

## E-Commerce: a Theoretical Approach and Overview of the Research Conducted in Iran

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### Abstract:

This study, the theoretical literature in the field of e-commerce and its implications for future research in this area provided. In this article, e-commerce subject is defined in terms of the history, advantages, limitations, causes entry into e-commerce, e-commercial value and ... E-commerce implementation challenges and solutions are expressed in Iran. This paper aims to contribute to a range of students, researchers and policy makers who are interested in earn more information about Ecommerce.

**Keywords:** E-Commerce, Strategic objectives of e-commerce, Wireless electronic

### Introduction

E-commerce over the past few years, despite being young, known in the world and in scientific circles and in the areas of economic, social, cultural, political is considered. This attention is influential factor in remarkable progress in strategies, requirements and applications of e-commerce. (9) e-commerce is performing all commercial activities with using computer communications networks, especially the Internet. Electronic Commerce is a paperless business. By use Ecommerce exchanging sales information and necessary information for transport of goods, will perform with less effort and more speed for the bank. Companies wouldn't have to communicate with each other and current limitations and their communication with each other will be easier and faster. Contact with customer can be as one with each person. In other words, e-commerce is the general name for a range of software and systems that which provide services such as information search, mobility management, account status, credit, and payment for on-line reporting and billing management on the Internet. These systems provide basic infrastructure of Internet-based activities. The purpose of using e-commerce is providing a new way of doing business. By this method, traders are able to offer their products and services all the time and to all the buyers around the world - regardless of geographical boundaries and nations. Many people know buying and selling through the Internet as a unique e-commerce, While this is totally include only a small part of e-commerce and This concept now is taken a wide range of commercial and economic aspects. We can easily include any commercial and financial activity between institutions and individuals in the electronics area. (8)

### The definition of e-commerce

Professor Turban states that e-commerce is defined as "the buying and selling of goods, services and information via computer networks such as the Internet," (7) ShariatPanahi and Geranmaye, (2004) stated that: Electronic commerce, is conducting business transactions such as buying and selling and provide services (free and paid services that is doing with economic purpose is on the Internet. In other words, e-commerce is the use of any kind of network o perform commercial and provide services.

European Commission (1997) defines e-commerce as follows: Electronic commerce is base on electronic processing and transmission of data, including text, sound and image. electronic commerce include Various activities such as electronic exchange of goods and services instant delivery digital content, electronic fund transfers, electronic share trading, electronic bill of lading, commercial design, direct marketing, and service after the sale(6).

### History of E-Commerce

The combination of e-commerce began in 1970. It is necessary for the development and adoption of electronic commerce provide requirements infrastructure such as telecommunication technology, regulatory and safety issues. When in 1994, the Internet demonstrated features of its commercial and scientific aspects of the research demonstrated; Commercial establishments and banks in developed countries were the first institutions that use more of their hard work in this process. Product of their efforts is today electronic banking (8).

Causes of entering electronic commerce

1. High overhead costs
2. High operating costs
3. Failure to do competitive technologies
4. Not respond timely to customers (3)

Subcategories of E-commerce

1. E-Commerce
2. Electronic business
3. Electronic Marketing
4. Electronic banking
6. Managing public relations with customers (1)

Electronic commerce models

If for trading via the Internet on three sides of government, business and consumers to distinguish, Most B2B and B2c are represented e-commerce. These models are introduced in the following:

1. Business to Business: (B2B) All contractors and users of e-commerce, are companies or organizations. This type of business has a major role in electronic commerce. Specific form of this model is known to the group trade occurs when individuals or companies or trade groups are working together on a commercial context, Such as, when some company are working together in different places on designing car
2. (B2C) Business to consumer: Include the sale of companies and service providers to private buyer. It is also called the e-retail e-commerce. When a large company provides its products or service for a smaller company, while the company may have their fixed customer and service them, it is called B2C model. Another way of B2C e-commerce services is The Company provides services and products to employees. This model is called briefly B2E. Internet trading is possible with other methods. Such as following model:
3. (C2B) Business to consumer: People who want to sell their products and services through the Internet to companies and organizations create this part. As someone who is looking for vendor for their wares.
4. (C2C) consumer to consumer: on this model, a person sells his product to another person. For example, sell their personal vehicle through the Internet and other services to individuals or selling to private knowledge to another takes place in this model. Sites that allow private individuals to put their own property on auction are this kind. A special case of the C2C is when people exchange music, film and software and other digital goods. Nowadays, with the development of wireless technologies, there is a special kind of e-commerce come that called mobile (7)

#### **Wireless electronic commerce (mobile commerce)**

With the emergence and expansion of wireless networks, today a new generation of e-business under the name M-commerce applications, has emerged, mobile commerce through Thousands of mobile devices such as mobile phones, personal digital devices (PDA), wireless notebooks and even , wireless dashboards of cars . Mobile Commerce is done via any electronic transmission or exchange of information by a mobile device via mobile web and during it the real value of money paid or received in exchange for goods; services or transmitted information "is defined. Or in simpler form "refers to a process in which trade via mobile telecommunications networks and using payment instruments, such as mobile phones or other mobile data communication or digital instruments is determined. Unique characteristics of mobile commerce such as lack of time and space limitations cause the majority of developed and developing countries put heavy invest in this area. Mobile technology as a new wave of interest in information technology emerges and contains interests it comes with two unique features: mobility of wireless features of the wireless transmission of data between devices without forming any type of physical connection points. (9) In the following we introduce some applications of mobile commerce:

1. Mobile Banking: Banking financial operations through wireless networks, mobile agents, and the disbursement of funds through the stock exchange
2. Mobile Purchase: Purchase goods, services or information via mobile phone to pay for purchases can be done via mobile payment systems buying a drink from a smart car sale.
3. Searching for sale place : Search in e-shopping network to find the exact location of selling a product, Especially for goods or services with special features that are not available to buy online, customers intend to Compare prices at other stores is useful. Search for a car sale by model, color and any ancillary equipment.
4. Mobile Gaming and entertainment: Purchase and receive a variety of games that can be used by mobile devices. Purchase has been done in direct way or subscription fee, Games, ringtones and mobile wallpaper page.
5. Auction Mobile: Buying and selling goods at a discount create from mobile phones via the mobile network via participate in an online auction. Competition to buy a painting from an aircraft in flight (9)

#### **Strategic objectives of e-commerce**

Deployment and implementation of a successful e-commerce, is required a clear and systematic strategy. Without proper strategy, all possible efforts of company in order to establish the e-commerce ecommerce failed and waste of resources, human and even time faced with threats to the survival of the organization. Basic steps in the development and design of strategic objectives e-business strategy is undoubtedly within the hierarchy of objectives, vision, mission and long-term and short-term organizational goals. (4)

#### **Prospects of e-commerce:**

One of the important tasks for senior managers and operators of e-business strategy is determining e-business vision of the organization. Superior Ecommerce prospects reflect something more than commercial purposes or income. Strong and appropriate prospects coordinates staff and encourages investors to invest more in company. Existence of strong, efficient and the appropriate Perspective send signals to market that represent organization's ability to gain market leadership and market dominance. Miller (1996), in definition of perspective states that the final Perspective is comprehensive, extensive and prospective. Perspective shows organization wishes and tools to make it clear. (4)

#### **E-Commerce Mission:**

Miller said: Ecommerce mission must include the following four elements:

1. Commitment to stakeholders in the electronics market: Organizers should determine Expectations of various stakeholders such as employees of the organization, management and investors to e-commerce and obligations itself to achieving. For example, should include job security of employees, improve performance and provide the expected rate of return as the expectations of stakeholders in the electronics market.
2. Areas of business: organization should determine its e-commerce mission in range and area of activities in the electronics market. The organization intends to work in B2C or B2B or both? If company participates in several business plans, how much is each of its businesses into electronic form? Is company plans provide only after sales service and customer relationship management or intends to follow the internet and digital transit exchanges?
3. The sources of competitive advantage in e-commerce: The organization should determine resources and skills that are creating competitive advantage in electronics market. If organization have sufficient funds to finance establishment and maintenance of e-commerce, Employees should be familiar with the concepts and principles of e-commerce, powerful brand, famous and popular and products have the ability to transform digital And have a high

degree of digital capabilities, organizations can gain competitive advantage in electronics market. The important thing is that the electronics market and the Internet itself, and in itself cannot be considered a competitive advantage.

4. Future image of the electronics market: in mission of e-commerce, should legal environment changes, competitive, economic, and technology should consider. Technology environment and provides the vital infrastructure of the e-market is interesting and important. (4)

#### **Ecommerce goals:**

WHEELEN, (2000) states: Organizations who intend develop e-commerce strategies should specify formulate the vision and mission, goals, ecommerce. Goals are represent the final results of the activities planned. In order to determine the objectives and goals of the vision and mission into specific performance goals are specified. (4)

THOMPSONS & STRICKLAND, (2003) states that: The objectives of e-commerce

Are the ultimate e-commerce objectives and are measurable activities. A characteristic feature of e-business goals are quantifiable so that they are tangible and objective n contrast to the vision and mission of the e-commerce modes in terms of quality and quantityare unclear, Ecommerce goals based on appropriate metrics can be converted into numbers. (4)

Saban (SABAN, 2001) the main objectives of the e-commerce can be summarized in three categories:

1. Improve the process: Electronic commerce can be eliminating redundant processes or improving existing processes. 3/68percent of companies using e-commerce clients, have process improvement as one of its objectives.

2. Cost containment: Sometimes target of e-commerce is reducing costs and improve efficiency. 1/17% of company has put cost and increases the efficiency as goal of e-commerce.

3. Revenue: in some cases, the goal is the establishment of e-commerce to increase sales and revenue. (4)

Dunn (2000) also aims to introduce e-commerce into the following five categories:

1. Relationship building: The Company may be better communication, stronger, more sustainable and comprehensive with customer. This is possible via e-mail.

2. International Presence: Producer may seek entry into the world market using electronic trading and export marketing

3. Reducing communication costs in the long term: Companies may seek to reduce costs, such as advertising and promotional activities. Because Internet advertising has less cost to traditional and paper advertising.

4. Provide services to a community or a specific group: company may seek to through e-commerce attention a specific market segment and to focus on that part.

5. Accessing new markets: One of the purposes of the application of e-commerce companies is access international markets as part of the opportunities the Internet offers. (4)

Role of e-commerce Management strategies:

In new e-commerce systems, customer management strategies are important because:

- Buyers and sellers are directly related;
  - support Complete the exchange of digital information between the two sides
  - Save time and limitations;
  - support the interactivity between the parties and, therefore, can be adapted to the dynamic behavior of customers.
- (3)

Impact of Electronic Commerce on corporate income:

According to the four components of e-commerce customers by revenue increases:

1) Increase the number of customers purchase.

2) Attract customers, competitors, and especially do not use e-commerce rivals.

3) The acquisition of new customers

4) Demand higher prices from customers to differentiate and customize the product (4)

The impact of electronic commerce on export development

According to Lawrence, the following benefits of globalization and e-commerce companies in the third world countries and therefore helps to develop export and improving the export process

1 - Constant change in products and companies

2 - Professionalization of corporate responsibility and not in theory of competitive advantage in international trade in goods

3 - Replace the trade data and services rather than products known to mediate.

4 - Reorganization of the industrial structure

5-downsizing Corporate and increasing their number (8)

Competitive Advantage in Electronic Commerce

Competitive advantage can be considered as most important topics in strategic management theory, because competitive advantage of an organization means a better performance to competitors and guarantees short-term profitability and long-term survival and growth of the organization. In the information age, the web technologies and computer networks have expanded the organization has become more turbulent. With the emergence of e-business competitive advantage is not only Unmitigated but even more important and more critical. (5) In e-commerce, there are four sources of competitive advantage for the organization that will able them to access them achieve to this competitive advantage (FRASER ET AL.2000)the four sources are:

1. Reduction costs intermediaries wholesale and retail sales. It forms with Using Internet technology process and eliminate intermediaries and customers can without going through traditional wholesalers and retailers, and with reference to the site of the original seller (manufacturer) buy products. This greatly reduces costs;

2. Ability of reducing cost associated with the needed purchase by reducing time supplies and logistics operations;

3. Improve the collection and processing of data that makes it possible to improve the supply chain management;

4. Expand market share and create new markets by reducing the cost of collecting and processing information about the needs and aspirations of current and potential customers. (5)

E-commerce business value:

1. Improve products: direct communication through e-commerce, can help promoting the services and products.
2. New sales channel: Due to direct access customers and electronic commerce systems for the mutual exchange of information on new sales channel for products to be considered.
3. Direct savings:

E-commerce can use a public infrastructure such as the Internet and the transfer and reuse of digital information reduce the cost of providing information to Customers. (3)

Benefits of E-commerce

E-commercial advantages for businesses

In today's constantly changing and competitive business environment, businesses can no longer rely on a market for its products are stable. They should compete on quality, price and after-sales services with increasing day by day competitors. To succeed in the market, they should not only reduce prices to more major changes in the methods of production, trade, and even to provide the corporate culture. Existence an electronic marketplace on the Internet significantly increases the productivity and competitiveness of both producer and consumer companies. In the following advantages of e-commerce include:

Reduce the purchase price of raw materials 2. Reduce cycle times 3. Increase the effectiveness of employment and service to the customers (7). "Production Cycle is the total time it takes for a product to be made. During the production cycle, there are the production of certain fixed costs remain unchanged and time-dependent. The fixed costs include depreciation of equipment, construction and utilities costs and the cost of management and supervision." (7)

**Conclusion:**

**E-commerce benefits to consumers**

Firms to increase productivity reduce costs and enhance customer service quality, investments on e-business. Also attract customers because they realize that shopping on the internet can be increase their choosing power astonishingly, gets better and more information to purchase and purchase easier the busy people can save their time. Better information, more choice and lower operating costs for businesses and consumers simultaneously will leads into e-commerce. Then advantages of e-commerce for consumers are discussed.

1. Increasing choice
2. Customize
3. Lower Prices (7)

Limitations of e-Commerce

- accepted standards (quality, security and reliability) are not exist.
- Consumers are afraid of online purchases.
- There is not enough bandwidth.
- Vendor is unknown in e-commerce.
- Software tools are not acceptable range.
- Benefits of e-commerce are not easily measured.
- Internet and software adaptation are still problems in electronic commerce, there are some programs and databases.
- Some buyers are willing to touches purchase products and do not adapt themselves to e-commerce.
- The Internet is still expensive.
- People still do not trust paperless transactions.
- In addition to server, network specific web server is required.
- faced with lack of Buyer and seller. (7)

Evaluation of e-commerce capabilities on firm performance

Zhu, Kraemer (2002) in their study on the performance provide a model to assess the capabilities of e-commerce companies. In the model Variables of size of company and industry type are considered as control variables. These authors argue that the using e-commerce, information flows and improve inefficiencies and reduce transaction costs. In this study, to evaluate the Company's performance, financial indicators are used. Such that Performance put In 3 areas of profitability, reduce costs and streamline inventory. (8)

Challenges and strategies for implementation of e-commerce in Iran

Iran from the need of electronic business, has a significant difference with developed country And still failed to achieve the desired position. That is why the launch of e-commerce faces with various challenges, including barriers and specific management. Moghaddasi, (2006) in his article explores some of these challenges, including technical challenges, cultural - social and managerial studies and guidelines for the establishment and development of electronic commerce, the following is noted:

1. Adopt a strategic approach by government managers
2. Creating cross-sector coordination among various government agencies
3. Driven to the private sector in national projects related to e-commerce
4. Prepared and adopted a strategic document sanctions
5. Development of electronic commerce through the use of proper and effective preparation and cultural infrastructure
6. Reform and strengthen the technical infrastructure of the country
7. Expanding use of the Internet
8. Development of qualitative and quantitative manpower of electronic commerce (6)

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