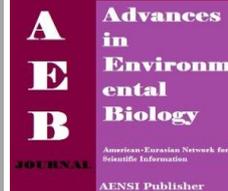




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Study on e-commerce security in Iran

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ABSTRACT

E-commerce can be expressed as any online business via the internet. This technique has been developed in recent years and is forecasted to grow more. E-commerce refers to any deal of buying and selling goods or services over the internet. This paper investigates the security of Iran's trade that threatens the e-business security by many security risks, such as theft or changing message content. Development of e-commerce requires trust and public confidence towards this type of business. Also according to the status of Iran in the field of technical infrastructure and barriers ahead, taking major steps in the sphere of culture, infrastructure and legal and technical infrastructure is essential.

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INTRODUCTION

"Electronic commerce" that is referred to a certain accelerator to increase productivity and economic growth is one of the issues that have been highly considered by state-owned enterprises and private firms. It can be said that by providing infrastructure of e-commerce development a good business environment can be built between government and business and conditions can be created to attract more investors. The importance of e-commerce is due to the Remove of spatial and temporal constraints on trade reduce of transaction costs, producers and sellers, access to large customers and consumers and access to large-scale producers of goods and services. Perhaps because of this benefits not only developed countries but also developing countries call "Electronic commerce" as a means to compete in the domestic arena.

Electronic Commerce and its many branches in this century is one of the necessities. So to use this new technology, it is necessary to study and review the environmental factors as infrastructures. Development of e-commerce has many benefits in terms of cost reduction and increase exports, employment and production due to the reduce of transaction costs, accelerate the exchange, strengthening competitive position in the world, taking advantage of fleeting opportunities in export and timely purchase of goods from outside the country. According to the estimates, the present value of world exports of goods and services is about \$ 7 thousand billion of which \$ 500 billion is spent on the provision and exchange of relevant documents. In other words, about 7% of the transaction value and transaction costs comprise the documents. With these electronic exchanges, the documents and transactions costs will be reduced greatly. Estimates indicate that the use of electronic communication instead of traditional paper-based methods resulted in cost savings of 21 to 70 percent of the business activities. Official statistics show that during the years of 75 to 78, the current value of the Iranian GDP has more than doubled Liquidity. In other words, velocity of money is slightly more than 2 and this figure would be at least twice the value of GDP by Underlying this figure of transactions in the country. Obviously, due to the volume of trade, the implementation plan for e-commerce would not be possible in the short term and so if the purpose is the Electronic Transactions in foreign trade field, we will be closer to reality. [1]

E-commerce:

E-commerce can be expressed as any online business via the Internet. E-commerce is the process of buying and selling products and services on the Internet.[2] And it can be divided into several categories, which are:

- Business to business (B2B)
- Business to Consumer (B2C)
- Consumer to Consumer (C2C)
- Consumer to Business (C2B)
- Peer to Peer (P2P)

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Business to Administration (B2A)
Consumer to Administration (C2A)[3]

Advantages and disadvantages of using the Internet in the field of economy:

Using the Internet and e-commerce development can be a marketing tool for exporters and a low cost way to enter global markets of companies that intend to enter the export arena.

In fact, e-commerce develops the companies and firms market and creates new business opportunities and allows small businesses to compete with large corporations. This increases the sales of these firms due to increased demand and thus reduces the amount of inventories (due to increased sales and the storage and distribution of goods to identify the market) and costs associated with it. On the other hand, in this case, firms can purchase the Materials and services needed in other parts of the business world at a lower cost and more quickly. Since the buyer and seller are present in cyberspace, the role of intermediaries is eased and with shorter distribution channels, price will reduce and profit will increase. Also, due to time and cost savings resulting from the implementation of electronic commerce, countries may find new business opportunities. However, some disadvantages and criticism is also entered in this field:

- The reduce of Bankrupt companies' production
- Lack of integration of digital and non-digital sales and production data;
- Protection of the property of individuals (due to hackers, allowing people and businesses to disclose confidential financial information on the Internet.
- Objections against tax and customs issues [4]

E-commerce position in Iran:

The general use of the internet in Iran is in universities in order to conduct research. Created urban centers have limited activities and more users use the Internet as electronic and remote phone. In addition, many of the rules for e-commerce platforms in the country are not yet available. So we cannot expect that e-commerce is a rapidly expanding population. However, statistics indicate that e-commerce in Iran is not a growing trend in this area and has not shown a good performance. [5]

Electronic payments problems in Iran:

1. Credit card use in Iran is very difficult.
2. In terms of business culture, buyer does not trust the seller to give him his credit card details so that he can withdraw it.
3. There is no legal infrastructure to address the violation.
4. it is very difficult to take international credit cards in Iran.
5. Getting a Merchant ID is almost impossible in Iran. [6]

Security in E-Commerce:

Security means the protection of data against unauthorized trespassing in e-commerce process. Internet is a very open network and the data can be robbed or manipulated till the necessary measures are not predicted to not allow unauthorized persons access to information and intervention. [1].

Today many security risks, such as theft or message content change threatens each of these stages. Development of e-commerce requires trust and public confidence towards this type of business. Given that buyers and sellers do not recognize each other and cannot even see each other (they may be in different countries), the trust must be took place through ensuring the security and authenticity of electronic data interchange. Information security means protecting information and information systems from unauthorized activities. These activities include access, use, disclosure, reading, copying or recording, destroying, altering, and tampering. [2]

Development of e-commerce, banking and e-government in the country requires public confidence towards this type of trade via electronic data interchange and ensuring the security and digital signatures, digital certificates, secure foundation for the electronic exchange and the poor technical infrastructure and rules required signatures and digital certificates grow the cyber crimes and lack of public trust in e-commerce. [7]

Security attacks:

If the data move from the source to the destination the data is sent correctly. However, some attacks may occur and cause insecurity of handling data and document, these Security attacks can be divided into four categories.

Interruption: The attack is done on the availability of the system and makes the system inaccessible and useless and impairs the data exchange. Data is sent from source to destination, but it never reaches the destination.

Interception: unauthorized system will have an unauthorized access to data. This attack causes the vulnerable privacy. . Data moves from source to destination. Furthermore it reaches the destination, and sent to another unauthorized system and the attacker takes an unauthorized copy of the sent data.

Modification: In this type of attack transmitter sends data to the receiver. In the middle of the sending stage, an unauthorized system gains an unauthorized access to the sent data and changes it and then sends it to the recipient. By this attack, it disrupts the integrity and authenticity of the data.

Fabrication: if an unauthorized system sends data to a destination with the identity of another system Fabrication occurs. The attack questions the authentication and validation of data.

Such security attacks cause millions of dollars in losses and disruption of operations. Many reporters and consultants estimated the costs associated with losses estimated at billions of dollars to have security flaws. However, what is more important than the accuracy rate of these losses is the fact that with the increase of users of information systems, easy access to information and increase of aware users f (technical) it can safely be assumed that the number of these misuses of technology and security threats are also increasing in the same proportion. [8]

In the literature of e-commerce and in relation to information security in Internet networks, three important areas are considered as follows:

1. Authentication: That is the mutual authentication of both parts of the business process.
2. Encryption: any record of information must be encrypted in such a way that the others cannot read it or make changes to it.
3. Authorization: After authentication, and Encryption the received record of applicant is the range of access to records databases and functionality that is already defined as access authorization and is of great importance. [9]

Ten important methods to enhance the security of e-commerce:

1. Use a dedicated server for your site rather than shared servers.
2. Always be careful about your server software packages and security updates and install them quickly.
3. Avoid the performance of applications that do not need them.
4. Always keep track of changes and updates of the server.
5. Recognize the person responsible for the technical support of your server and track changes.
6. Make sure about the physical security of the server and its data.
7. Make a formal contract with the hosting company for the security of user data.
8. Code Sanitizing implementation for data entry fields
9. Add your site to the list of sites that you review daily.
10. Always scan the emails that are sent from your server. [10]

Conclusion:

Because e-commerce is conducted in cyberspace and its operations to both sides are not tangible transactions, maintain data security, e-commerce as one way of winning the trust of customers has a great importance. One way to deal with the threats of data sent is encryption. On the same day in order to eliminate obstacles to the development of e-commerce as well as the addition of " technical infrastructure facilities commensurate with the progress of the day " and " identification tools to the users clients ' should" for better monitoring of rules » are approved. The support of " government institutions ", " cultural and educational courses " and " establish a legal basis for combating electronic crimes " of the most fundamental parameters that can be established between us in this area and the countries of the region 1404.

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