and post selling services. Thousands of small and medium companies can already confirm these minimum conditions can be assured without difficulties.

Although the concept of e-commerce history covers a period of 55 years, its evolution was a complex assembly of technologic elements and specific law frame.

We consider that an analysis of the e-commerce impact on the economic environment is relevant if it comprises the economic reality in the world, in Europe and in finally in Romania.

2. The Evolution of the Electronic Commerce

The Internet is the outstanding means of presenting and transferring information. This was the first step; the second one was the electronic transfer of money.

The simultaneous development of telecommunications and computers sustained the explosion of the Internet and its specific technologies.

Once web was spread, the marketing specialists thought how they can transform the web surfers in clients. The companies took into account new services, such as buying on net, by consulting electronic catalogues.

The e-commerce optimizes the approaching and distribution channels in order to optimize the activity. It goes beyond marketing and on line selling; it implies a dynamic change in information and ideas through web. Its speed is impressive; the number of users increases every year.
The evolution of e-commerce is tightly connected to the increase of the Internet users and the accessibilities this type of communication offers. E-commerce or e-business is no longer used by the great companies, but more and more medium or even small companies understood the advantages of the online business and their great potentials.

### Table no.1 Usage of the Internet on Earth

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1,073,380,925</td>
<td>4,514,400</td>
<td>167,335,676</td>
<td>15.6%</td>
<td>37.06%</td>
</tr>
<tr>
<td>Asia</td>
<td>3,922,066,987</td>
<td>114,304,000</td>
<td>1,076,681,059</td>
<td>27.5%</td>
<td>9.41%</td>
</tr>
<tr>
<td>Europe</td>
<td>820,918,446</td>
<td>105,096,093</td>
<td>518,512,109</td>
<td>63.2%</td>
<td>4.93%</td>
</tr>
<tr>
<td>Middle East</td>
<td>223,608,203</td>
<td>3,284,800</td>
<td>90,000,455</td>
<td>40.2%</td>
<td>27.39%</td>
</tr>
<tr>
<td>North America</td>
<td>348,280,154</td>
<td>108,096,800</td>
<td>273,785,413</td>
<td>78.6%</td>
<td>2.53%</td>
</tr>
<tr>
<td>Latin America</td>
<td>593,688,638</td>
<td>18,068,919</td>
<td>254,915,745</td>
<td>42.9%</td>
<td>14.10%</td>
</tr>
<tr>
<td>Australia</td>
<td>35,903,569</td>
<td>7,620,480</td>
<td>24,287,919</td>
<td>67.6%</td>
<td>3.18%</td>
</tr>
</tbody>
</table>

Analyzing the situation presented in the table, we note the following aspects:

The great increase of the number of users from 2000 to 2012 is seen in Africa, this is 37.06%, but with the smallest penetration rate of 15.6%; it is followed by the Middle East with the value of 27.39% and Latin America with 14.10%.

The smallest increase of users from 2000 to 2012, is to be seen in North America, of 153.3%, but if we take into consideration that here we meet the highest penetration rate, of 78.6%, we can observe the plafonare of the number of new users;

For the years 2012, the great number of users is for Asia (1,076,681,059) and the least in Australia (24,287,919).

The Internet users in Europe represent in 2012 June 21.6% from the entire world, the rest of the continents gathering 78.4%.

If we refer to the informatics technologies and Internet speed, Romania has the first place in Europe and the fourth place in the world, but if we take into consideration the Internet access and its usage, we are placed on the last place in UE. The statistics utters that only 9% of the Internet users bought online in 2010.

As concern Romania, the evolution of the online commerce can be seen in the figure below:

![Figure no. 1 E-commerce in UE in 2010](chart_url)
The evolution of the Romania online market during the period 2006 – 2012 show us an increase of about 10 times; this type of commerce had a slow start, but it tends to be a viable tendency.

We maintain several characteristics of the Romanian Internet users, as seen by GfK Romania, during 2010 – 2012viii.

The incidence of people over 15 years old was of 48.7% in 2012, increasing with 8 percent as 2010. The percentage of women using the Internet is greater than of men. In 2012 about 50% of men and 47% of women were using the Internet. The number of men increased with 7.7 percent points and the number of women increased with 9.3 points.

The rural area registers a better dynamics: the penetration rate increased from 22% to 33% from 2010 to 2012.

As concern the urban area, 61% citizens used the Internet in 2012, with an increase of about 7 percentage points as 2010.

The greatest penetration rate is in Bucharest; here 68% of the people over 15 access the Internet.

If we analyze the age of the users, the results are: 83% from the persons between 15 and 24 years old; 71% of the people between 25 and 34 years old and 62% of the people between 35 and 44.

The segment of people between 35 and 44 increased with more than 15 percent points; a significant increase, of about 8 percent is also for the segment between 45 and 54 years old.

Referring to education, 89% of the highly educated persons and 52% of the persons having a medium education sue the Internet.

In 2012 there were about 1 million of Internet users who bought on line, from the total number of 9 million Internet users.

3. The Evolution of the Electronic Commerce

Bit coin is a decentralized system of paying and a digital coin, created in 2009 by Satoshi Nakamoto. As opposed to the great majority of currencies, bit coins do not rely on trust on a central issue. They use distributed data bases from peer-to-peer in order to count transactions and cryptography to get security basic functions: they can be spent only by their owner and no more than once.

Bit coin allows anonymous possession and value transfer. They can be saved on a personal computer as a file or a wallet. Bit coin is one of the first representations of the concept named crypocurrency, firstly described in 1998 by Wei Daiix.

The table no. 1 presents the total bit coins in circulation, expressed in millions dollars and previsions.

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The table no. 1 presents the total bit coins in circulation, expressed in millions dollars and previsions.

Table no. 2 Bit coins circulation and forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Bit Coins in Circulation (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2.63</td>
</tr>
<tr>
<td>2013</td>
<td>5.26</td>
</tr>
<tr>
<td>2017</td>
<td>7.88</td>
</tr>
<tr>
<td>2021</td>
<td>10.50</td>
</tr>
<tr>
<td>2025</td>
<td>13.15</td>
</tr>
<tr>
<td>2029</td>
<td>15.78</td>
</tr>
<tr>
<td>2033</td>
<td>21.00</td>
</tr>
</tbody>
</table>

A few characteristics of bit coins are the following:

1. The lowest fees out there
   Bit coin's high cryptographic security allows it to process transactions in a very efficient and inexpensive way. You can make and receive payments using the Bit coin network with almost no fees. In most cases, fees are not strictly required but they are recommended for faster confirmation of your transaction.

2. Protection against fraud
   Any business that accepts credit cards or PayPal knows the problem of payments that are later reversed. Chargeback frauds result in limited market reach and increased prices, which in turn penalizes customers. Bit coin payments are irreversible and secure, meaning that the cost of fraud is no longer pushed onto the shoulders of the merchants.

3. Fast international payments
   Bit coins can be transferred from Africa to Canada in 10 minutes. In fact, bit coins never have any real physical location, so it is possible to transfer as many of them anywhere with no limits, delays, or excessive fees. There are no intermediate banks to make you wait three business days.

4. No PCI compliance required
   Accepting credit cards online typically requires extensive security checks in order to comply with the PCI standard. Bit coin still requires you to secure your wallet and your payment requests. However, you do not carry the costs and responsibilities that come with processing sensitive information from your customers like credit card numbers.

5. Get some free visibility
   Bit coin is an emerging market of new customers who are searching for ways to spend their bit coins. Accepting them is a good way to get new customers and give your business some new visibility. Accepting a new payment method has often shown to be a clever practice for online businesses.

6. Multi-signature
   Bit coin also includes a feature, not yet well known, which allows bit coins to be spent only if a subset of a group of people signs the transaction (so-called "n of m" transactions). This is the equivalent of the good old multi-signature cheque system that you might still use with banks today.

7. Accounting transparency
   Many organizations are required to produce accounting documents about their activity. Using Bit coin allows you to offer the highest level of transparency since you can provide information your members can use to verify your balances and transactions. Non-profit organizations can also allow the public to see how much they receive in donations.

8. Bit coin for Individuals
   Bit coin is the simplest way to exchange money at very low cost.

9. Mobile payments made easy
   Bit coin on mobiles allows you to pay with a simple two step scan-and-pay. No need to sign up, swipe your card, type a PIN, or sign anything. All you need to receive Bit coin payments is to display the QR code in your Bit coin wallet app and let your friend scan your mobile, or touch the two phones together (using NFC radio technology).

10. Security and control over your money
    Bit coin transactions are secured by military grade cryptography. Nobody can charge you money or make a
payment on your behalf. So long as you take the required steps to protect your wallet, Bit coin can give you control
over your money and a strong level of protection against many types of fraud.
11Works everywhere, anytime.
Just like with email, you don't need to ask your family to use the same software or the same service
providers. Just let them stick to their own favourites. No problem there; they are all compatible as they use the same
open technology. The Bit coin network never sleeps, even on holidays!
11. Fast international payments
Bit coins can be transferred from Africa to Canada in 10 minutes. There is no bank to slow down the
process, level outrageous fees, or freeze the transfer. You can pay your neighbours the same way as you can pay a
member of your family in another country.
12. Zero or low fees
Bit coin allows you to send and receive payments at very low cost. Except for special cases like very small
payments, there is no enforced fee. It is however recommended to pay a higher voluntary fee for faster confirmation
of your transaction and to remunerate the people who operate the Bit coin network.
13. Protect your identity
With Bit coin, there is no credit card number that some malicious actor can collect in order to impersonate
you. In fact, it is even possible to send a payment without revealing your identity, almost just like with physical
money. You should however take note that some effort can be required to protect your privacy.
14. Bit coin for Developers
Bit coin can be used to build amazing things or just answer common needs.
15. The simplest of all payment systems
Unless payment needs to be associated with automatic invoices, accepting money is as simple as sending a
bit coin: link or displaying a QR code. This simple setup is within reach of any user and can fulfill the needs of a
good range of clients. When done publicly, it is especially suitable for transparent donations and tips.
16. Many third party APIs
There are many third party payment processing services that provide APIs; you don't need to store bit coins
on your server and handle the security that this implies. Additionally, most of these APIs allow you to process
invoices and exchange your bit coins into your local currency at competitive costs.
17. You can be your own financial system
If you don't use any third party APIs, you can integrate a Bit coin server directly in your applications,
allowing you to become your own bank and payment processor. With all the responsibilities that this implies, you
can build amazing systems that process Bit coin transactions with almost no fees.
18. Bit coin addresses to track invoices
Bit coin creates a unique address for each transaction. So if you were to build a payment system associated
with an invoice, you simply need to generate and monitor a Bit coin address for each payment. You should never
use the same address for more than one transaction.
19. Most of the security is on client side
Most parts of the security are handled by the protocol. This means no need for PCI compliance and fraud
detection is only required when services or products are delivered instantly. Storing your bit coins in a secure
environment and securing payment requests displayed to the user should be your main concerns.
20. Cheap micro payments
Bit coin offers the lowest payment processing fees and usually can be used to send micro payments as low
as a few dollars in value. Bit coin allows designing new creative online services that could not exist before only
because of financial limitations. This includes various kinds of tipping systems and automated payment solutions.
In spite of these many advantages offered by this type of paying, some specialists in informatics field advise
us not to buy this type of currency, as it is not something real, but a virtual thing, it also has an anonymous
character, the lack of regulations, it can be used for terrorist crimes. Countries as Russia and China strongly
restricted its usage.

5. Conclusions: Implications of the E-Commerce on the Global Commerce

The e-commerce depends exclusively on technology. Its specificity is that it changes the market. The
required abilities of the employees focus on the technique ones.
Within the e-commerce, the customer has many options for documenting, thus he becomes more oriented
and can also proposes the producer new and individualised market elements.
The producer can know the market trends more rapidly, by filtering the data base.
The online sellers have more purchase sources; even the small companies can wider their purchase sources,
taking into account other online providers, being unlimited by geographic distance.
The element time is spent more efficient, minimizing it during the cycle between the producer, retailer and
final customer.

The e-commerce contributes to the increase of the globalization\textsuperscript{xiii}. The online buying does not have the restrictions of the classical markets.

One advantage of the online commerce is that the clients can return the inconvenient products; this fact attracts another specific aspect, namely a returned product is resealed and can be bought at a smaller price.

Another preoccupation of the online seller is to measure the feedback concerning the clients’ satisfaction.

The online transactions contribute to the development of the offline connect partners and services.

The online shops have members who can be kept; the producers offer special prices or bonuses them in most situations.

6. Bibliography