Development and Impact of E-Commerce in Turkey

ABSTRACT
Today, the number of technological devices such as computers, cell phones, tablets etc. has increased and their usage has become widespread. As a result of frequent use of these technologies depending on situation, these devices have developed even further and became a part of our lives. Development of Internet infrastructure and increase of its usage have led people to interact more with the Internet and it has become an indispensable aspect of our lives. The fact that the Internet offers new opportunities for businesses and consumers formed a basis for development of e-commerce. The purpose of this paper is to determine impacts of electronic commerce and Internet technology in Turkey on both companies and customers through literature reviews.

Key words: Electronic commerce, E-Commerce, development of the Internet, Parties in E-Commerce, the impact of the Internet on the society.

Introduction
With the rapid development of technologies the Internet has become an indispensable part of our daily lives. We instantly search and find even the simplest piece of information through the search engines on the Internet and share them. By using the social media, we share every bit of our moments in our lives with our social circle and the loved ones and even with the entire world. We began to purchase many products and services online, such as a flight ticket, clothes we wear, computers or televisions we use, or even a car, land or a house.

Since the last 10-15 years, Internet entrepreneurship and Internet usage, both in Turkey and in the world, have been rapidly increasing and developing. While the number and quality of services provided online are gradually increasing, one of the most rapidly developing channels has been e-commerce.

According to studies, 2 of 3 young individuals in our country think that technological devices are an aspect of people’s social statuses. This year, more than half of young people (53.9 percent) believe that people who are not using technological devices are behind the times. Young people are using Internet mostly for connecting on social networks (54.7 percent), reading news (39.9 percent) and acquiring information (39.3 percent). (The report of Turkish Informatics Association (TBD)).

The technological revolution that we experienced in recent years not only affected our daily lives but also began to restructure all related areas of business life and economic activities. These are major changes and they do not occur with any kind of enforcement or imposition.

Although introduction of the Internet to the Turkish society dates back only five or ten years, with constant development of technological infrastructure for use of the Internet, the Internet usage becomes rapidly widespread in all areas in our country. As the smart phones begin to be used commonly, this trend increases even further.

The rapid increase in the number of Internet users in recent years forced the companies in our country, too, to enter into the Internet environment (www.enderahtatcioglu.com). Along with development of technologies, information technologies have been developed rapidly as well. Becoming an industry in its own right following the advent of the Internet, E-commerce has its own share of this development and rapidly grew and continues to grow. This new structure, brought by technology, emerged a new economy. And this new economy introduced many concepts such as E-business, E-government, E-Commerce etc. to our lives. Electronic commerce, electronic marketing or E-Commerce has been accepted as a concept that signifies and includes all these developments.

1-Concept of Electronic Commerce

Electronic commerce: the concept that involves fulfillment of commerce in electronic environment that emerged especially after increase of Internet usage pursuant to the year 1995 is called as electronic commerce or, in short, e-commerce.

Until today, many definitions have been made regarding electronic commerce. While some of these definitions were quite comprehensive, the others were kept brief.

The comprehensive scope of electronic commerce and the fact that it cannot be defined with certain boundaries and due to its constant progress, made it difficult properly define this concept. Several definitions for E-commerce, made by institutions from various countries, are given below.

CEFAC (United Nations Centre for Trade Facilitation and Electronic Business) describes it as follows; UN – CEFAC – It is the sharing of job information, structured or not structured, for fulfillment of business, administration and consumption activities between manufacturers, consumers and public institutions and other organizations through electronic means (electronic mail and messages, electronic bulletin boards, WWW technology, smart cards, electronic fund transfer, electronic data interchange etc.)/www.muhiteva.com/Kirçova, 2000, p.6.). According to the definition of WTO (WORLD TRADE ORGANIZATION), e-commerce: is fulfillment of manufacturing, advertising, sale and distribution activities for goods and services through telecommunication networks (Kirçova, 2000, p.6.).
The definition made by OECD (Organization for Economic Cooperation and Development) in 1997: all commercial transactions based on processing and communication of digitized written texts, audios and visuals involving individuals and organizations. OECD, described the e-commerce process as follows (www.elektronikticaretrehberi.com):
- Companies getting information and doing research in electronic environment prior to commercial interaction,
- Interaction of companies in electronic environment,
- Fulfillment of payment procedures,
- Fulfillment of undertakings, delivery of goods and services, aftersales maintenance, support etc., delivery of services.

Electronic commerce involves all kinds of activities related to product design, manufacturing, advertising, trade transactions, payment of accounts performed through all types of computer networks. Electronic commerce means doing business electronically. It involves electronic processing and communication of data in the form of written text, audio and video.

"Electronic commerce is fulfillment of manufacturing, advertising, sales, insurance, distribution and payment procedures of goods and services through computer networks. Electronic commerce involves three stages: advertising and market research; ordering and payment; and delivery, where one or all of the commercial transactions are performed in an electronic environment" (www.ekonomi.gov.tr).

Actually e-commerce or electronic commerce became even more popular with the development of today's technologies and frequent and constant use of these technologies by people. It can be described as exchange of goods or services or even ideas through such means as TV, EDI, ATM, phone, fax and finally Internet, which are employed by electronic channels or e-commerce.

"While e-commerce can be described as all kinds of commercial business activities, where parties communicate electronically without requiring to make direct or physical contact or physical exchanges... It can be described as fulfillment of purchasing information, products and services via sites on the web or utilizing computer networks to facilitate procedures involving delivery, sale, distribution and manufacturing of goods and services on the market or fulfillment of procedures that involve exchange of goods or services between two or more than two parties through electronic means and methods." (Budak, 2010, 19)

E-commerce can also be defined as "purchase and sale of goods, services and ideas by means of communication and specifically, through the Internet." If we are to describe electronic commerce with a simple definition we can say that it is a part of new means of communication established with development of the Internet. Functional definition of e-commerce is: to use Internet for value exchange, to be more specific, orders and payments between enterprises as well as enterprises and consumers.

### 1-1. Means Used in Electronic Commerce

Electronic commerce is most commonly carried out with the assistance of six kinds of means. These are: phone, fax, television, electronic payment and money transfer systems, electronic data interchange (EDI) system and the Internet (Pirnar, Güz 2005, 1: 28-55).

Phone is the most important means used in e-commerce. The reason for this is the presence of smart phones that are commonly used by almost everybody.

Another means used in electronic commerce, undoubtedly, are fax machines. Fax is a means through which people send and receive their documents.

As an instrument that astounded everyone since the day it entered to our lives, television has been considered as one of the most efficient instruments due to its audiovisual property.

Although its form and size have changed, its impressiveness continues with its improved visual quality and some of the new functions. Televisions, which are available in all houses and even placed in several locations in some houses, maintains its position as one of the most important means of communication both in marketing and advertising thanks to its features such as HD image quality and Internet connection.

In today's banking service, ATMs mean the possibility to perform money transfers without requiring people to go to banks or with no limitations regarding working hours.

According to the Central Bank of Turkey’s (CBT) Weekly Money and Banking Statistics, the expenses made with individual and corporate credit cards, whose usage rate reached the tremendous levels and which is considerably important for electronic commerce, indicated an 8 percent decrease in comparison with the same period of 2014 and a 1.54 percent increase when compared to the end of the year. 39.215.790.000 TL of the total credit card expenditure was paid in installments while 44.861.204.000 TL was paid without installments.

For instance, the expenses made with cards in jewelry and furniture/decoration industry for the last 5 years are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Furniture and Decoration (million liras)</th>
<th>Jewelry (million liras)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>19.940</td>
<td>10,951</td>
</tr>
<tr>
<td>2013</td>
<td>18,077</td>
<td>12,856</td>
</tr>
<tr>
<td>2012</td>
<td>12,732</td>
<td>11,845</td>
</tr>
<tr>
<td>2011</td>
<td>10,104</td>
<td>9,182</td>
</tr>
<tr>
<td>2010</td>
<td>8,048</td>
<td>7,352</td>
</tr>
</tbody>
</table>

Source: http://www.trthaber.com/haber/ekonomi,(AA)

As the system ensuring exchange of documents and information between two trading organizations through computer networks without requiring human factor, EDI is an important part of electronic commerce.

The most part of electronic commerce is carried out via the Internet. Furthermore, the main principle of this type of commerce is to function while connected to the Internet networks. Therefore, the Internet is of vital importance with regards to electronic commerce. Availability of computers provided advantages to people, businesses, shortly all private and legal persons not just in the field of electronic commerce but also many other areas. These advantages increase day by day.

When considered from an electronic commerce point of view, computers and its derivatives, that are notebooks, netbooks, tablets etc., made great contributions to this type of commerce, which is e-commerce, and this contribution increasingly continues. The rate of computer usage considerable increased with the presence of the Internet and computers were identified with the Internet.
The birth of Internet dates back to the establishment of "Advanced Research Project Agency", abbreviated as ARPA, by US department of defense (Başhan, Karaman, 2011). This system was established when a spacecraft, named Sputnik, was sent to the space by Russia, which was then known as Soviet Union, in 1957 (Jahns, 2006). This system, which was initially used for defense purposes, was later named as ARPANET due to the network established within the framework of ARPA.

In 1969, with the message of Bouteil Hall, from California University, that reads as “do you receive this message?” and that was sent to UCLA Stanford Research Institute and Utah University, the Internet journey began. Afterwards, pursuant to inclusion of many universities and institutions to this network, journey of Internet reached to the position that it has today with certain developments (Budak, 2010).

E-Commerce is an economic phenomenon. However, we feel its social and cultural impacts as well. It is seen that E-Commerce has various effects on individuals, enterprises and the society. Since customers’ expectations are what determine the market within contemporary marketing perspective, enterprises, adopting E-Commerce, adapt to the market more quickly and have competitive advantage.

Regarding exchanges, Electronic commerce presents individual(s) with new opportunities that remove physical distance and time restrictions (working hours, etc.) with regards to access to information and services. Electronic commerce will reduce the time spent on performing tasks, and the time required to monitor the daily routine works, and thus the costs will decrease and consequently the efficiency will go up.

It is believed that all these facts will increase the spare time of people and, therefore, electronic commerce will have impacts on both economic and social lives of the society.

Although there are some challenges regarding e-commerce, selling products via Internet presents several advantages in favor of companies and customers. Although the advantages of e-commerce for consumers vary from one consumer to another, it has several advantages. For instance, there are numerous advantages such as possibility of shopping in a wider area, benefiting periodical discounts and exclusive Internet promotions, being informed about new products, services and offers, being able to shop 7/24, which e-commerce can offer to the consumers.

Despite all these advantages, electronic commerce has several disadvantages as well. One of the main concerns consumers is related to security and confidentiality. Consumers want the assurance that the personal information they are submitting on website of the company would not be sold to other companies for marketing purposes. Others, on the other hand, are trying to avoid technologies related to security and confidentiality. Consumers want to purchase the right goods and services at the right time and place with the right price; that is with the most suitable conditions for them. Increased alternatives in numbers, and forms, and colors regarding goods and services indicate that the consumers’ liking is getting more difficult. Consumers now have the opportunity of easily doing research on the goods and services they desire and making comparisons. Consumers do not show loyalty to the shopping site where he/she once purchased goods or services and may move forward to another website which provides better benefits.

Electronic commerce changed shopping habits of consumers as well. Since enterprises can offer cheaper shopping opportunities in comparison with the traditional marketing basing on low costs provided by e-commerce, consumers can shop more and access to the countries, stores, goods and services from all around the world without exhausting much efforts or making transportation expenses.

According to the study involving 26 provinces and 5 thousands of young people within the age group 15-29 in Turkey, computer is available in 71.4 percent of the households in which the young people live. While 3 of 5 young people in Turkey have regular access to the Internet, this rate goes down to 2 of 5 young people in the countryside (TBD assessment report, 2013).

Thanks to electronic commerce and the Internet, technological products and systems became cheaper and consequently new job opportunities were born. However, on the other hand, the use of automated systems in business leads to redundancies in certain sectors and some employed people faced unemployment. However this problem, the decrease in employment caused by redundancies in the long term, can be compensated with the new employment opportunities created by information technologies (database specialist, biotechnology expert, web designer, solution architect, Internet strategy specialist, programming etc.)

With the changed place and time concepts, the money and time spent on reaching to stores or shopping malls now can be saved. However, the establishment of new forms of working, which is called as tele-working, and a new concept in commercial life, it is ensured that handicapped people can participate in business life from their homes or workplaces, where special conditions are provided. As a result of the emergence of the above mentioned new areas of expertise and new opportunities, we see quite different successful ideas and designs.

Thanks to distance education and developments in distance education convenient systems such as e-education, e-library, e-school,
e-government have emerged. With the introduction of new working areas such as e-commerce software, customer services and product delivery to customers, employment is increasing.

2. Impact of Electronic Commerce on Economy

According to the study published by OECD in 1999 (A Status Report, 1999), electronic commerce caused considerable changes in economic life. Both according to this report and in a general sense, we can list its impact on economy as follows.

Reduced costs in businesses, Reduced costs are reflected on prices, Increased competition in businesses, Alternatives for goods and services increase from the consumers’ point of view, constant trade and shopping is offered with the principle of 7 days 24 hours, The meaning of time and place changes with e-commerce, The physical distance to market is no longer relevant. It is ensured that the market strength is shifted in favor of the consumer; Planning of companies in work organization is changing.

2. Impact of Electronic Commerce on Advertising and Marketing

Fulfillment of sale and marketing of goods or services via online systems in electronic commerce reduces the distribution costs of the enterprise and provides savings.

Thanks to interactive electronic marketing, enterprises can make goods and services even more intriguing with various audios, visuals and animations on their websites. It is possible for them to manage customer demands quickly and efficiently. In this way, they can determine advertising and marketing strategies with monitoring of shopping activities and statistical data that indicate information about what is bought by whom. Tracking of stock and information, such as order quantity and new versions of the products, can be performed and decisions can be taken in a timely manner. Enterprises can ensure saving in logistics infrastructure with money transfers performed on the Internet environment via the banks, thanks to the practice of e-payment. A direction can be provided to the enterprise or customers by applying surveys to customers’ trading in electronic environments about goods and services or structure of the organization. Electronic commerce ensures instant access to information, documents, goods or services presented through the Internet no matter where you are.

It offers the possibility of trading or performing other tasks from any place, moment or hours where you have Internet connection. It can be seen that electronic commerce is not a concept that just affects the business world, or trade in other words, but also entire society in such areas as health, tax, education, etc. Therefore electronic commerce is a new way of business and life, which is ensuring transition towards information society.

5. Brief History of E-Commerce in Turkey

With the purpose of establishing “Electronic Trade Network” and proliferating electronic commerce in our country, in High Commission for Science and Technology’s (BTK) meeting dated August 25, 1997, the establishment of a working group was decided and the duty of coordinatorship was assigned to the Undersecretariat for Foreign Trade while TÜBİTAK was appointed as secretariat.

As per this decision, the first meeting of Electronic Commerce Coordination Commission (ETKK), formed under the chairmanship of Undersecretariat for Foreign Trade and with participation of relevant organizations, was held on February 16, 1998, and legal, technical and financial working groups were formed under ETKK.

In the meeting of BTK, dated June 2, 1998, financial, technical and legal reports prepared by the aforementioned working groups were presented and afterwards four main long-term responsibilities of the government regarding the development of electronic commerce in our country was determined.

1. Ensuring that the required technical and administrative infrastructure is established,
2. Forming the legal structure,
3. Taking measures to encourage electronic commerce,
4. Ensuring the compliance of national policies and practices with international ones (www.ekonomi.gov.tr).

4. The Factors Affecting the E-Commerce Volume in Turkey

It is known that many factors can affect the e-commerce, whereas these factors may differ from one country to another. It is believed that especially economic variables and developments in the Internet infrastructure in the country may directly affect trading volume of e-commerce. On the other hand, it is thought that while establishment of a strong legal regulation that would support e-commerce would increase the volume of e-commerce, the economic crises that the country is subjected to might reduce the volume of e-commerce in the relevant periods. The factors affecting the e-commerce trading volume in Turkey are as follows:

1. Per Capita Gross Domestic Product (PCGDP)
2. Number of Internet Users
3. Legal Regulations (TÜREN et alias)

4.1. Per Capita Gross Domestic Product (PCGDP)

GNP (Gross National Product): is the total worth, as money currency, equivalent to the total amount of goods and services produced by citizens of a country in a given year. Gross Domestic Product (GDP) on the other hand, involves the final goods and services produced by foreign nationals operating in that country (www.turkebilgi.com).


4.2. Internet Usage Rate in Turkey

“When we look at the reports of BTK and TUBISAD, we see that the Internet penetration rates in our country have come close to 50% and it is estimated that there are approximately 37 million of Internet users. First, we need fully understand what Internet penetration is. The concept of Internet penetration used by BTK and other institutions that regard BTK reports as the basis, involves all the people who subscribed for Internet access one way or another. This figure is reached from both land and GSM service providers’ reports.”
BTK reported the number of mobile Internet users, which was determined in the second quarter of this year, as 28,445,663 people. The total number of broadband Internet subscribers is given as 36,986,164.

The rate of computer and Internet usage in 2013 within 16-74 age group made 49.9% and 48.9%. In the second quarter of 2014, the rate of computer and Internet usage among individuals within the age group of 16-74 made 53.5% and 53.8%. While these rates are found as 62.7%.
and 63.5% among men, the rates for women were 44.3% and 44.1%.

According to this report, “the age group where the percentage of Computer and Internet usage is highest is 16–24”. In all age groups Computer and Internet usage percentage is higher among men.

In the published Report it was stated that the increased number of regular Internet users in percentage made 44.9%. at the same month of 2013 this percentage was 39.5%.

According to the results of the Research on Household Information Technologies Usage, the percentage of households who have Internet access across Turkey in April, 2014 was 60%. This percentage was 49.1% at the same month of 2013. 42.8% of the households who does not access to the Internet indicated that they do need to use the Internet. This was followed by the high prices of Internet connection with a percentage of 31.9%.

The percentage of households that have broadband Internet access was 57.2%. According to this, while 57.9% of the households have access to the Internet with fixed broadband connection (ADSL, cable Internet through cable TV infrastructure, fiber, etc.) 37% accessed to the Internet with mobile broadband connection.

In the third quarter of 2014 79.1% of individuals within the age group 16-74 used the Internet at home. This was followed by 38.7% at workplace, 30.2% in houses of relatives and friends, 25.3% at locations where wireless connection is available such as shopping mall, airport, etc. and 14.3% at the Internet cafe.

While 58% of the individuals who used the Internet in the first three months of 2014 used cell phones or smart phones to connect to the Internet outside homes and workplaces, 28.5% used portable computers (laptop, netbook, tablet, etc.). These percentages in the same period of 2013 made 41.1% and 17.1%, respectively.

Considering the Internet usage purposes, while 78.8% of the individuals, who used the Internet in the first three months of 2014, browsed social network sites, this was followed by a 74.2% for online news, 67.2% for searching information about goods and services, 58.7% for gaming, music, film, downloading or playing videos, and 55.9% for sending-receiving e-mails.

During the twelve-month period involving April, 2013 and March, 2014 the percentage of the people who used the Internet with the intention to contact public institution/organizations for personal purposes made 55.3%. This percentage made 41.5% in the same period of the previous year (April, 2012 – March, 2013). Among the purposes of use, obtaining information from websites of public institutions was at the top with 51.2%.

The rate of individuals using Internet for ordering or purchasing goods or services via the Internet for personal use was 30.8%. In the previous year, the percentage of the people who shop via the Internet was 24.1%.

In the twelve-month period involving April, 2013 and March, 2014 51.9% of the individuals performing online shopping purchased clothing and sports materials, 27% bought household goods (Furniture, toys, white appliances, etc.), 26.8% bought travelling tickets, car-renting, etc., 24.9% bought electronic devices (Cell phone, video recorder, radio, TV, DVD player, etc.) and 15.9% bought books, magazines, newspapers (including e-book) (TÜİK, Basic indicators).

On the other hand, according to the 2012-2018 data on information community strategy and the action plan draft we obtained the following data.

### Internet Entrepreneurship and E-Commerce Goals

<table>
<thead>
<tr>
<th>Goals</th>
<th>2012</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of people performing online shopping</td>
<td>24.1</td>
<td>70</td>
</tr>
<tr>
<td>Percentage of people received entrepreneurship education</td>
<td>6.3</td>
<td>15</td>
</tr>
<tr>
<td>Number of angel investor network (per million population)</td>
<td>0.1</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: TÜİK, Global Entrepreneurship Research Association, Ministry of Development May 2014

### 4-3. Legal Regulation

The law article published in the official gazette on November 5, 2014, includes regulations regarding electronic commerce. The first article of the law states: “This Law defines commercial communication, responsibilities of service providers and intermediary service providers, obligations to give information on the basis of contracts made with electronic means of communication and applicable sanctions.” (Official Gazette, issue: 29166, 2014).

Also the Distance Contracts Code, which is prepared by the Ministry of Customs and Trade with the aim of regulating principles and procedures of application regarding distance contracts, was published in the Official Gazette on November 27, 2014 in compliance with the Consumer Protection Act. The new Distance Contracts Code introduces regulations interesting for e-commerce companies and consumers. The new Distance Contracts Code, which introduced new regulations especially focused on protection of consumers in e-commerce, imposes new obligations on e-commerce companies as well (Official Gazette, 2014, 28).

There are laws related to e-commerce in Turkey, among them are:

- The Law on Retirement Saving and Investment System and E-Commerce;
- The Public Bidding Law and E-Commerce;
- The Electronic Signature Law;
- The Real Estate Tax Law and The E-Commerce, Craftsmen, Artisans And Other Independent Workers Social Insurances Institution Law and the E-Commerce
- Capital Market Act and the E-Commerce, Distance Contracts and E-Commerce in Consumer Protection Law, the E-Commerce in Turkish Penal Code, the Turkish Central Bank Act and the E-Commerce, Turkey Employment Institution Act and the E-Commerce www.eticaretforum.com.)
Conclusion

Although the introduction of the Internet to the Turkish society dates back only five or ten years, with the constant development of technological infrastructure for use of the Internet, the Internet usage in our country becomes rapidly widespread in all areas. As the smart phones began to be used commonly, this trend increases even further.

While more than half of the individuals who used the Internet in the first three months of 2014 used cell phones or smart phones for to connect to the Internet outside homes and workplaces, nearly 30% of individuals used portable computers (laptop, netbook, tablet, etc.). It is seen that in 2014 the Internet connection rates based on the number of households increased to as much as 60%.

Despite these high figures, the percentage of individuals refraining from connecting to the Internet or those who do not want Internet connection at home or work is still considerably high. In addition to the consumers indicating that this is because of high prices of Internet connection, it is seen that there are people that state who they do not want the Internet access.

When compared to the previous years, the number of individuals using Internet for ordering or purchasing goods or services via the Internet for personal use increased. And this indicates that Turkish society showed progress in terms of electronic trade. In comparison with traditional marketing or commerce rates, the volume of electronic trade is increasing.

The increase in the Internet subscriptions, people’s dependency on the Internet and other means of e-commerce, proliferation of cell phones, availability of smart phones in particular, campaigns of service provider phone operators especially regarding the Internet connection, cause e-commerce to have a profound place in the lives of Turkish people, just as it is worldwide.

The availability of cell phones and Internet packages especially among young people and high school and university students in particular, makes this group dependent on the Internet. Since the universities now use automated systems, students carry out many of the procedures, their grading in particular, through e-commerce.

Citizens began to carry out their procedures in an electronic environment through systems such as e-business, e-government, etc. with the assistance of handheld devices. Enterprises began to perform transactions and trading with each other in electronic environments while citizens, as well, started to perform their trade with enterprises and procedures with the government, such as tax debts, through electronic environments.

The concerns of people who refrain from performing all of these procedures and even those who carry out their transactions in electronic environments are tried to be eliminated with laws and regulations issued by governmental bodies. And enterprises established security systems to protect their websites against cyber attacks and ensure that their customers can perform secure tasks.

As a result, both technological development and legal regulations and all kinds of initiatives established to facilitate people’s lives expand electronic procedures and e-commerce in particular and they become indispensable parts of people.

References: