

## **The Impact of Organizational Factors on e-Business in the Hamrah-e-Aval Company in Kermanshah Sity in Iran**

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**Abstract:** In recent years, we have seen an increasingly competition among different industries in business area. According to researchers in the field of business, achieving a competitive position for an organization is possible only with the aid of a suitable model business. A successful business model demonstrates a better choice which can offer more values to a distinct group of customers and brings greater benefits to the company. In the beginning of a business, failures to identify a suitable business model causing lack of fulfillment to achieve its goals. The aim of this study was to evaluate the impact of organizational factors on e-Business in the mobile Hamrahe Aval Company in Kermanshah. The population in this study consists of 1,200 employees of MCI, so the sample size in this study was 291 employees. To collect data, two questionnaires of organizational factors with 22 items and e-Business questionnaire with 12 items and a five-point Likert scale were used. Hypotheses were analyzed using Pearson correlation coefficient and structural equation analysis. The results showed that organizational factors, knowledge of information technology, IT external support and education level of employees have a significant positive impact on e-Business. Among theses, information technology knowledge has the greatest impact on electronic business; education level of employees has minimal impact.

**Key words:** e-Business, organizational factors, IT knowledge, IT external support, employee's education, Hamrah-e-Aval Company in Kermanshah

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### **INTRODUCTION**

The advent of the Internet and e-Business applications had striking impacts on the procedure and structure of different industries. Many organizations likely tend to use it due to the multiple benefits that it brings to them. The use of e-Business is now a necessity and companies are forced to use it. Therefore, applying e-Business brings change and innovation and is influenced by factors that have positive and negative impacts in the use of e-Business. e-Business is defined as the use of one or more network computers to create and transfer of information which are more related to the selling of goods and services over the internet. With the help of e-Business, exchange of information, buying and selling of information necessary to transport goods will be done more quickly and bank transactions will be performed with fewer problems and more speed. Companies are able to communicate with each other without current limitations and their communication will be done easier and faster. In the traditional business, just

about 7% of the value of world exchanges is spent for preparation and exchange of relevant documents. Estimates indicate that the use of an electronic business instead of traditional paper-based methods will be led to 21-70% savings in various commercial activities (Bidbakhtie and Akbar, 2009). Thus, e-Business is thought to reduce the costs and helps the facilitation of national and regional trades. The highest level of online revenue is related to Europe and the lowest income belongs to Asian countries including Iran. e-Business has created 8 million jobs around the world that most of them belong to Canada, America and Australia. With 60% of the young job seekers as well as about 2.5 million unemployed, Iran has acted very weak in education and job creation over the Internet. Among the benefits of e-Business are lack of broker and intermediary to sell, reduced administrative bureaucracy, decreased costs related to errors, easy entry into new markets, better analysis of customer, increased employment and developed new job opportunities, providing products and services globally, increased competitive ability of

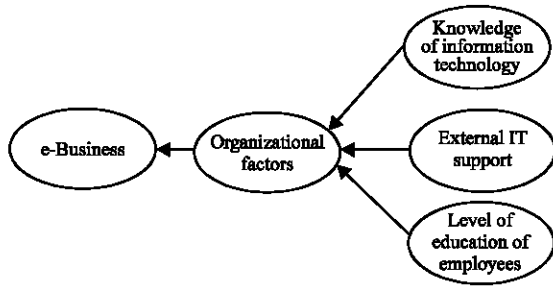


Fig. 1: Conceptual model and research hypotheses

companies to reduce the time to complete the trade, especially delivery of goods to payment. Given the importance of e-Business and realization of the benefits of its use by the authorities, third and fourth development legislation program reflects the enforcing strategies and policies for e-Business development in Iran. This study examines the impact of organizational factors on e-Business in the Hamrahe Aval Company in Kermanshah. First, literature and theoretical principles will be analyzed and internal and external investigations will be discussed. Secondly, procedure will be explained and population will be defined and data collection will be explained. Finally, data will be analyzed and conclusions are made (Saeedi, 2003).

**Conceptual model and research hypotheses:** According to the conceptual model presented in this study, the hypotheses are:

- Information technology knowledge has a positive and significant impact on e-Business in Hamrahe Aval Company in Kermanshah
- External IT support has a positive and significant impact on e-Business in Hamrahe Aval Company in Kermanshah
- Level of education of employees has a positive and significant impact on e-Business in Hamrahe Aval Company in Kermanshah (Fig. 1)

### Literature review

**Organizational factors:** Organizational factors include organizational culture, organizational structure and size, financial resources and ability to pay of organizations, plans and policies of the organization, human resources, facilitations and equipment of organization, motivation and corporate education programs and so on. Organizational culture are defined by set of values, stories, beliefs, assumptions and norms manifesting in conversations, symbols, objectives and enhance

management actions and feelings. Organizational structure also consists of organizational factors affecting the performance of organizational management. Each organizational structure has two messages: the division of labor in terms of task and coordination of tasks to ensure the performance of task. Other factors affecting management are included goals, plans and policies of the organization. Goals are determined by guidelines and focused efforts. Managers set goals based on the perception of their long-term and short-term goals. Policies depict ways to reach goals and plans actually visualize the future of the organization. Financial resources, ability to pay, human resource, job and administrative facilities are considered important and influential organizational factors in the success of managers (Zohorie,1999).

**e-Businesses:** The current period of human life is experiencing amazing transformations. In these massive transformations, organizations as a subset of human life must prepare themselves for the survival and growth. Today, intangible and intellectual assets, called as knowledge viewed as a critical factor in organizations. In other words, organizations will be successful in the face of changes if they can improve and develop their spiritual and intangible assets. e-Business is defined as the use of all information systems to strengthen and control business processes which are developed using web-based technologies. Simply speaking, e-Business means business with the use of telecommunications and related tools. On the other hand, e-Commerce has more limited and minimal concept compared to e-Business. In e-Commerce, money should be exchanged “between the two sides to be realized the concept of commerce. However, this is not the case in e-Business. For instance, the court where the trial is done through the online space is defined as e-Business. Some think e-Business as combination of e-Commerce and intelligence of corporates, customer relationship management, supply chain management and enterprise resource planning which are as follows: there are different definitions of e-Business that some of them are mentioned:

- e-Business is a tool paving the way for firms to the market. The path by which customers purchase their goods and services
- e-Business is a tool that allows users to reach customers more effectively and efficiently
- e-Business is the capability of conducting business via electronic networks such as the Internet and the global network

**The evolution of e-Business:** The concept of business model exposed to evolution during the long years. However, researchers acted individually in this area have yet we witnessd a gradual step to the common goal and progress. In a comprehensive survey of the business model literature, five different phases can be observed.

**Phase 1:** This phase coincides with the time that the importance of the term of business model began to be appeared and a number of experts provided definitions and classification for their business models (Shahriar and Karimi, 2008).

**Phase 2:** In this phase, by adding elements to the definitions provided, experts completed them.

**Phase 3:** In this phase, detailed and comprehensive description of the elements of the business model was presented.

**Phase 4:** In this phase, experts were beginning to conceptually model the components. This has come to provide business models as reference models and ontologies (ontology).

**Phase 5:** In this phase, reference models were used for program and management information system. A lot of confusion and ambiguity regarding the business model arise from the fact that different experts from different levels have defined the term and so without a common understanding of the term, they have provided different definitions. From this perspective, experts in this field can be divided into the following three groups:

- Experts who consider business model as an abstract concept that can explain all businesses in the real world
- Experts who explain the different types of business models by abstract notion and outline a set of features in common with their businesses
- Experts who provide real-world aspects or implications of their business model

Each of these three groups is different in terms of the intensity of modeling, degree of simply definition, listing of elements of linked elements and the conclusive and imagined elements. In the business literature, the definitions provided by these experts can be classified in three different levels. The three levels are:

- The introduction of elements of a business model
- The introduction of a variety of business models
- The level of real example of a business model

However, none of these three groups are not comprehensive and in order to achieve a comprehensive view, all three groups should be examined and the results of which are interconnected with a comprehensive approach.

**e-Business practices:** Generally there are three types of e-Business transactions:

- Off line
- In this transaction, firms do business by use of the mail system
- On line
- In this transaction, firms do business via URL (Uniform Resource Locator). URLs are addresses for all the computers that have the same structure and organizations may achieve the desired source by using it

**Network gateway (Portal):** A page is a network in which there are some links to the websites containing news related to different topics. These pages include address with many different topics. Network gateway services often include search engines, e-mail, chat, maps, sales and other options for customers. In fact, the gates are considered as networks for advertising and marketing purposes.

**MCI company:** Mobile Communication Company of Iran (MCI) under the MCI brand name is the first and largest mobile network operator in Iran and a subsidiary of Iran Telecommunication Company and has over 16 mln customers with postpaid and prepaid and over 43 mln subscribers. The mobile Hamrah Aval services are accessible in 1078 province and over 38,000 km of highways in the Iran. The company provides roaming services through 256 partner operators in 109 countries. In 2010, 55% stake in MCI, worth of \$396 mln. were sold in the OTC market. It is the largest IPO to date in the Iranian stock market and the total value of the company is about \$72 bln. MCI shares were offered in Tehran stock exchange.

Moghdehieh in a study titled "Development of Electronic Infrastructure" revealed that development of an electronic infrastructure is one of the main factors for the influence and promoting e-Commerce technologies in each community, so that it is able to support and maintain e-Commerce community. Using electronic service quality of Tabarsa; Lee. Analyzed factors influencing on users of online banking service. In this model, electronic service quality includes five dimensions: performance, fulfillment, access to the system, confidentiality and trust. The results showed that the quality of electronic services has

a significant and positive effect on customer satisfaction of electronic services. Increased high quality services leads to increased customer satisfaction and customer loyalty. Customer satisfaction in receiving e-Services has a positive effect on e-Loyalty. Meydarie and Asaln (2007), showed that the business model reflects an organization's core business and is required for description (and even prescription) of organization's main missions and providing products and services to customers.

Gibson in his study entitled "Architecture of the World Information Technology" considered IT architecture in the form of information and communication technology capabilities and suggests that the IT architecture combines four physical elements (calculations fitness, data transparency, communication connection and feasibility) and logical elements in the form of planning, organizing and control. Fartook in a study entitled "Analysis and Design of System" showed that IT architecture is as the basis for designing access to the effectiveness of the system.

## MATERIALS AND METHODS

**Methodology and population:** The research has an applied purpose. In terms of nature, it is classified as causal research because it may investigate the relationship between factors. To examine the relationship among variables, bivariate correlation analysis and structural equation modeling were used. To test the hypotheses, the survey method with a questionnaire was used to collect information. The questionnaire included 5-items Likert scale will be distributed among statistical samples. The population consists of 1200 staffs in Hamrah Aval Company which according to Morgan table, 291 staffs were selected for the sample. Therefore, a total of 291 questionnaires were distributed and after the completion by employees of MCI Kermanshah, they have been collected.

**Methods and data analysis tool:** Since, the correlation coefficient and structural equations are methods of analysis for the study, SPSS 22 and AMOS 22 Softwares were used to implement and test hypotheses. SPSS 22 Software was used to determine the reliability of the questionnaire, correlation coefficient and normality of variables and statistical charts. Kolmogorov-Smirnov test was applied to determine the normality of the data. Moreover, AMOS 22 Software was used for the analysis of fitness and impact factors. If significance level of test is  $>0.05$ , the null hypothesis is accepted and we conclude that the distribution of the target variable is normal. In

Table 1: Kolmogorov-Smirnov test results to assess the variables following a normal distribution

Variables	Kolmogorov-Smirnov statistic value	Significant level
e-Business	1.672	0.0561
Organizational factors	2.892	0.6900
IT knowledge	2.410	0.2120
External IT support	1.990	0.3960
Education level of employees	2.110	0.7110

order to evaluate the association between variables, there are an appropriate statistical methods including correlation coefficient calculation which is an important criterion for assessing r correlation coefficient. This factor is usually shown with the letter r and the value fluctuates between -1 and +1. The former represents complete negative correlation and the later refers to the complete positive correlation. There are different methods to calculate the r value that one of these methods is as follows (Table 1):

$$r = \frac{n \sum x_i y_i - (\sum x_i)(\sum y_i)}{\sqrt{[n \sum x_i^2 - (\sum x_i)^2]} \times \sqrt{[n \sum y_i^2 - (\sum y_i)^2]}}$$

According to the above table, since all the variables are significantly  $>0.05$ , therefore, we conclude that all variables follow a normal distribution.

## RESULTS AND DISCUSSION

**correlation tests of assumptions:** Since, the normality of variables was accepted, Pearson's correlation coefficient was used for the assessment of the relationship between the variables (Table 2). Since, the significant level is  $\geq 0.000$  and its comparison with the permission error of 0.05 ( $p > 0.05$ ) and 95% confidence level, it suggests that the relationship between e-Business and organizational factors are rejected. It implies that the organizational factors have a significant impact on e-Business. Therefore, regarding to the value and Pearson correlation coefficient 0.755, this effect is positive. The following Tables are related to the correlation coefficient between e-Business and IT knowledge, external IT support and education level of employees indicating a positive and significant relationship between e-Business and mentioned variables above 95% (Table 3-5).

**Structural model of research:** In the following, structural equation model was discussed in the standard estimation mode and hypotheses were investigated using structural equation model and impact factors of the variables of the study. Also, structural equation model fitness was studied using model-fit indices. If the value of the index corresponds with the given period, the proportion of

Table 2: Is concerned with the correlation coefficient between e-Business and organizational factors

Organizational factors	Values
<b>e-Business</b>	
Pearson's correlation coefficient	0.755
Significance level	0.000

Table 3: Pearson correlation coefficient between e-Business and IT knowledge

IT knowledge	Values
<b>e-Business</b>	
Pearson's correlation coefficient	0.733
Significance level	0.001

Table 4: Pearson correlation coefficient between e-Business and external IT support

External IT support	Values
<b>e-Business</b>	
Pearson's correlation coefficient	0.712
Significance level	0.023

Table 5: Pearson correlation coefficient between e-Business and education level of employees

Education level of employees	Values
<b>e-Business</b>	
Pearson's correlation coefficient	0.700
Significance level	0.009

Table 6: The assessment of hypothesis using structural equation model

Hypothesis	Impact	Significance level	Results
Organizational factors have a significant positive impact on e-Business	0.73	0.000	Confirmed
IT knowledge has a positive and significant impact on e-Business	0.67	0.000	Confirmed
External IT support has positive and significant impact on e-Business	0.63	0.000	Confirmed
Educational level has a significant and positive impact on e-Business employees	0.60	0.000	Confirmed

Table 7: Indicators of structural equation model

Index	Values	Results
Chi-square ( $\chi^2/df$ )	2.675	Confirmed
The Mean Root of Approximation Squares Error (RMSEA)	0.089	Confirmed
Root Mean of Residual squares (RMR)	0.673	confirmed
Goodness of Fit (GFI)	0.930	confirmed
Modified Goodness of Fit Index (AGFI)	0.911	confirmed
Normalized Fit Index (Bentler Bonet) (NFI)	0.923	confirmed
Comparative Fit Index (CFI)	0.900	confirmed
Incremental Fit Index (IFI)	0.905	confirmed

collected data model is desirable; therefore the structural equation model fitness is approved (Table 6-7).

According to the results obtained, it can be acknowledged all the above indicators of fitness place in this domain and so the fitness model of collected data is desirable. Therefore structural equation fitness model is approved.

## CONCLUSION

Since, the normality of variables was accepted using Pearson's correlation coefficient, the

Kolmogorov-Smirnov test was used for examination of the relationship between variables. The correlation coefficient between e-Business and organizational factors, IT knowledge, external IT support and education level of employees, indicates a positive and significant relationship between e-Business and mentioned variables above 95%. In the following, structural equation model was discussed in the standard estimation mode and hypotheses were investigated using structural equation model and impact factors of the variables of the study. Also structural equation model fitness was studied using model-fit indices. Since, the value of the index corresponds with the given period, the proportion of collected data model is desirable; therefore the structural equation model fitness is approved (Nasim *et al.*, 2009).

## RECOMMENDATIONS

Thus, considering the results, the following recommendations have been proposed to improve e-Business hypotheses:

- Employees must have the knowledge and skills to meet the objectives of the organization's e-Business and should be equipped with plans to teach the necessary skills to staff, so that they can take an active role to meet their objectives
- To take important business decisions, employees should have sufficient knowledge
- Focus on key issues and difficulties in implementing e-Business organizational factors within the organization
- Alignment the organization with the development of e-Business
- Focus on increasing the capacity of staff in the use of IT knowledge
- Overcoming the problem of unavailability of experts in information technology
- Improving the quality of IT services

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