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## Barriers to E-Commerce in Toos Industrial Town

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**Abstract:** *Businesses are facing with different barriers in their e-commerce. Therefore, the present study aims to investigate the barriers of e-commerce. The present research is applied in terms of purpose and is implemented in the category of descriptive research and survey method based on a standard questionnaire. The questionnaire has 38 questions and measures barriers to implementing e-commerce through its dimensions: technical and hardware barriers, financial and software barriers, customs barriers, legal and customs barriers, and Internet barrier. The statistical population of this study comprised 420 managers of the factories of Toos Industrial Towns, who used e-commerce, of which 127 subjects were selected as sample using the Krejcie-Morgan Table. The data analysis method in the inferential statistics of regression estimation was used in the form of independent t-test to investigate the relationship between barriers to e-commerce implementation. SPSS16 software was used to analyze the data. The results confirmed all the research hypotheses.*

**Keywords:** *E-Commerce, Implementation Barriers, Industrial City*

### INTRODUCTION

Various definitions were proposed for e-commerce, most of which are based on past experiences in the use of e-commerce. In 1997, the European Commission defined e-commerce as the following "e-commerce is based on the processing and transmitting electronic data, including text, sound and image. E-commerce involves various activities such as electronic exchange of goods and services, urgent delivery of digital demands, electronic money transfers, electronic stock exchanges, electronic Bill of Lading, business plans, direct marketing and after-sales services. The rapid growth of e-commerce in advanced countries and the resulting competitive advantages means that developing countries must rapidly revise their commercial strategies and policies.

Many economists, experts, and futurists believe that in recent years a revolution has taken place similar to the industrial revolution that brought the world into the information age and made a profound transformation in terms of the economic and social aspects of human life.

One of the dimensions of this development is the profound changes that were made in the economic relations between individuals, companies and governments. Business exchanges between individuals, companies with each other, and individuals with companies and governments are rapidly expelled from their traditional mode, which is based mainly on paper-based exchanges, and is geared toward trading through the use of the electronic-based information systems. The rapid development of information technology has led to the emergence of a phenomenon called e-business.

Internet technologies include the Internet, the global network (web) and other wireless transmission technologies in mobile phones and personal digital devices. Companies that only operate online are often called dot com business to be distinguished from other companies that are active in physical locations (solely or with online operations) (Huakg et al., 2013).

In this environment, the replacement cost of the supplier decreases, thus the key to maintaining the customer is to create a sense of satisfaction in the customer (Dong, 2012). E-commerce transformed economics and society and has great benefits for organizations, customers and society. E-commerce brings together the boundaries of time and space and reduces the cost of goods and services for customers and leads to gaining more markets and higher profitability for companies.

Also, companies can use e-commerce to reach small groups of customers that are scattered around. The web is in particular a good environment for creating virtual communities that are ideal for the sale of certain goods or services. A virtual society is a social community of people who have common interests and gather together on the Internet instead of gathering in a physical location (Lin et al., 2013).

### **E-commerce Advantages**

Using e-commerce has many advantages. At micro level, the use of e-commerce will be followed by cost savings, reduced transaction costs, increased efficiency, change in management processes and establishment of business enterprises, reduced exploration cost, increased access to information, power adjustment between producer and consumer, reduction of the market entry barrier, increased competition, reduction of exclusive profits, etc. There are also other cases to mention, including:

Development in commerce, sales, income and investment.

Concluding multilateral trade, industrial and economic contracts are facilitated.

The use of e-commerce can greatly remove the need for countries to negotiate bilateral agreements and provides the conclusion of multilateral agreements. This issue, in addition to providing specific stability to contracts and agreements, will reduce the costs and expenses of abundant costs that will be spent on bilateral or single-country contracts worldwide.

The use of e-commerce provides the context for the correct and real identification of the relative advantages. Iran is among countries with rich and unique resources. The huge reserves of oil and gas and iron ore, zinc, copper, aluminum and extensive and fertile land, long beaches, sea areas rich in aquatic animals, potential capacity for tourism, cheap human resources, and so on, are blessings which is in our country. Recognizing them correctly based on the advantages of each one and prioritizing them can lead the country's economy to a thriving and comprehensive growth.

By identifying the relative advantages of the country, e-commerce makes foreign investors invest more in the country.

The use of e-commerce creates an appropriate environment for the expansion of economic relations with other countries, and gradually develops the context for the expansion of political relations; relations that may be made in a more rational and reasoned way by commercial links, Because the economic interests of countries require politically closer, sincerer and equal relations.

The welfare level of the community is promoted.

New business opportunities will emerge for industries and businesses through eliminating discrimination and gaining business excellence from negotiations between governments.

The use of e-commerce will increase resource utilization and accelerate economic growth and sustainable development.

Product innovation is another important benefit of e-commerce, which means creating or learning new ways to deliver products and services that are not feasible in the traditional way.

It takes time to waste and reduce unnecessary traffic.

Entry into cross-regional markets become probable in reaching to global marketing.

It leads to the elimination of intermediaries and brokers (Khani, 2007).

### **E-business models**

The use of the Internet as the most important communication bed in e-commerce has led to the emergence of various models in this business along with the global network of communications. These models are the result of the interaction of the three main groups of individuals of a society, from an economic point of view including government or affiliated organizations, commercial and economic organizations, product manufacturers and service providers, and ultimately ordinary people who are the ultimate buyers of goods or services. Different models of e-commerce are derived from the two-dimensional interaction of these three main groups.

1. Business to business e-commerce B2B
2. Business to consumer e-commerce B2C
3. Consumer to consumer e-commerce C2C
4. Any business affairs between government to business G2B (Mousavi et al., 2010).

Given the benefits of e-commerce and the speed of its development in the world, it seems that companies should consider using e-commerce as well as identifying and removing barriers to its implementation. Therefore, the purposes of the present research are as follows:

- The main purpose:
  - Evaluating the effect of barriers on e-commerce in Toos Industrial Town
- Sub purposes:
  1. Investigating the effect of technical and hardware barriers on e-commerce in Toos Industrial Town
  2. Investigating the effect of financial and software barriers on e-commerce in Toos Industrial Town
  3. Investigating the effect of customs Issues on e-commerce in Toos Industrial Town
  4. Investigating the effect of legal barriers on e-commerce in Toos Industrial Town
  5. Investigating the effect of legal and customs on e-commerce in Toos industrial Town
  6. Investigating the effect of internet barriers on e-commerce in Toos Industrial Town

## **Research literature**

A study on identifying barriers to the growth and development of e-commerce in developed countries was widely conducted in recent years. However, due to the research conducted, unfortunately, little attention has been paid to this subject in the scientific research field within Iran and the research has been limited in this regard.

Rajesh and Bee Theng Lau, investigated major barriers to developing e-commerce in businesses in Malaysia. The results of the research showed that the main obstacles in the development of e-commerce in priority order were: a) social and cultural barriers; b) technical barriers; c) financial barriers (Rajesh et al., 2008).

Macgregor began to classify barriers to accepting e-commerce. In the research findings, the classification of barriers to e-commerce adoption include: (a) Hard barriers to e-commerce that prevent a company from accepting e-commerce, including lack of skill and technical knowledge in the organization, the complex implementation of e-commerce in the organization, the needs for high investment, lack of sufficient time to implement e-commerce, difficulty in choosing to accept various e-commerce strategies, security issues, b) barriers to inappropriate e-commerce, barriers that are inappropriate for an organization, and disrupts the work of organization in the way of accepting e-commerce. It also includes incompatibility of e-commerce with products and services, e-business incompatibility in business processes, incompatibility of customers with e-commerce services, lack of benefits in using e-commerce in the company (Macgregor, 2005).

Alipour et al. investigated the priority of barriers to using e-commerce and prioritized these barriers. The results indicated that 40 factors in 5 distinct groups were identified as inhibitors including 8 communications

and technology infrastructure, 9 economic factors, 8 social and political factors, 9 cultural and educational factors, 6 legal and legislative factors (Aliopour et al., 2012).

Gadvin examined the concerns about using the Internet in commerce. During the research results, the concerns expressed about using e-commerce included: a) Internet security, b) personal information dissemination, c) child vulnerability, d) email security risks, e) impersonation (Gadvin, 2001).

Koushesh Afkar, in his research, evaluated the obstacles to the successful implementation of e-commerce. The results of this study indicated that the lack of financial resources for investing in e-commerce infrastructures is the most influential index on other indices and the lack of senior management support from the implementation of the e-commerce system, is the most influential index of other indices, also the lack of senior management support for implementing the e-commerce system has the most interaction with other indices (Koushesh Afkar, 2017).

### Research Methodology

The present research is applied in terms of purpose and is implemented in the category of descriptive research and survey method based on a standard questionnaire. The questionnaire has 22 questions and measures barriers to implementing e-commerce (technical and hardware barriers, financial and software barriers, customs barriers, legal and customs barriers, and Internet barrier. Validity of the questionnaire was confirmed by the relevant professors in the field of business management and marketing orientation. In order to assess the reliability of Cronbach's alpha, the results were presented in the following (Table 1)

**Table 1:** Cronbach's alpha coefficients of the research variables

No.	Dimensions	Question	Cronbach's alpha
1	Technical and Hardware Barriers	1 to 3	0.8102
2	Financial and Software Barriers	3 to 6	0.8321
3	Customs Barriers	7 to 12	0.8206
4	Legal Barriers	13 to 16	0.8001
5	Legal and Customs Barriers	17 to 19	0.8241
6	Internet Barrier	20 to 22	0.8198

The statistical population of the present study comprised the managers of the Toos industrial town factories that use e-commerce, consisting of 420 people, of whom 124 were selected as the sample size using the *Krejcie* and Morgan Tables.

Data analysis method, information analysis method, in inferential statistics, regression estimations were used in the form of independent t-test to investigate the relationship between barriers to e-commerce implementation. SPSS16 software was used to analyze the data. The results confirmed all research hypotheses.

### Research Findings

The (Table 2) summarizes the barriers of e-commerce implementation, i.e. their mean, median, and standard deviations:

**Table 2:** Statistical characteristics of barriers to e-commerce implementation

Variables	Mean	Median	Standard deviation
Technical and Hardware Barriers	3.52	3.66	1.03
Financial and Software Barriers	4.36	4.39	1.13

Customs Barriers	4.08	4.13	3.98
Legal Barriers	3.91	3.95	1.09
Legal and Customs Barriers	3.78	3.82	3.99
Internet Barrier	4.22	4.19	1.11

The findings of this study show that among the barriers to e-commerce, financial and software barriers, technical and hardware barriers, have the most and the least mean in terms of the sample studied.

In inferential statistics, regression estimations were used as independent t-test to investigate the relationship between e-commerce barriers and e-commerce variables. SPSS16 software was used to analyze the data in (Table 3).

The summary of the results include:

1. There is a reverse and statistically significant statistical relationship between technical and hardware barriers to e-commerce. In addition, if other conditions are constant, if technical and hardware barriers increase by one unit, e-commerce implementation will be reduced by 0.842 unit.
2. There is a reverse and statistically significant relationship between financial and software barriers with e-commerce. In addition, if other conditions are constant, if financial and software barriers increase by one unit, e-commerce implementation will be reduced by 0.892 units.
3. There is a reverse and statistically significant relationship between customs barriers and e-commerce. In addition, if other conditions are constant, if the customs barriers increase by one unit, the e-commerce implementation will be reduced by 0.820 units.
4. There is a reverse and statistically significant relationship between legal barriers with e-commerce success. In addition, if other conditions are constant, if the legal barriers of a unit increase, e-commerce implementation will be reduced by 0.810 units.
5. There is a reverse and statistically significant relationship between legal and customs barriers with the e-commerce success. In addition, if other conditions are constant, if the legal and customs barrier increase by one unit, e-commerce implementation will be reduced by 0.822 unit.
6. There is a direct and statistically significant relationship between the Internet barrier. In addition, if other conditions are constant, if the Internet barrier increases by 1 unit, the e-commerce implementation will be reduced by 0.833.

7. **Table 3:** Summary of the barriers to e-commerce implementation in the Toos Industrial Town

No.	Variable	The correlation coefficient	Type of relationship	Hypothesis
1	Technical and Hardware Barriers	0.842	Reverse - significant	Confirmed
2	Financial and Software Barriers	0.829	Reverse - significant	Confirmed
3	Customs Barriers	0.820	Reverse - significant	Confirmed
4	Legal Barriers	0.810	Reverse - significant	Confirmed
5	Legal and Customs Barriers	0.822	Reverse - significant	Confirmed
6	Internet Barrier	-0.833	Reverse - significant	Confirmed

### Conclusion

In the current competitive world, the adoption and use of e-commerce by companies to create and maintain competitive advantage has become a necessity. In fact, e-commerce has become a major determinant of future success for companies and has caused changes in the form of competition. The research findings showed that among the barriers of e-commerce, financial and software barriers, technical hardware barriers had the highest and the least mean in the opinion of the managers of the Toos industrial town, respectively. The research

hypotheses were also confirmed. In other words, the technical and hardware barriers, financial and software barriers, customs barriers, legal and customs barriers, the Internet barrier each have a reverse relationship with e-commerce and negatively affect e-commerce implementation. Therefore, it is suggested that the factories examined and other companies with similar activities, by finding solutions to remove or control any of these barriers, try to improve e-commerce, so that its benefits can be maximized.

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