Inhibiting factors of improving E-business in developing countries
(Case study with focus in Iran)
Mina Yazdanipour, Farid Mahalati pour
College of Commerce and Business Management, Osmania University, Hyderabad, India
ammfr_66@yahoo.com

ABSTRACT

E-business is a broader definition of E-commerce that includes not just the buying and selling of products and services, but also, servicing customers, cooperating with business partners, enforcement electronic transactions within an organization. Recently, E-business is growing in the world but there are some obstacles in front of improvement of it.

The main objective of this paper is to discover most significant barriers against Electronic Business (E-business) in developing countries compare to developed countries with focus on Iran. Inhibiting factors are classified into three hypotheses. 1) Lack of government support, 2) incapability of firms to use e-business (that is technical support) and 3) The Social-Culture backgrounds of people in Iran is not ready for e-business acceptance in many companies. Finally, statistical methods are used to test these hypotheses to find significant obstacles against E-business improvement in Iran.

Keywords: E-Business, E-Commerce, Inhibiting Factors, Developing Countries, Iran.

1. Introduction

E-business is a fast changing matter, driving multiple paradigm shifts that are as radical as those that splintered from the industrial revolutions with all their recorded social, economic and technological impacts. For the first time virtual stores may provide advertising and selling channels leading to the global market. E-business implementations used to address the mass market are at the heart of the current revolution, but more specialist impacts such as those in banking, stock markets, and money markets might be considered more significant as they are influential in determining the performance of an economy.

Taking advantage of information and communication technologies (ICT) is an increasing challenge for developing countries. More and more developing countries are now aware of what they stand to gain from ICT and are making vigorous efforts to encourage their dissemination and use. Yet, the gaps are still far too wide. For example, while the number of Internet users in Africa grew by 56% in 2003, only 1% of Africans had access to the web, compared with 55% of North Americans. E-business and ICT in general can be powerful development tools, but their potential cannot be achieved unless certain conditions are met and basic policies are established. UNCTAD's role is to help developing countries diagnose the obstacles they face in adopting ICT and introduce measures to remove them. This study is surveying the barriers for implementation and improvement of E-business in developing countries with focus on Iran.
The remainder of the paper is organized as follows: E-business and E-commerce are defined in next section. Significance of this study is clarified in Section 3. In Section 4 previous studies in this context are discussed. In Section 5, all three hypotheses are evaluated based on statistical data analysis. Based on our finding we tried to offer some recommendations in section 6. Finally, conclusion is presented in Section 7.

1.1 Definition

In the mid-1990's, electronic commerce emerged as a term that was EDI as well as open buying and selling on electronic networks. For example, the Computer Desktop Encyclopedia (1995) defined electronic commerce as "Acting business on line. It includes buying goods via on-line services and the Internet as well as electronic data interchange (EDI), in which one organization’s computer requests and transmits purchase orders to another computer of organization." A brief description of electronic commerce that was broadly used at this time was "The purchasing and selling any kinds of information, goods or even services via computer networks including internet" (Kalakota and Whinston, 1996, p. 1). "Electronic commerce is the sharing of business information, Preservation business relationships, and performing business transactions by means of telecommunications networks. Ecommerce consists the sell purchase relationships and transactions between companies, as well as the corporate processes that support the commerce within individual firms" (Zwass, 1996).

Electronic business, commonly referred to as "E-business", or an internet business can be descript as the application of information and communication technologies (ICT) in support of all the actions of business. Commerce forms the exchange of goods and services among businesses, teams and persons and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses. Therefore E-Business in addition to encompassing E-commerce includes both front and back-office applications that form the engine for modern E-commerce. E-business is not just about E-commerce transactions; it's about re-defining old business models, with the aid of technology to maximize customer value. E-Business is the overall strategy and E-commerce is an extremely important facet of E-Business. Thus E-Business involves not merely setting up the company website and being able to accept credit card payments or being able to sell products or services on time. It involves fundamental re-structuring and streamlining of the business using technology by implementing enterprise resource planning (ERP) systems, supply chain management, customer relationship management, data ware housing, data marts, data mining, etc.

2. Significance of research

We can claim that E business is a kind of ICT, therefore taking about advantage of information and communication technologies (ICT) is an increasing challenge for developing countries. There is now growing evidence that enterprises benefit substantially from e-business. New technologies, and in particular the Internet, transform economic sectors and allow them to do business faster and better.

For example in the tourism sector, local tourism providers use the Internet to market their offers directly online. Electronic commerce may have large economic effects in the future. Internet commerce will change the face of business forever (that is kinds of E-business). The e-commerce has affected the global economy in many different ways. First of all, it has
affected the information technology, and all the economic sectors, all and above e-commerce has enhanced the productivity growth worldwide and here we are going to discuss this impact, they are able to identify the number of qualified people needed to advance their country’s information economy or to calculate the amount of investments needed to provide business with access to the internet. Some countries are already benefiting from the results, they are now in opposition to benchmark their economies with competitors internationally and there are many ways to accelerate the growth of productivity but the reason for this is rather controversial. Banks and financial services companies in the developing countries will need to adopt online payment system, to obtain e-trade finance and equity investment, tourism and its internet incarnation is regularly cited as one of the fastest growing ecommerce sectors E commerce is raising at 12% annually in the U.S, and EU.

The impact of E-business on developing countries could be even stronger than that on developed countries because the scope for reducing inefficiencies and increasing productivity is much larger in the developing countries. Growing sectors of E-Business in developing countries Automobiles: Buying and selling of new & used four wheelers and two-wheelers, its marketing, etc. Real estate and e-commerce: They provide information on new properties as well as properties for resale. Travel & tourism: Online reservations, tour packages, hotel bookings Stocks & shares: Online trading, Online banking Gifts through E commerce: Chocolates, Luxury items, flowers Matrimonial Services, Employment sites Indian railway (IRTC)Need of study the tremendous rise of growth in E business has also increased the growth of risks, security threats, hackers, fear among internet shoppers, but E-business is able to open new windows for doing business and help enterprises do their business globally.

2.1 Previous studies

The e-commerce has affected the global economy in many different ways. First of all, it has affected the information technology, and all the economic sectors. The impact of e-commerce on developing countries could be even stronger than that on developed countries because the scope for reducing inefficiencies and increasing productivity is much larger in the developing countries. By cutting costs, increasing efficiency and reducing time and distance, e-commerce could become an important tool for development.

A research that is done by Alev M. Efendioglu and Vincent F. Yip and William L. Murray in University of San Francisco with the title of “e commerce in developing countries: issues and influences” (Alev M. Efendioglu, F. Yip, 2002). They found that Differing characteristics of local environments, both infrastructural and socio economic, have created a significant level of variation in the acceptance and growth of e-commerce in different regions of the world. Their studies show that, in development and diffusion of ecommerce in China, cultural issues such as “socializing effect of commerce”, “transactional and institutional trust”, and “attitudes toward debt” play a very major role. Grabner-Kraeuter observes and states that “trust is the most significant long-term barrier for realizing the potential of e-commerce to consumers”, (Grabner-Kraeuter, 2002) and others state that trust will be a “key differentiator that will determine the success of failure of many Web companies.” (Urban et. al., 2000) This research and the associated research focus on the impact of these infrastructural and socioeconomic factors on e-commerce development in China, and these findings identify changes that will be required for broader acceptance and diffusion of e-commerce in this country. In this study 20-question questionnaire, prepared in English and translated to and administered in Chinese. It contained questions designed to collect information on demographics, Internet usage, and e-commerce activities (frequency of commerce and type of
purchase, means used for purchase, transaction experience, and perceptions of e-commerce in China). They selected 252 individuals that would be considered to be a close match to e-commerce users in developed countries and they considered to be “early adopters”. Since their primary focus was “impact of culture”, they wanted to get the opinions of actual participants/users of e-commerce and wanted to eliminate the infrastructure problems as much as possible. The study participants resided and worked in different regions and for different types of organizations, and had different educational levels, professions, and gender. They asked participants about their Internet usage to identify their familiarity with technology and their access to Internet, and their e-commerce participation to determine their ability.

The overall results of this study clearly show that both the economic and infrastructural issues and culture continue to impede and constrain the development of e-commerce in China. This findings show that, even though a developing country government may make the necessary investments in infrastructure (as China has done to a significant degree), unless the e-commerce industry participants understand and address the cultural issues that are unique to that country and relate to off-site transactional process, the large scale diffusion and success of such endeavors will be greatly impeded.

The other study that is done by Dr. Zeinab Mohamed in Miser University by the title of “The Impact of E-commerce on Developed and Developing Countries Case Study: Egypt and United States” which analysis impact of e-commerce in Arab countries (Zeinab Mohamed El Gawady, 2005).

Results of her study can be summarized as follows: As E-business is rapidly growing in the United States; to the contrary, in Egypt it is completely different. Although e-commerce is considered as a significant instrument for development in the Egyptian economy; Trade over the Internet has not been quickly adopted in Egypt because there are a number of barriers that have mitigated e-commerce to properly take off.

3. Hypotheses and analysis

This study is about to find important inhibiting factors against improvement of E-business in developing countries in narrowing case Iran, which is one of the developing countries. Three hypotheses are defined and by the help of questionnaire we tried to check whether these tree assumptions approved or not. For each hypothesis some questions are designed. Our sampling consists of all 90 IT managers of Tehran and Isfahan who are working in Telecommunications organization (ICT), A 19-question questionnaires is prepared for examining the three hypotheses and distributed among them; Number of IT managers in these two provinces is nearly equal to all the IT managers in all the other cities in Iran and mostly these managers lead others in the country.

Hypothesis1: Lack of internet access and government support in this area is one of the main obstacles to the development of e-business in Iran.

Hypothesis2: Other inhibiting factor in developing countries that has caused restricted use of e-business is incapability of firms to use e-business.

Hypothesis3: The Social-Culture backgrounds of people in Iran aren’t ready for e-business in many companies.
The hypotheses are analyzed using SPSS software. Using this software some tests are done on data and then results are analyzed to check whether hypotheses are accepted.

![Average Score](image.png)

**Figure 1:** Friedman test for research hypotheses’ ranking

Friedman test is done on the hypotheses of the research to rank the hypotheses and results are shown in Figure1. From the above table it is inferred that hypothesis No. 1 with 2.63 score, has highest rank among all 3 hypothesis. After this hypothesis No.2 with 1.86 score is in 2nd place and the last one is hypothesis No. 3 with 1.58 score.

To analyze the data, once again all the research questions are repeated and results based on T-Test is shown for all 3 hypotheses.

**T-TEST**

**Table 1:** One-Sample T-Test for Hypothesis 1

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>90</td>
<td>4.21</td>
<td>1.419</td>
<td>.135</td>
</tr>
</tbody>
</table>

**One-Sample Test**

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>F1</td>
<td>4.080</td>
<td>89</td>
<td>.000</td>
<td>.550</td>
<td>.28</td>
</tr>
</tbody>
</table>

To check whether first hypothesis is acceptable or should be rejected, One-Sample T-Test is used. In this test, t factor is equal to 4.080 with freedom degree (df) of 89 and It also has a significance level of less than 0.05 Since significance level is less than 0.05, therefore it can be said that: “Lack of internet access and government support in this area is one of the main obstacles to the development of e-business in Iran”. This means that hypothesis 1 is accepted.
Inhibiting factors of improving E-business in developing countries  
(Case study with focus in Iran)

Table 2: One-Sample T-Test for Hypothesis 2

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>90</td>
<td>3.82</td>
<td>1.502</td>
<td>.145</td>
</tr>
</tbody>
</table>

One-Sample Test

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>3.921</td>
<td>89</td>
<td>.000</td>
<td>.580</td>
</tr>
</tbody>
</table>

95% Confidence Interval of the Difference

<table>
<thead>
<tr>
<th></th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2</td>
<td>.29</td>
<td>.91</td>
</tr>
</tbody>
</table>

To check whether first hypothesis is acceptable or should be rejected, One-Sample T-Test is used. In this test, t factor is equal to 3.92 with freedom degree (df) of 89 and It also has a significance level of less than 0.05. Since significance level is less than 0.05, therefore it can be said that: “Other inhibiting factor in developing countries that has caused restricted use of e-business is incapability of firms to use e-business”. This means that hypothesis 2 is accepted.

Table 3: One-Sample T-Test for Hypothesis 3

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3</td>
<td>90</td>
<td>3.71</td>
<td>1.841</td>
<td>.189</td>
</tr>
</tbody>
</table>

One-Sample Test

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3</td>
<td>3.298</td>
<td>89</td>
<td>.000</td>
<td>.492</td>
</tr>
</tbody>
</table>

95% Confidence Interval of the Difference

<table>
<thead>
<tr>
<th></th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3</td>
<td>.24</td>
<td>.81</td>
</tr>
</tbody>
</table>

To check whether first hypothesis is acceptable or should be rejected, One-Sample T-Test is used. In this test, t factor is equal to 3.29 with freedom degree (df) of 89 and It also has a significance level of less than 0.05. Since significance level is less than 0.05, therefore it can be said that: “The Social-Culture backgrounds of people in Iran aren’t ready for e-business in many companies”. This means that hypothesis 3 is accepted.

Based on the analyzed data from questioner, it can be said that all the 3 factors (3 hypotheses) are important inhibiting factors for implementation of E-business in Iran from the managers’ opinion. Totally, very few numbers of questions had answered with “disagree” or “absolutely disagree” or even “No Comment”.

ASIAN JOURNAL OF MANAGEMENT RESEARCH
Volume 4 Issue 1, 2013
4. Recommendation

Based on analysis of hypotheses some suggestions are presented to help to improve E-business in Iran and probability, other developing countries.

1. To achieve competitive advantage in the emerging global economy, it is essential that all nations continue to nurture e-business development. But, successful implementation of e-business needs operational policies and programs that fit with the internal situations of countries. To achieve this goal, companies should concentrate on developing ICT skills in individuals to develop the human resource IT skills in E-business.

2. Informing the society about better opportunities that are provided by digital economy and enacting policies for training ICT professionals and enacting an ICT education program to train workforce based on international standards in Iran.

3. Establishing a close relationship between industry and education system for training the individuals with the skills required for accepting industry and specially E-business.

4. Encouraging foreign students with high ICT skills to stay in the country whit planning the proper strategies to keep the professional and accepting trained individuals in the country.

5. Supporting and informing activities for e-business in the society.

6. Improving and developing the telecommunication systems and information infrastructures to improve e-business activities.

7. Providing financial and non-financial incentives to internal and external companies that invest in internal ICT

8. Establishing culture of using E-business applications in enterprise by Encouraging staffs and enumerate the benefits of E-business.

5. Conclusion

This research show that Lack of internet access and government support in this country (Iran) is one of the main obstacles to the development of e-business that arises from restricted access to the Internet, Low-speed internet in this country. More ever, lacks of Infrastructures are important factors against Iran which need government support. Also in this country incapability of firms to use e-business is due to the lack of enterprise-wide information sharing (that is under Managerial-organizational factors), Technical infrastructures, Scare of failure in E-business implementation, Scared employees in the use of new technology Because they think they may lose their jobs; and all and all of these factors play a major role in incapability and Insufficiency of organization to use E-business commonly and prevalently. Finally Social-Culture backgrounds of people in Iran aren’t ready for e-business in many companies due to Cultural acceptance and IT literacy that is not sufficient. Trust in E-business and E-Commerce services and awareness are not enough in this country yet.

Based on hypotheses in this research which all of them are accepted after analyzing the gained data by statistical test, we can conclude that main inhibiting factors in developing countries (Iran) are Government support of E-business requirements and infrastructures, Managerial-organizational factors and social cultural of these countries that is not still ready for accepting the E-business. To have a successful implementation of E-business in developing countries, these barriers and also other factors which may cause arising problems in E-business improvement, Must be eliminated; then only implementation of e-business
could be successful and we may observe improving E-business in developing countries such as developed countries.

6. References


