

# An Introduction To Electronic Commerce

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**Abstract:** - Recent developments in the fields of Internet and Information Technology have led to renewed interest extraordinary in electronic commerce in societies. Electronic commerce is supporting of customers, supplying of services and commodities, portion of business information, manages business transactions and maintaining of bond between suppliers, customers and vendors by devices of telecommunication networks. In the new global business companies and institutions providing merchandise and services, synchronously with evolution of the world in field of electronic commerce are in effect to change the logical and physical structure of their organization in this area. The purpose of this paper is to review of principles, definitions, history, frameworks, steps, models, advantages, barriers and limitations of electronic commerce.

**Index Terms:** - Electronic Commerce, Information Technology, Telecommunication Networks, Business, Merchandise, Transaction, Organization, Vendor

## 1 INTRODUCTION

Electronic commerce is a powerful concept and process that has fundamentally changed the current of human life. Electronic commerce is one of the main criteria of revolution of Information Technology and communication in the field of economy. This style of trading due to the enormous benefits for human has spread rapidly. Certainly can be claimed that electronic commerce is canceled many of the limitations of traditional business. For example, form and appearance of traditional business has fundamentally changed. These changes are basis for any decision in the economy. Existence of virtual markets, passages and stores that have not occupy any physical space, allowing access and circulation in these markets for a moment and anywhere in the world without leaving home is possible. Select and order goods that are placed in virtual shop windows at unspecified parts of the world and also are advertising on virtual networks and payment is provided through electronic services, all of these options have been caused that electronic commerce is considered the miracle of our century.

### Definition

Interaction between communication systems, data management systems and security, which because of them exchange commercial information in relation to the sale products or services, will be available, so the definition, the main components of electronic commerce are: communication systems, data management systems and security.

### History

In the 1970s, the term electronic commerce, referred to electronic data exchange for sending business documents such as purchase orders and voices electronically. Later, with the development of this industry the term of electronic commerce is used to business of goods and services via the web. When the first World Wide Web was introduced in 1994 as a comprehensive, many well-known researchers have been predicated this type of business "the web-based business" will become soon an important in the world economy, but it took four years that http based protocols should be widely available to users.

The first electronic commerce created in USA and some European countries in 1998. These types of business are formed with beginner and unprofessional websites and it has been expanded rapidly. Electronic commerce was spread rapidly in most cities in America, Europe and East Asia in 2005. Some say dates of electronic commerce return to prior of the Internet, but due to the costs of this style of business, only business and financial institutions and corporations could use it. But with the widespread use of the Internet to all of the people and change the structure of electronic commerce, this kind of business from specific business case for a particular group out and became the industrial form.

### Frameworks

Electronic commerce framework is comprised of three levels that this framework is needed to for successful electronic commerce.

#### 1. Infrastructure

The first part of the framework for electronic commerce is including hardware, software, databases and communications. It is used in term of World Wide Web on the Internet or other message switching methods on the Internet or other telecommunication networks.

#### 2. Services

The second part of the framework include a wide range of services that provide the ability to find and present of information and are including the search for trading partners, negotiation and agreements

#### 3. Products and Structures

This section of the electronic commerce frameworks consist forecasts and direct provision of goods, services and trade-related information to customers and business partners, cooperation and sharing of information within and outside the organization and organizing of environment of electronic marketplace and chain of supply and support.

### Advantages & Disadvantages

The invention of new telecommunication networks and modern online devices has resulted in a new business. In fact, electronic commerce has become one of the most popular activities on the web. Electronic commerce created many benefits for companies and users however, some disadvantages and serious problems stem from this issue.

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## Advantages

### Buying 24/7

We can also sell any time, night or day, 365 days a year. Even while we are resting, our users can visit our web site, search our goods, services, and determine their orders.

### Decrease Transaction Costs

If we buy from online store, we spend low operational cost, we have better quality of service, and we can cut the many unnecessary costs. For example, if our goods or services downloadable, we will have transport costs completely cancel.

### Conduct a Business Easily

In electronic commerce, we do not need to physical company setups or there are not any crowds to deal with. We can buy from our house comfortable; users can easily choose goods from various procedures without moving around physically.

### Comparison in Prices

Everyone can easily compare fees among the various web sites. We can usually earn discounts on fees when compared with normal shop fees.

## Disadvantages

### Security

Security pursues to be a main problem in electronic commerce. Everyone good or bad can easily open a web site, and there are many bad sites, which their aim is user's money.

### Guarantee

There is no guarantee for product quality. Our orders might be damage in the post or things may look different online to what you actually receive for example, slightly different colors and feel of clothes or the freshness of vegetables and fruits.

### Social Relationships

Electronic commerce allows to users that buying and selling goods and services without geographic limitations but in this method we have not any contacts and relationships with other persons and loss our social contacts.

### Impact

Electronic commerce is a new method business that mixes all of the prior methods and transaction styles. Electronic commerce and electronic business have impact on many districts of business for instance, economics, marketing, computer science, finance and accounting, production and operation management, management information system, human source management, business law and ethics. The following are some of the factors describe:

### Marketing

The raise of information technologies and computer networks has many effects in business especially in field of marketing. Everyone can make markets work with more efficient and they can improve their career with information management within a group. In this case, they can decrease cost of operations and catch new markets and new opportunities for selling and transactions.

### Economics

In industry world, managers must encourage and conduct employees to devise plans to take advantages of new

economic opportunities. Electronic commerce is creating new opportunities to the global economic, for example in global travel and tourism industry. Transforming from traditional business method to electronic commerce method is hard and there were many different factors for companies to adapt them with electronic commerce factors. For this work, they must use Internet and many other online networks, because for grow and use from new economic opportunities in each industry it is necessary to be match with new technologies.

### Finance and Accounting

Two decades of progress in information technology and development of its applications in the field of economic and social to form a new chapter of relations between people, institutions, companies and governments and new concepts are emerging on literature of economic and trade. Internet as a global network, as well as prerequisite of electronic commerce, for reason flexibility, attractive, ease for use, low cost access and ubiquity, is changing the traditional business moreover, electronic commerce had a significant impact on finance and accounting that include saving time, disinflation, increase productivity, reduce the demand for money (reduce the cost of publishing) and etc.

### Production and operation management

The outcomes of manager's work, by on time product quality productions and with the least cost is determined. For this purpose, first requirement is correct information. Electronic commerce is the best way to have the most accurate and correct information for managers because, consumers transmit their demands to managers directly.

### Limitations

There are some barriers for electronic commerce setup, which include:

- Lack of knowledge and necessary information for use of electronic commerce and Internet network
- Protection of consumer rights in electronic commerce
- Lack of legal infrastructures in electronic commerce such documents that are not acceptable and electronic signature
- Low security of electronic funds transfer in some countries
- Lower speed and limitations on the use of Internet
- Lack of information intermediary institutions and manufacturing companies of the benefits of Internet business
- The security and confidentiality of information exchanged

## Electronic Commerce & Information Technology

Information technology has changed the manner of acts of people, organizations, governments and so economic, social affairs and even the mentality of people has changed. Education, health, industry, manufacturing, trade, banking and even of all entertainments services have effected and changes with technology. Information technology creates new jobs, new

industries, change lifestyle and has brought new creativity in all of the dimensions of our life. Understanding of people together, adapted cultures and decrease of incompatibility are examples of these consequences. From scientific perspective, Information Technology and Genetic Engineering with aerospace knowledge is one of the leading branches of knowledge and constructor of civilization of human in the future. Advances in Information Technology have expanded to the point that some experts with phenomena such as "inventing steam engine" have equated. In economic dimension, "the importance of rapid access to accurate information" is the key to success in global competition. Electronic commerce is one of the important branches of Information Technology that has been emerged as the result of development of Information Technology.

### Websites & Electronic Commerce

Websites are effective in acts of business corporations. Websites are gateways to business brands, products and services of manufacturers. A company that does not care about its websites ultimately will be bankruptcy in business. The websites that are not adapted are like an old and faded showcase in a traditional business. Therefore, companies should have a strong background and exact planning in Internet search. For many users, the site of search (search engine) is the entry point to the Internet. For many changes in the world around us, each organization or agency should coordinate itself with the changes and enhance its work efficiency. Internet especially websites can be suitable means to achieve this goal. For instance, web can use up to extend markets by facilitating the presentation and repartition of existing products in to new business centers. The web can also be a workmanship that facilitates products development, as companies who their existing customers well create exciting, new or alternative offering for them.

### Types of Electronic Commerce

There are many various classifies of electronic commerce and many different methods to characterize these clusters. Academics determined a number of frameworks for classifying electronic commerce but each one want to illustrate it form a unique perspective. The main different classifies of electronic commerce are Business-to-Business (B2B), Business-to-Consumer (B2C), Consumer-to-Consumer (C2C), Consumer-to-business (C2B) and Mobile Commerce (M-Commerce).

#### B2B

Business-to-Business is a type of commerce transaction that exists between businesses or a transaction that occurs between a company and other company to transfer of services and products. A possible explanation for this might be that Business-to-Business includes online wholesaling in which businesses sell materials, products and services to other businesses on the websites.

#### B2C

Business-to-Consumer refers to transactions between a business and its end consumer and so it create electronic storefronts that offer information, goods, and services between business and consumers in a retailing transaction or it is an Internet and electronic commerce model that indicates a financial transaction or online sale between a business and consumer.

#### C2B

Consumer-to-Business is the transfer of services, goods or information from persons to business or it is a business model where end users create products and services that are used by business and institutions.

#### C2C

Consumer-to-Consumer is an electronic Internet facilitated medium, which involves transactions among users and it is a business model which two consumers deal business with each other directly.

#### M-Commerce

The term of Mobile Commerce was invented in 1997 to aim "the buying and selling of products, information and services" via wireless handheld devices such as cellular phones, laptops and personal digital assistants. These wireless devices interact with computer networks that have the ability to conduct online merchandise purchases. Mobile commerce allows to users access to Internet and shopping in it without needing to find a place to plug in. Mobile Commerce transactions continue to improve and the phrase includes the purchase and sale of a wide range of products and services, online banking, bill payment, information delivery and so on.

### Conclusion

This essay has argued that apart from all the advantages, electronic commerce has weaknesses: access to personal computers, low-speed data transfer on the Internet, difficult to access to websites on the Internet. Effect of these caused to diminishes the impact of electronic commerce but with the increase in Internet users and ease of access to the virtual world of the Internet, electronic commerce will change the face of the world.

### References

- [1] Angehm, A., "Designing mature Internet Business strategies, The ICDT Model," *European Management Journal*, Vol. 5, No. 4, 1997.
- [2] Cappel, J.J. and Myerscough, M.A., "World Wide Web Uses For Electronic Commerce: Toward a Classification Scheme," 1996.
- [3] Clark, B., "Welcome To My Parlor...", *Marketing Management*, Chicago, Vol. 5, No.4.
- [4] Bonnett, Kendra, "An IBM Guide To Doing Business On The Internet," *Mc Graw-Hill*, U.S.A
- [5] Kalakota, Ravi and Andrew B. Whinston, "Electronic Commerce: A manager's Guide," *Addison Wesley Longman*, Inc, 1997.
- [6] Smith Dayle, "The E-Business Book: A step-by-Step Guide to E-Commerce and Beyond," *Princeton: Bloomberg Press*, 2001.
- [7] Jianzheng Yang, Yu Ding, "B2B E-Commerce Websites Customer Satisfaction: A Formula and Scale," *International Asian Symposium on Interaction and Effective Computing*, 2009.

- [8] N. Asokan, P.A. Jason, M. Steiner, M. Waidner, "The State of the art in Electronic Payment Systems," IEEE Computer, 1997
- [9] S. G. E Garrett, P.J. Skevington, "An Introduction to E-Commerce," BT Technology Journal, 1999
- [10] F. J. Riggins, "A Framework for Identifying Web-Based Electronic Commerce Opportunities," Journal of Organizational Computing and Electronic Commerce, 1999
- [11] E. Rhodes, R. Carter, "Electronic Commerce technologies and Changing Product Distribution," International Journal of Technology Management, 1998