

## IDENTIFYING THE EFFECTIVE ELEMENTS OF ELECTRONIC BUSINESS IN THE GROWTH OF BUSINESS COMPETITIVENESS OF COUNTRIES

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**Abstract.** With the change of the economic form over the past three decades, the world has witnessed the birth of new methods of trading both indigenously and internationally. The new methods of economics in the world level are owed new technological tools such as the growth and the use of internet and the most sensitive and intelligent computers, both of them mean that modern economies and technologies are so interconnected that the one will cause to stop another. One of the main branches of the world economy is the subject of commerce in the world level which by moving away from its traditional forms and entering the age of statistics and figures, has become a new entity, and the result of the global nature changing is the of electronic business which does not last long from the beginning. E-business activities in the advanced countries have an unexampled grown and are rapidly expanding globally. In the meantime, e-business has experienced high growth as one of the subsets of information and communication technology over the last decade. So that the policy approach of most commercial firms is to adopt and apply electronic business in order to enter global markets and attract new efficient customers in this way. But the use of electronic business in business activities requires paying attention to a series of effective endogenous and exogenous factors. So that the attention of business enterprises to the factors and planning for the optimal use of electronic business technology not only guarantees the success of its exploitation but also provides the basis for the growth of the enterprises.

The present research aims to assess key factors for electronic business. So, deducing effectual variables in this alternative could be effectual for designing a decision making model especially for managers, brokers and agencies. The questionnaire was designed in Likert scale & distributed among 235 managers in the field of commerce in Iran. Cronbach alpha is calculated as %86, which is well above the minimum desirable limit of 0.70. The study investigates 23 factors & extracts five important ones, which Analyzing Business Process and Improvement, IT factor analysis, political commitments, value drivers, organizational factor . In this paper for analyze the data use from spss softwares.

**Keywords:** Electronic Business Competitiveness Business Competitiveness Factor analysis

## INTRODUCCIÓN

Trade facilitation that is an important aspect of the competitiveness between countries, improves cost and time efficiency in the movement of goods and services. Trade facilitation is usually referred to as simplification, harmonization, and standardization in international trade practices.

Therefore, the purpose of trading procedures is the same activities and procedures involved in collecting the presentation, communication, and processing of data required for the movement of goods in trade between countries. The definition of trade facilitation has various definitions depending on the context and involved sectors.

In a limited perspective, facilitating trade is a logistical change in the movement of goods through ports, or expediting customs formalities. In recent years, we have seen a wider look at the definition of trade and the environment facilitation which includes business transactions take place in. With this view, domestic policies and economic and governance structures play an important role in facilitating trade. For example, the transparency of government regulations creates a favorable environment for doing business. In addition, coordination in the application of international standards and rules cause to facilitate business interactions. From the World Trade Organization's perspective, trade facilitation refers to improving procedures and controls related to the goods movement between countries to reduce costs and volume of formalities. The importance of trading as a tool for subjective economic development has been fully accepted in the theory of economics. At present, the share of trade in global gross production is about 30%, which is projected to increase by 50% by 2020 (Andrea et al. 2010).

In order to develop the share of trade in the welfare and development of countries and on the basis of various experiences and studies, so far, three areas have been mentioned as the most fundamental solutions to facilitate trade at the national and international levels:

**First area:** facilitate trade practices by all major international organizations as a critical issue for economic development is a bottleneck commercial procedure that reinforces the need for trade facilitation more than past time.

**Second area:** deploying IT infrastructure for the electronic circulation of commercial documents and reducing time while improving the security of

document exchange in trade at national and international levels

One of the main goals of this infrastructure is the availability of paperless business space.

Third area: the use of international standards, which has been developed and coordinated mainly with the cooperation of the International Organization for Standardization i.e. ISO and the United Nations Center and e-business depend on United Nations and other relevant affiliated organizations has been explained and provided (Bordonaba and et al.2012).

One of the major goals of these standards is to achieve simple solutions, without dependence on specific and low-cost hardware and software and available to all countries at each level of development and for all businesses on a daily basis and every income (Bordonaba and et al. 2012).

## 2. Theoretical bases

### 1-2.The impacts and benefits of trade facilitation

Costs of doing business depending on the complexity or length of procedures of each country, in particular customs, affect the efficiency and correctness of the interactions of businesses and government, the types or characteristics of goods, the type and size of businesses. The total cost of doing business is a combination of direct and indirect costs.

Direct costs are such as costs associated with the providing information and documents to relevant organizations and indirect costs are such as those caused by delays due to processes and regulations. Empirical studies show that direct and indirect costs of doing business are between 1 and 15 percent of the value of the exported goods. In addition, empirical evidence suggests that the cost of doing business for agricultural products and foodstuffs is much higher than for industrial goods. Because of that transfer of food and agriculture products require special procedures and controls in the customs.

Small and medium-sized enterprises, meanwhile, are more vulnerable to this issue. The benefits from the business expense, depending on countries, economic sectors and types of actors have a large verity (Chang 2009).

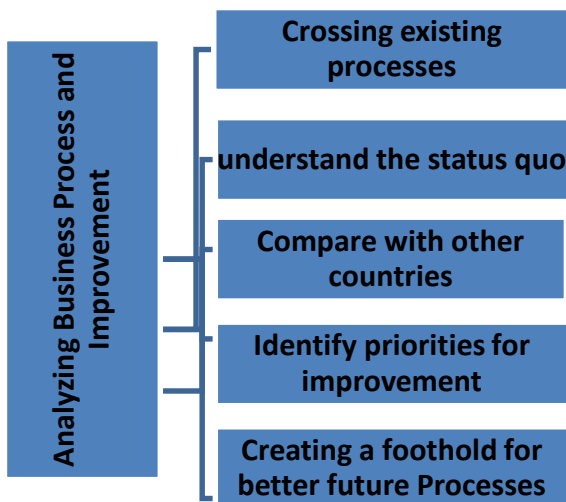
### 2-2.How many resources of the companies save on paperless business?

Not only the main exporters like Samsung and Hyundai, but also small and medium-sized enterprises were able to make the best use of paperless business services and tools to become one of the highest-performing countries in

information technology. Samsung Electronics Company was able to reduce design time by 67%, processing time by 80%, and labor force by 84%, and reduce paper requirement by 95%, in its international purchases.

### 3-2. Analyzing Business Process and Improvement

In the analysis of business processes, several basic steps must be taken to achieve the desired status of business processes: understanding the current status, defining standards for identifying the situation, identifying priorities in improving business processes, and ultimately simplifying processes that should be continuing to do. That is, a mechanism should be created while stabilizing the processes, improve their continuity. The first step in analyzing and improving business processes is to understand the current status. According to conducted studies in Thailand in 2007, the lack of electronic documentation and the lack of automation infrastructure in different firms are one of the shortcomings of this situation (Lai and Yang 2009).



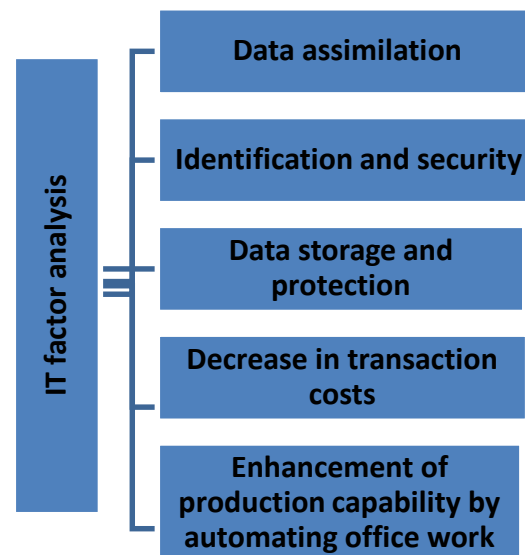
#### Practical recommendation

- Transferring the requirement of the implementation of trade facilitation analysis, especially for high-level decision-makers
- Providing sufficient resources to conduct business process analysis
- Clear understanding of the role of stakeholders
- Determining a qualified leader set
- Small start, then growing
- Exploiting past experiences
- Investing in education

- Use the results of business process analysis to actual improvement (Zhao and Zhu.2008)

### 4-2. IT factor analysis

The IT factor leads to saving and thriftiness. This saving includes reducing the cost of exchanges by using electronic documents, improving production capability by automating office work, and improving management, maintenance and protection, and storing and retrieving information and documents through the use of information technology.



**Data assimilation and modeling for data and the effectiveness of business data include three steps:**

1. Assimilation: Matching national or regional data domains to national, regional or international data sets
  2. Simplification: Delete additional and unnecessary data
  3. Standardization: Increase the number of data sets in national, regional, or international standards through standardization institutions
- Standardization, simplification, and assimilation are the three main axes in this step that described more details of these steps in below (Huang et al. 2008).

#### Data assimilation

The practice of integrating definitions and formats of presentation of data components are into a domain of interest. Assimilation involves a set of activities that improve the compatibility of the use

of data components in terms of meanings and presentation formats.

Assimilation specifies a set of core data elements (expressed elements by using different descriptions but with identical meanings) .

#### **Data assimilation output:**

A list of documents or e-mails is in the realm of data integration.

A set of data glossaries corresponds to a list of document identification or electronic message. National Standard Dataset which:

Requirements of listed data in each glossary unify the data. It includes the standard semantic definition and presentation format for each data requirement.

A set of executive message guidance for key documents supports combines un/Edifact or XML messages.

#### **The benefits of data synchronization**

- Providing common semantic standards for import, export and logistics data
- Reduce surplus and duplicate data
- Ensuring data assimilation is data interoperability among all stakeholders which facilitates more business practices.
- Preparing for the development of e-commerce documents

Step-by-step approach to data assimilation (Cegarra et al. 2007)

#### **Data assimilation steps:**

- Step 1: Collecting business processes and identifying the basic documents and requirements
- Step 2: Analyzing data in each document and defining the meaning of data and data formats
- Step 3: Analyzing data elements in different documents and organizing them in a comparable method
- Step 4: Match the data components with the data reference model
- Step 5: Achieving the structure of the electronic document

#### **Identification and security**

Cyber-security is an important issue for government and private sectors that should not be blocked by electronic communications.

Information technology can provide several services: proving originality, integrity and completeness, timestamp, and so on.

#### **Data storage and protection**

•The emergence of technical standards to increase attention to database protection

•Additional work on obtaining evidence in researches and acceptance in criminal proceedings, especially in the field of trade between countries

•The rules must be business-aid, not their cumbersome and excessive regulation should be avoided and assistance in the regulation of the law.

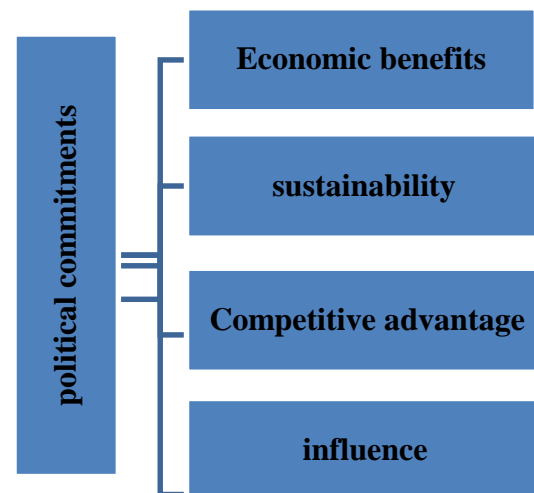
•Paperless transferring to environments is an opportunity to re-process and simplifying existing rules

•Adoption of advanced legislation, preferably based on widely accepted standards (Cegarra et al. 2007)

#### **5-2 -The element analyzing of the political commitments**

To win the trust and support of a country's authorities in implementing such national projects, with the emphasis on a series of topics in the project, it is possible to increase the attendance of officials:

- Explaining the economic benefits of the project
- creating a guarantee for the stability of the implementation of the project in its various phases and the return of initial capital
- Draw up the competitive advantage of leading countries in the implementation of this project
- Draw effects such as investment attraction, improved supply chain processes, and ... by having an optimal mechanism in overseas trade (Alexandra et al.2016)



#### **General principles of electronic exchange law**

The rules of electronic exchanges, a general model of which regulated by UNCITRAL, are based on three principles:

The principle of non-discrimination: because of its electronic nature, there is no need to emphasize on the non-use of electronic devices.

The principle of work equivalence: the same function for example, between paper documents and their electronic equivalents, are similar.

The principle of neutrality of technology: Point out that the law should not insist on using a particular technology or brand and it should be independent of technology (Bordonaba et al 2012)

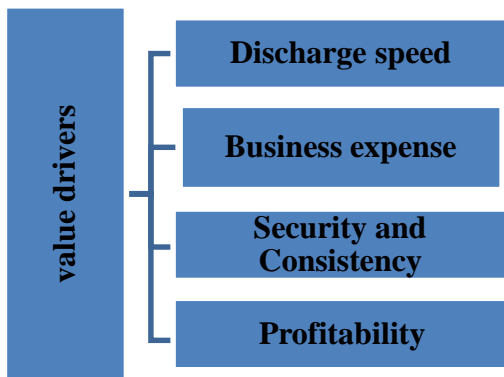
- Adoption of international standard payment methods
- Record and apply all available data to reduce barriers
- Developing new international partnerships and expanding bursaries( Borges et al. 2009).

**Security and Consistency**

Includes the following factors:

- Development of public sector partnership models - private sector in the business community
- Integration of providing nationwide services
- Developing the ability of a business partner with key industries
- Developing public-private sector information sharing mechanism (Yeh et al. 2012)

**6-2. Factor analysis of value drivers**



**Discharge speed**

Includes the main strategies that are:

- The liberalization of the payment process from physical exchange
- Providing the possibility of registering and entering electronic information and encouraging it to do so
- Integrating domestic governing processes in related departments
- Improving and promoting working teams (Lin et al. 2008)

**Business expense**

Includes guiding actions that are:

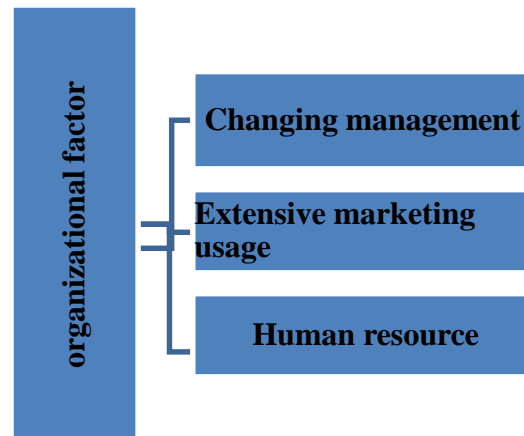
- Adoption of an agreed risk-based approach
- Running pre-discharge plans before obtaining certificates
- Integrate profitable sets with industry payment processes
- Implementing strategic objectives
- Exploiting new technologies for lubrication of port processes and discharge of goods (Jeon et al. 2006)

**Profitability**

Includes emerging approaches that are:

- Accepting virtual discharge activities at the port

**7-2. Analyzing organizational factor**



• **Changing management**

Manager of changing management: programs and tasks of changing management have to be managed by customer users to conduct changing management training .

Training viewers: Hold a training course and take advantage of the knowledge used by different applications

• **Extensive marketing usage**

Marketing activities should be planned and implemented.

Manage sales accounts and follow shopping queues.

• **Human resource**

Functional human resources management: it does talent acquisition, useful programs and performance management (Wiengarten et al .2012).

**3. RESEARCH METHODOLOGY**

### 1.3 Data collection and sample:

This study attempts to find the impact of demanding managers in the field of commerce. The proposed study uses factor analysis to extract most influence factors and sample size has been chosen from managers. The questionnaire was designed in Likert scale & distributed among 235 persons. To analyze the data, descriptive statistics were used to sort the data in the second part of the data analysis is performed based on statistical inference. In this paper for analyzing the data, we use SPSS software. Factor analysis and structural equation analysis of the presumptive test was used.

### 2.3. Assessing reliability:

The reliability of the measurements in the survey was tested using Cronbach's  $\alpha$ . Hair et al. (1998) stated that a value of 0.70 and higher is often "considered the criterion for internally consistent established factors". Cronbach's  $\alpha$  is calculated as 0.86, which is well above the minimum desirable limit of 0.70. The Cronbach's  $\alpha$  coefficients in parentheses indicate the internal consistency reliability of the measures ( $\alpha = 0.868$ ).

There are 23 variables and using factor analysis, we extract four factors where Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.72 (Approx. Chi-Square = 3.614E3 df=595 Sig. = 0.000), which also confirms the results of our survey.

### 4. Analysis and results:

The proposed study designs a questionnaire and distributes it among 235 managers in the field of commerce. Cronbach's  $\alpha$  is calculated as 0.86, which is well above the minimum desirable limit of 0.70. Cronbach's  $\alpha$  has been calculated as 0.86 and Table 1 demonstrates the results.

Table 1. Reliability Statistics

CRONBACH'S ALPHA	CRONBACH'S ALPHA BASED ON STANDARDIZED ITEMS	N OF ITEMS
0.868	0.868	23

We extract factors where Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.72 (Approx. Chi-Square = 3.614E3 df=595

Sig. = 0.000), which also confirms the results of our survey. Table 2 demonstrates the results.

Table 2. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.72
Bartlett's Test of Sphericity	Approx. Chi-Square	3.614E3
	Df	595
	Sig.	0.000

### 5. Interpretation of the results of the factor analysis:

In this section, we present details of our findings on five influencing factors.

#### 5.1. The first factor: Analyzing Business Process and Improvement

The first factor is associated with Business Process and Improvement factors. Table 3 shows details of our survey. As we can observe from the results of Table 3, "understand the status quo" is number one priority followed by "Crossing existing processes", "Compare with other countries".

Table 3. The summary of factors associated with Analyzing Business Process and Improvement

option	Factor weight	Eigenvalues	% of variance	Accumulated
Crossing existing processes	0.798			
understand the status quo	0.803	2.433	48.657	48.657
Compare with other countries	0.684			
Identify priorities for improvement	0.563			
Creating a foothold	0.605			

option	Factor weight	Eigen values	% of variance	Acumulated
Data assimilation	0/830	2.226	55.643	55.643
Identification and security	0/689			
Data storage and protection	0/692			
Decrease in transaction costs	0/724			
Enhancement of production capability by automating office work	0.573			
future Processes				

Cronbach alpha =0.72

### 5.2. The second factor: IT factor analysis

IT factor is the second important factor and it includes five factors, which are summarized in Table 4.

According to the results of Table 4, “Data assimilation” is number one priority followed by “Decrease in transaction costs” and “Data storage and protection”.

### 5.3 political commitments factor

“Sustainability” is the most important component in the political commitments factor followed by “Economic benefits” and “Competitive advantage”.

Table 4 .The summary of factors associated with IT factor analysis

option	Factor weight	Eigenvalues	% of variance	Acumulated
Economic benefits	0.752			
sustainability	0.881	1.984	66.122	66.122
Competitive advantage	0.584			
influence	0.563			

Cronbach alpha =0.84

### 5.4. Value driver’s factors

Value drivers factors are another important factors with four items summarized in Table 5. According to the results of Table 5, “Security and Consistency” Is the most important component in value driver’s factors followed by “Discharge speed”, “Occupation” and “Profitability”.

Table 5 .The summary of factors associated with value drivers factors

option	Factor weight	Eigenvalues	% of variance	Acumulated
Discharge speed	0/802			
Business expense	0/758			
Security and Consistency	0.813	1.877	62.551	62.551
Profitability	0.796			

Cronbach alpha =0.76

Table 6 .The summary of factors associated with organizational factor

option	Factor weight	Eigenvalues	% of variance	Acumulated
Changing management	0/88	2.226	55.643	55.643
Extensive marketing usage	0/79			
Human resource	0/77			

Cronbach alpha =0.84

According to the results of Table 4, “Changing management” is number one priority followed by “Extensive marketing usage” and “Human resource”.

### CONCLUSIONS

The scope and aspects of e-commerce are where the trade is expanding. With this approach, all government services to businesses can be considered for conducting business transactions at the national and international levels. Transportation, insurance, and bank services are also considered in this field. With other aspects, you cannot look at the current term of e-commerce. It also addresses the role of facilitating business and e-commerce. Electronic business is not just a network page that will make the business processes, relationships, and transactions global, but it is an environment of business models, including business with employees, customers, suppliers, and partners. This paper has presented an investigation on important factors influencing Electronic Business in the Growth of Business Competitiveness of Countries. The study investigates 23 factors & extracts five important ones, which Analyzing Business Process and Improvement, IT factor analysis, political commitments, value drivers, organizational factor.

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