Key Factors Affecting on the E-Readiness Assessment for Small and Medium Manufacturing Enterprises to Enter the ECommerce Market

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Abstract— Due to the increasing growth of information and communication technology and to optimum utilization of its advantages, organizations must to develop their existing capacities. To measure this capacity of any organization, be sure is evaluated, the ereadiness of the organization to enter the e-commerce market. The main objective of this paper is to identify key factors affecting in the Electronic Readiness assessing of SMEs in Shamsabad Industrial City, Tehran to enter the e-commerce market. In this paper to determine this factors after identifying and introduction of variety existing models, concepts; dimensions and indicators of research is extracted and is designed in the form of a questionnaire.

Then, using a designed questionnaire is action to gathering insights of academic experts and professional and variety of concepts, dimensions and related indicators is evaluated to E-Readiness assessment. Finally, with regard to the reforms, have been identified key factors affecting the E-Readiness of small and medium manufacturing enterprises.

Keywords— E-Readiness, E-Readiness Assessment, Small and Medium-sized Manufacturing Enterprises, E-Commerce Market.

I. INTRODUCTION

Increased attention to small and medium companies in the world. These companies play an important role in all global economies. In developing countries, SMEs contributed to employment, production and income distribution [1].

Over the past decade, the crucial and key role of the information and communication technologies in facilitating the transition process and change of organizations has been well proved. In the information age, the e-readiness assessment is increasingly important

for the planning to develop necessary capabilities of the various technical and organizational aspects. For this reason, several different electronic assessment tools have ever been supplied and used by consulting firms and universities [2].

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The adaptability to the market and the need of the day, is something that cannot be brought about of a large and interconnected structure and, thus, to achieve rapid development and delivery of new products, the only effective way is to create and develop conditions in which small and medium sized businesses can be established and compete. That is why special attention should be paid to these types of businesses. Improvement in small and medium businesses helps them grow, moreover, this can help to reduce the gap between developing and developed countries [3].

The success of e-commerce is respectively obtained when its preliminaries are provided based on the principles of e-commerce readiness.

II. THEORETICAL FOUNDATIONS

2.1. E-Readiness

So far, numerous definitions of e-readiness have been given, however, in almost all of them the e-readiness has been defined as the rate of readiness and ability of a region in correct exploitation and optimal use of ICT. A number of definitions of e-readiness are offered below. The e-readiness, is the ability to use ICT in line with a nation's economic development and also increase in the welfare of that country. E-readiness is a relatively new concept which has developed due to the rapid penetration of the Internet throughout the world, because of substantial progress in the use of ICT in the business and industry. E-readiness is measured by the degree to which a country, nation or economy may be ready, and willing

or ready to achieve benefits and profit from the information and communication technologies.

E-readiness is a concept that was formed in the late 1990s, in order to provide an integrated framework for assessing the extent and depth of the digital divide between developed and developing countries [4].

2.1.1. E-Readiness Assessment

E-readiness assessment will result in describing the current conditions of applying information technology in the country or organizations. Also, it helps to identify the existing problems in this field, and to extract desirable solutions to such problems. According to Peters (2001), the e-readiness assessment for different people have different meanings in different contexts and is used for different purposes.

2.2. The Concept of E-Commerce Readiness

The concept of readiness is studied at various levels for a society, economy, country and organization. Generally, many definitions have been provided to e-commerce readiness each of which defines e-commerce readiness for itself based on the goal that follows. E-readiness means is the ability of a society, the economy of a country, organization, department or workgroup to successfully Join, apply and take profit from the ICT in their such business processes as electronic commerce. Thus, the e-commerce readiness is considered as a subset of e-readiness of an organization or a country.

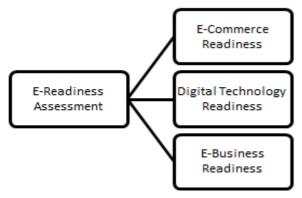


Fig. 1: E-commerce Readiness Status

2.2.1. E-Commerce Readiness Assessment

The Success of the Internet company does not depend only on electronic value chain, it is, however, related to other factors such as the readiness of customers, suppliers and business partners in the electronic interactions and transactions. For this reason, to be invested with a successful e-commerce in business, effective factors on the e-commerce must be evaluated before entering business readiness for e-commerce and its amount of utilization. Many models have been considered for this work that has come into vogue with respect to the existing factors in any business.

2.3. Comparison Between E-Readiness and E-Commerce Readiness

E-commerce readiness is a subset of the e-readiness. In the e-readiness, the aim is to assess the rate of readiness of a country or organization to take advantage of the ICT. The e-commerce is one of these benefits. In the e-commerce readiness, only factors affecting the growth and the e-commerce adoption are discussed, while in the e-readiness at both national and institutional levels, we consider all the factors influencing the growth of an entity in use and enjoyment of the ICT. To have an electronically ready community, one of the factors is the readiness of that collection to enter into the e-commerce [5], [6].

2.4. SMEs

Generally, industries are divided to the large, small and medium industries. With regard to this, each country has offered a definition in according to its own particular circumstances [7]. In fact, the prevailing economic and industrial conditions in each country, represents its SMEs. These definitions have been given mainly based on quantitative measures such as number of employees and turnover rate. Although any classification based on quantitative criteria gives an easier the definition, such criteria are not an appropriate tool for classification. However, the companies' qualitative characteristics are of high significance in this division [8].

Usually, SMEs are invested with three qualitative attributes: ownership and unit management, personal property and family, and independence from other firms. These qualitative characteristics should be considered as SMEs in the definition of the status and functions of companies. Otherwise, mere reliance on the quantitative measures, will make the implementation of the SMEs related programs and policies problematic [9]. Of course, beyond the issue of the company size (by the number of employees), SME and other large companies have substantial differences in other issues as "Table 1" indicates: [10]

Table.1: Comparison of SMEs Against the Large Enterprises

	11gential title Zen ge Zitter prises
Large Enterprises	SMEs
Hierarchical structure with several layers of	The flatbed structure with a few layers of
management	management
Rigid and inflexible structure and information	Information flow and flexible structure
flow	

The low advent of innovation	The advent of high innovation
Slow accountability to environmental changes	Rapid accountability to environmental changes
High degree of formalization	Low degree of formalization
Low independence and authority of the staff	High independence and authority of the staff
Access to financial and human resources	Limited access to financial and human resources
Staff's high resistance to change	Staff's poor resistance to change
individual creativity is Stifled and suppressed	Individual creativity is encouraged
Non-intuitive and consultative decisions made	Intuitive decisions made by decision-makers
by decision-makers	(usually the owners)

(Source: Ghobadian et al., 1997, p. 136)

The following table provides the definition of the SMEs in selected countries: [11]

Table 2: The Definition of SMEs in Selected Countries

Classification criterion	The definition of SM	ИEs	Country	
A 1. C1	1-9 employees	Micro industries		
An annual turnover of less than 40 million euros and the balance sheet less than	10-49 employees	Small industries	The Europe Union member states	
27 million euros	50-249 employees	Medium industries	member states	
	Less than 100 employees	Small industries		
Number of Employees	Between 100 and 499 employees	Medium industries	Australia	
Number of Employees	Less than 100 employees	Small & Medium industries	Indonesia	
The number of employees	Less than 100 employees and with sales of less than 5 million Canadian dollars (\$)	Small industries		
and sales	Less than 100 employees and with sales of less than 5 million Canadian dollars (\$)	Medium industries	Canadian	
	Between 50 and 100 employees	Small industries		
Number of Employees	Between 101 and 500 employees	Medium industries	China	
The number of employees	Less than 20 employees	Small industries		
and Finance	Between 20 and 300 employees or	Medium	Japan	
und I manee	less than 100 million ¥ of capital	industries		
The number of employees and Finance	Less than 300 employees and capital between 20 and 80 billion ₩ Korea	Small & Medium industries	South Korea	
The number of employees and sales	Less than 150 employees and annual sales turnover less than 25 million RM	Small & Medium industries	Malaysia	
Number of Employees ¹	Fewer than 500 employees	Small & Medium industries	USA	

(Source: Ghasemi et al., 2009)

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¹. In this country, the term used by small businesses rather than small industries.

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In Iran, There are also various definitions of the SMEs in various organizations. According to the available statistics of the industrial workshops of Iran, industrial workshops set with 10 to 49 people are taken into account as small businesses, workshops with 50 to 149 employees are placed in the category of medium firms, and workshops with more than 150 staff members are Included among the large manufacturing industries [12].

2.5. The SMEs and E-Commerce Readiness

Over the recent years, the importance and role of small and medium industries in industrialized and even developing countries has increased. With the advent of the new technologies in production and communication in recent decades, developments have emerged in the potential of industrial units, and also in the methods of production and distribution and organizational structure, that have generally added to the importance of small and medium businesses. These institutions, have organized the private sector structure, and include about 90% of the world's economic enterprises. The impacts of the SMEs on the economic prosperity of countries can be expressed as follows:

- A. Effective role in generative job creation, B. Major portion in providing the financial resources of countries.
- C. Guardians of the systematic structure of productive capacities,
- D. Flexibility and innovation of the SMEs with regard to the developments process of globalization can be responsive to changing the social and economic conditions of countries,
- E. The development of the SMEs has been influential in the advancement of democracy and encourages the entrepreneurs to participate in the political, economic and social systems.
- F. The potential features of the above brought about special attention to the small and medium, relevant and consistent enterprises, but not to separate and disintegrated units. Among the strategies of both developed and newly developed countries to ensure free market competition, and prevent monopoly of the large companies, is to exert and apply special policies to promote small and medium industries and to facilitate the entry of entrepreneurial firms in the economic sphere.

So, for an SME to have a successful e-commerce in a way that this success guarantees the promotion and growth of the country's position in international trade, it needs to identify and evaluate factors affecting the success of the electronic commerce in their businesses before entering into such a field. Accordingly, it can determine the amount of readiness to enter this sector until if necessary so as to be able to solve cases faced with weakness and

deficiencies. In this way, it can have a successful e-commerce. It is possible by models and methods presenting the electronic and e-commerce readiness [13].

III. RESEARCH HISTORY

Akkeren & Cavaye (2000) In a study entitled "Factors Affecting the Adoption of e-commerce in the small business auto industry in Australia" investigated factors affecting the use of e-commerce at the company and these factors have divided manager features, return on investment, organization characteristics and competitive pressure.

Javalgy and Ramsay (2001) in their study entitled "Strategic issues of electronic commerce", have studied factors affecting the growth of e-commerce. E-commerce is one of the large-scale of internet applications and its growth depends to the infrastructure including ICT, social and cultural, business, and government and law. The absence of any of these infrastructure can be considered major obstacle in the implementation of e-commerce. The above infrastructure are necessary to support the growth of e-commerce and take advantage of strategic interest e-commerce.

Kotha and Chun (2001) have done research on the relationship with the "reading e-commerce in Singapore" that paid the necessary for web development as the requirements of e-commerce development. The survey have been carried out of 130 companies active in the field of tourism industry, finance and information technology. The results show that the intensity of competition and the benefits obtained and firm size has a positive effect on the company's strategic imperative to e-commerce. This strategic imperatives is possible through of the website development.

Ling (2001) in a study titled "Model effective factors in the development of e-commerce adoption in SMEs" has been introduced organizational readiness as top management support, organizational structure and culture in the form of variable organizational readiness. As well as, in this research is mentioned to the competitive dynamics as a positive effect on the willingness of companies to apply EC. Also he believes that the dynamics of the client including external environmental factors that affect decision-making use of e-commerce.

Halley (2002) in an article entitled "China's e-commerce: Business Changes" to discuss the future of e-commerce in China, and he said that it has to be brilliant. He growth in emerging markets China as much as possible Western markets with the development of economic and technological infrastructure and investing in communications and other prerequisites for e-commerce are given a necessity to those Chinese companies that want to attain global competitiveness which is a

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significant risk. In his view Chinese markets have many problems, but managers can adapt themselves with political, commercial and infrastructure opportunity, that encounter. If the government control five threats listed in this article the growth rate of e-commerce is continue increasingly. These threats include: commercial agents, coercion, corruption, political ideologies and security.

Eid, Truman and Ahmad (2002) discussed in their study to categorize the critical success factors in five groups and 21 minor factor. In this study, first is given a definition of critical success factors and techniques available to identify critical success factors. Then presented analysis of society from the critical success factors in e-commerce B2B. also be noted that Organizations should revised before entering the world market and the Internet environment, in there processes and to achieve a level of organizational readiness this preparation was five critical success factor is given below:

Group A: factors related to marketing strategy

Group B: factors associated with website

Group C: factors related to the World

Group D: internal related factors

Group E: external related factors.

Martinson (2002) in an article entitled "e-commerce in China: The Rise Success Stories", described e-commerce in Chinese organizations with Chinese characteristics; and success factors of e-commerce in China he has regarded the development of infrastructure including comfortable and cheap access to the Internet, and barriers to the development of e-commerce he is considered the transaction presence experience and the interest of consumers to face to face transactions.

Wilson and Abel (2002) in the article "Do you want to engage in e-commerce?" for small and medium companies Internet has been raised as a marketing tool and a business plan that is good based and structured to have seen basis of the success the companies. This paper is introduced the Internet businesses problems, the security and privacy of individuals and information overload.

Naeimi and et al (2011) In an article entitled "E-commerce development challenges in the agricultural sector from the Viewpoint of Staff experts in Ministry of Agricultural Jihad", This is a descriptive correlational survey which aims has been to examine the challenges of e-commerce development in the agricultural sector between 100 people of Staff experts in Ministry of Agricultural Jihad that is considered independent variables in this study social, government, legal, technical challenges and dependent variable the development of e-commerce in the agricultural sector; and the results

indicate that the importance of the independent variable is almost identical of course government and social challenges respectively with the average of 6/3 and 4/3 the most and least important account of the views of experts.

Ms. sajadi Amiri et al (2012) in an article entitled "Feasibility to set up of e-commerce in export enterprises of Mazandaran province with fuzzy AHP technique" has been to review and prioritize the necessary factors to set up e-commerce. Results of this study show that the technical and organizational infrastructure jointly ranked first, environment, economic and financial infrastructure, to respectively importance rated is second to fourth And prioritize the options, in order use of government support for information security and e-commerce, organizational structure suitable for guiding and controlling the work, planning for the implementation of e-commerce systems, management support for the implementation of the system, skilled and efficient employees with sufficient information of e-commerce, are including the most important existing factors for the establishment of ecommerce and have gained more weight in terms of importance.

Also Rizk in a study entitled "E-Readiness Assessment of SMEs in Egypt" is discussed to the level assessment of corporate communications, awareness and use of ICT in marketing, production and management. In studies of this research show that the smaller companies are less amount of readiness to deal with ICT. In this study surveyed 36 companies, is including 14 small, 17 medium and 5 large enterprise. These companies had responded to a questionnaire that measured variables such as electronic infrastructure, human resources, realities and prospects for the use of ICT and ICT's administrative barriers.

IV. RESEARCH METHODOLOGY

In this study, to collect information about different models and choose the right model for small and medium manufacturing enterprises Industrial City Shamsabad Tehran is used from library method and the Internet and through reviews of books, magazines, reports and websites, and field method (questionnaires and interviews).

In this study population comprising experts are two groups as follows:

A- Academic experts are university professors, B- professional experts (industry) who are active in projects related to information technology.

The figure below says the steps needed to extract concepts, dimensions and components of e-readiness of small and medium enterprises industrial City in Shamsabad Tehran to enter the e-commerce market.

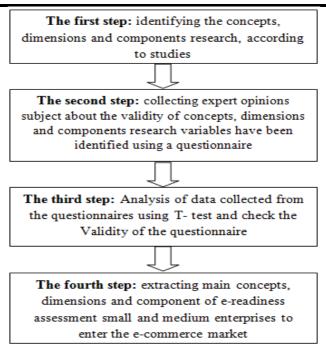


Fig. 2: The main stages of e-commerce readiness assessment model for local small and medium enterprises

4.1. Key Concepts, Dimensions and Components of E-Readiness Assessment

The relationship between a variety of concepts, there dimensions and components are presented in Table 3.

Table 3: operational process research variables

Tuble 5. operational process research variables			
Use of wireless communication in the organization			
Expanded connectivity to the Internet			
Access to e-mail in the organization	Using the Network		
Use of organizational website for perform tasks	NCTWOIK		
Use of LAN and WAN networks to perform tasks			
Enabled computer network		ors	
Quality hardware network such as servers, modem and etc. in Company	Appropriate Technical	Technology Factors	
Ability to provide sufficient electrical power	nfrastructure	nolc	
Quality Internet and LAN connections		Tech	
Transparency strategy and policy in government programs to promote ICT	Expansion ICT		
Adequate oversight to ensure the implementation of ICT projects	Strategy		
Legal framework to support the development of ICT in the organization		tors	
Network security and reliability required to support ICT in the organization	Legal and Security	Government Factors	ess
Protection of consumer rights ICT services organization	protections	ernm	E-Readiness
Regulations and directives that encouraging firms to use of ICT		Gove	E-Re

The widespread use of e- shopping in the process of performing the duties firm			
The widespread use of e- sales in the process of performing the duties firm	Networked		
The widespread use of e- payment in the process of performing the duties firm	Economy		
The widespread use of e- services in the process of performing the duties firm			
The widespread use of customer relation managementin the process of performing the duties firm	Dealing with	actors	
The widespread use of SCM in the process of performing the duties firm	Value Chain Partners	Economic Factors	
Use of outsourcing of service to do some of the firms tasks		Econ	
Comprehensive needs assessment and appropriate content of educational programs in the field of ICT			
Appropriate educational software	Education		
Received sufficient training hours for required ICT training		ırces	
Required number of expert employees in the field of ICT		eson	
Required number of expert consultants in the field of ICT		an R	
Managers familiar with the concepts, benefits and applications of ICT	Human Resources	md Hum	
Forces have English language skills as a prerequisite for the use of ICT	resources	Education and Human Resources Factors	
Awareness of staff to the ICT		Educatic Factors	
The culture of creativity and the exchange of information in society			
Adapt the use of ICT with the values of society			
Popular belief users (employees and customers) to use ICT			
Using network services (Internet, Email, etc.) in everyday life and outside the organization	actors		
Access to ICT (computers, telephones, etc.) in everyday life and outside the organization	Social Factors		
Organization leadership and management			
Size of organization	a la		
Organization areas	tion		
Organization Structure	Organizationa	Factors	
Product / Service	Org	Fac	

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4.2. The method of collecting the required data

In order to identify the number of experts population is used group known method, thus, according to the understanding that there is a set of professors and industry experts in the field of information technology it is estimated that the number of university experts population of 100 people as well as professional experts are 200 people. In order to determine the optimum number is used of Cochran's formula which total number of optimal samples will be 200 people. Due to not accessible the number of experts, in order to collect the data use the available experts.

Depending on the type of data (quality), and also according to the experts who have expertise related to the topic relative to the total recognized experts in the field of information technology is the focus of this study therefore can be used in a manner of the formula for calculating the number of samples that optimized sample size obtained by the following steps and based on Cochran formula. Since Z, has a normal distribution could be used the following formula to calculate the appropriate sample size.

$$n = \frac{\frac{PQ Z^{2} \frac{\alpha}{2}}{d^{2}}}{1 + \frac{1}{N} \left[\frac{PQ Z^{2} \frac{\alpha}{2}}{d^{2}} - 1 \right]}$$

In the above equation symbols used are:

n: Number of samples, d: the maximum absolute error, N: number of population, P: the experts who have expertise related to the topic relative to the total recognized experts in the field of information technology Q=1-P and the coefficient α is considered as the accuracy of the estimate. To calculate the optimal volume of sample P is considered equal to 0.5. Sampling error and estimation accuracy are considered to be experimental of 0.4 0&05. In order to collect data of the participants based on criteria that referred to in Table 3, questionnaire will be set that answers have been arranged in the form of scale of five options and was distributed the sample.

4.2.1. Reliability of Research Tool

To calculate the reliability of the questionnaire is used coefficient Cronbach's α . α is calculated for the questionnaire equal to 92% since this amount is more

than 75% therefore can be concluded that the questionnaire is reliable.

Table.4: Cronbach's alpha test research

Cronbach's alpha	Number of questions
0.92	54

V. ANALYZE THE DATA

In this study is used to describe the population as well as each of the concepts, dimensions and indicators of descriptive statistics that the results of describes the concept and main dimensions are given in Table 5. Also in this study is used of inferential statistics method including T binomial test.

5.1. Validity of the questionnaire

As mentioned earlier model and research tool (questionnaire) have been adopted of several valid and verified articles, however, in this study, to assess the validity the designed questionnaire is used of T binomial test. Therefore in the present study after identifying the factors that identify hidden variables (observed variables), in the form a questionnaire these factors were provided to specialists in the subject, and they were asked to determine the validity of these components in the range of five options.

Questionnaires were distributed among 170 persons of university professors and experts in the subject manually and e-mail and they were asked express their opinion on the suitability of defining and identifying variables and relevant dimensions (hidden variables), as well as evaluation indicators of related dimensions (observed variables) on items of totally agree, agree, neither agree nor disagree, disagree and strongly disagree.

The number of questionnaires has been answered was 133 number which among them approximately 13 cases were excluded due to lack and defaced of completeness the information; with this account questionnaires were returned for about 70%. Finally with 120 questionnaires were analyze the data. In order to access the needed information to analyze and interpret the collected data, frequency distribution of respondents to the questionnaire showed that most respondents to the questions responded above 3 (balanced).

Table 5: Descriptive statistics of the study population

				1000	z . z eseripi	ive statistics of the				
Wor	rk Expe	erience			Degree			Expertise		
Not mentioned	20<	10- 20	10>	P.H.D	Masters	Undergraduate	Public Management	Industrial & Production Engineering	KM	IT
24%	31%	35%	10%	41%	44%	15%	12%	34%	16%	38%

5.2. Results of Binomial T- test for the Concepts and Original Dimensions of Research

In order to check whether any of the concepts and original dimensions of the study were evaluated using the questionnaire, at the appropriate level or desirable or not, is used binomial T- test.

Because of the respondents were asked to indicate rate their agreement or disagreement on a continuum for each question from 1 to 5 points, the mean intensity of approval or disapproval for each question among respondents, was conducted using the Binomial T- test and results is expressed in terms of the views of more than three agree as approval and disapproval as the bottom 3. It should be noted that basis the confirmation of error in T test is less than 5%. The results of the frequency of respondents and Binomial T- test for each of research variables as well as assess the dimensions of indicators is description in the following.

Table.6: Results of binomial T- test the main concepts and dimensions of the research

Test result	P-Value	Percent	Number	Score Received	Concepts / Dimensions
Confirm	0	100	120	Above 3	Toohnology Footons
Comirin	U	0	0	Down 3	Technology Factors
Daisat	0.438	38%	46	Above 3	Government Factors
Reject	0.430	62%	74	Down 3	Government ractors
Datast	0.592	42%	50	Above 3	Essentia Essetana
Reject	0.583	58%	70	Down 3	Economic Factors
Confirm	0.01	83%	100	Above 3	Education and Human
Comirin	0.01	17%	20	Down 3	Resources Factors
D - 2 4	0.220	45%	54	Above 3	Carla I Eastern
Reject	0.339	55%	66	Down 3	Social Factors
C 91	0	93%	112	Above 3	0 ' 4' 1E 4
Confirm	0	7%	8	Down 3	Organizational Factors
C C	0	100%	120	Above 3	II 4b . N
Confirm	0	0%	0	Down 3	Using the Network
		82%	98	Above 3	
Confirm	0.01	18%	22	Down 3	Appropriate Technical Infrastructure
Confirm	0.08	76%	91	Above 3	Education
Commin	0.00	24%	29	Down 3	Education
Confirm	0.02	79%	94	Above 3	Human Dagaunaag
Confirm	0.02	21%	26	Down 3	Human Resources

As noted in the previous section results was confirmed among the 6, 3 number of the concepts; between 8 dimensions, 4 number of major dimensions and between 40 indicators, 22 number of them and only 18 indicators were not acceptable to expert opinion. Therefore, these variables are removed from the final version.

To assess the importance of each dimension and prioritizing them is used Friedman test. In this section to be explored the rank indicators related to each dimension to provide a basis for making recommendations for each area. Results of this test is presented respectively, dimensions of the analytical model in the table below. (The numbers in parentheses represent the average rank of each of the indicators.)

Table 7: Results of Indicators Friedman test

Rating	Indicators of Network Usage
(Average)	Dimension
First Rank	Expanded connectivity to the
(3.23)	Internet
Second Rank	Use of LAN and WAN networks to
(3.13)	perform tasks
Third Rank	Use of wireless communication in
(3.08)	the organization
Fourth Rank	Use of organizational website for
(3.03)	perform tasks
Fifth Rank	Aggest to a mail in the organization
(2.93)	Access to e-mail in the organization
Rating	Indicators of the appropriate
(Average)	technical infrastructure
(Average)	Dimension

IIIJOguiii Publicuti	
First Rank (3.33)	Enabled computer network
G 1D 1	Quality hardware network such as
Second Rank	servers, modem and etc. in
(3.25)	Company
Third Rank	Quality Internet and LAN
(3.17)	connections
Fourth Rank	Ability to provide sufficient
(2.78)	electrical power
Rating	Indicators of Education
(Average)	Dimension
	Comprehensive needs assessment
First Rank	and appropriate content of
(3.66)	educational programs in the field of
	ICT
Second Rank	Received sufficient training hours
(3.23)	for required ICT training
Third Rank	Appropriate advectional software
(3.15)	Appropriate educational software
Rating	Indicators of Human Resource
(Average)	Dimension
First Rank	Awareness of staff to the ICT
(3.59)	
(3.37)	
	Managers familiar with the
Second Rank (3.34)	Managers familiar with the concepts, benefits and applications of ICT
Second Rank	concepts, benefits and applications
Second Rank (3.34)	concepts, benefits and applications of ICT
Second Rank (3.34) Third Rank	concepts, benefits and applications of ICT Required number of expert
Second Rank (3.34) Third Rank (3.03)	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT
Second Rank (3.34) Third Rank (3.03) Fourth Rank	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert
Second Rank (3.34) Third Rank (3.03) Fourth Rank (2.80)	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert consultants in the field of ICT
Second Rank (3.34) Third Rank (3.03) Fourth Rank (2.80) Fifth Rank	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert consultants in the field of ICT Forces have English language skills
Second Rank (3.34) Third Rank (3.03) Fourth Rank (2.80) Fifth Rank (2.30)	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert consultants in the field of ICT Forces have English language skills as a prerequisite for the use of ICT
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Second Rank (3.34) Third Rank (3.03) Fourth Rank (2.80) Fifth Rank (2.30) Rating (Average)	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert consultants in the field of ICT Forces have English language skills as a prerequisite for the use of ICT Indicators of Organizational Factors Concept
Second Rank (3.34) Third Rank (3.03) Fourth Rank (2.80) Fifth Rank (2.30) Rating (Average) First Rank	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert consultants in the field of ICT Forces have English language skills as a prerequisite for the use of ICT Indicators of Organizational Factors Concept Organization leadership and management
Second Rank (3.34) Third Rank (3.03) Fourth Rank (2.80) Fifth Rank (2.30) Rating (Average) First Rank (3.23)	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert consultants in the field of ICT Forces have English language skills as a prerequisite for the use of ICT Indicators of Organizational Factors Concept Organization leadership and
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Second Rank (3.34) Third Rank (3.03) Fourth Rank (2.80) Fifth Rank (2.30) Rating (Average) First Rank (3.23) Second Rank (3.04) Third Rank (2.88)	concepts, benefits and applications of ICT Required number of expert employees in the field of ICT Required number of expert consultants in the field of ICT Forces have English language skills as a prerequisite for the use of ICT Indicators of Organizational Factors Concept Organization leadership and management
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VI. CONCLUSION

According to the results after the removal of the concepts, Dimensions and indicators that have no an impact on the E- Readiness of small and medium manufacturing enterprises Industrial City Shamsabad Tehran was obtained the approved final model that could be an appropriate instrument be used to e-readiness assessment to enter the e-commerce market. Test results of this model showed that the three concepts of "Technical Factors", "Education and Human Resources Factors" and "Organizational Factors" in the population study exists in a satisfactory condition while the concepts of "Government Factors", "Economic Factors" and "social Factors" there has not been at a desirable level. It should be noted that there is no single definition of concept of E-Readiness and each of the administrators of the field, in this case having disagree, depending on the tools and models used on the one hand, and the level of analysis and type of organization under study the other hand.

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