

E-Readiness in Jordan Public Shareholding Companies

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ABSTRACT

This research measures the accomplished achievements that make public shareholding companies in Jordan ready to host e-transactions (or so-called e-readiness). It aims to analyze the effect of e-readiness enablers on the stage of e-readiness in the targeted companies. However, the research relies on an empirical study and a structured questionnaire. Questionnaires numbered 330 have been distributed to 110 public shareholding companies in four economic sectors in Jordan. The study found that the Jordanian business environment encourages e-readiness in public shareholding companies although it faces hard economical conditions and unstable political conditions in some neighboring countries. Jordan made an obvious modernization of the existing laws and enacted new ones, but it still needs more improvements in e-business legislation to meet the details that could face the citizens while using internet and e-business. The study recommends improving the coordination between public enterprises and the Ministry of Communication and Information. Managements should define the focus, direction and scope phasing required for their e-readiness plans.

Keywords: E-readiness, ICT, Business environment, Culture and regulation.

INTRODUCTION

Special interest in e-readiness and e-commerce aspects is accompanied by the rapid rate of internet penetration throughout the world (Economic Intelligence Agency, 2008) However, the reach of the underlying information and communication technologies (ICT) is causing globalization of business. To understand e-readiness, it is necessary to determine the processes through which an enterprise makes use of its information, human, financial, physical and network resources in its business. Second, it must be calculated whether 'becoming electronic' would improve the effectiveness and efficiency of these processes. Third, there is a need to measure whether the enterprise has the resources to enter into an 'electronic dimension'. Hence, the equation of ICTs plus e-skilled people seem to be the formula towards e-readiness (Ozmen, 2003).

Substantial changes had occurred in both Jordanian economic structure and business environment with sustainable economic growth. Jordan has moved very firmly towards establishing the necessary institutions and setting the strategies as well as enacting the laws to move rapidly towards an electronic and technological era. Internet is becoming popular in Jordan, ICT education is a top national priority and the curriculum has been revised to reflect a compulsory ICT focus. While in the past decade Jordan has witnessed notable improvements in networked readiness and e-readiness in general, many challenges remain. However, personal computers are not generally affordable because of low average incomes which remain a great impediment to the spread of internet use. E-commerce activity is minimal, although it has adequate e-commerce readiness requirements, but it still lacks some standards and success factors of e-readiness (Shannak and Al-Debei, 2006). Furthermore, Jordanian companies' application of e-commerce business is small. Jordan's labor pool is well educated and ICT education is a top national priority. The

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curriculum has been revised at all levels to reflect a new ICT focus. This research project examines these outcomes, in order to analyze the current state of e-readiness in Jordan public shareholding companies by discussing and analyzing e-readiness requirements and studying its effect on the e-readiness stage, using an appropriate research method. The main aim of this research study was to evaluate and assess the e-readiness current state in Jordan public shareholding companies by explaining the relationship between e-readiness enablers and e-readiness stage in Jordan public shareholding companies.

Procedural Definitions of the Study Variables

E-Readiness: is the ability to use Information and Communication Technologies (ICT) to develop economy and to foster welfare. E-readiness is constructed primarily for ranking countries, and thus it is concerned with the global digital divide, such as the gap between countries that have access to ICT and those that do not (Kirkman, 2002).

Business Environment: is related to what owners are doing, laws affecting them, customers, economic forecasts, etc... (Peppers and Rogers, 2006).

Regulation: refers to the act of regulating or the state being regulated. It is a principle, rule, law or governmental order having the force of law (Economic Intelligence Agency, 2006).

Culture: is defined as a collective programming of mind that distinguishes members of one group from those of other groups (Daft, 2001).

Literature Review

Literature in e-readiness has shown a range of assessment tools that have been developed to measure a country's or an economy's level of penetration in ICTs (Wilson, 1999). The following review of literature shows this range of assessment. One type of study has focused on global tools for measuring the 'digital divide' between developed and developing countries, another type of study

on e-readiness has introduced to specific ICT-related areas. In this section, the research will discuss the outcomes of these studies and alleviate them with this research. On the other hand, the literature review has been used as a source for the questionnaire paragraphs as listed in Table (1). Investment in technology has been seen as an essential requirement, as is investment in human capital and promotion of favorable business and legal conditions for online activity to thrive (Economic Intelligence Agency, 2008). E-readiness is ultimately about giving digitally enabled people and businesses as many options as possible to determine their own most productive path forward. While the Economic Intelligence Unit (2006) concludes that e-readiness is rightly seen as an enabler of globalization, it allows national economies to foster the development of unique industries that define their long-term economic success. Furthermore, computers, software and networking technology, have in this way been instrumental in enabling skilled workers with cost advantages in emerging markets to take over labor-intensive back-office processes and data management from developed country firms (Economic Intelligence Agency, 2006). Yalamov (2002) has introduced e-readiness assessment as a policy tool for development in Bulgaria. The assessment model applied was based on a series of indexes, which summarize the most important indicator variables to measure the level of e-readiness in different sectors of society in Bulgaria as a whole. The assessment pointed out two critical factors; the indicator of internet usage in business and teachers' readiness for the networked world. A framework for measuring national e-readiness introduced by (Tung and collaborators, 2003) evaluated e-readiness of a nation based on eight factors such as digital infrastructure and macro economy. The main contribution came out from the proposed methodology that reminds policy makers that e-business is part of a complex and general economic structure and that its success depends on

that structure. Al-Khateeb and Al-Husaini (2001) examined the influence of internet and information technology in modern organizations in Jordan. The study showed a significant relationship between e-commerce dimensions and strategic position of industrial companies. ICT opportunities and challenges for development in the Arab World, introduced by (Satti, 2002) showed the status of ICT in the Arab world and the potential ICT opportunities and challenges expected. The study concluded that the majority of the richest Arab Gulf countries tend to have higher GDP and HDI indexes, and therefore tend to have a better performance of ICT index as measured by the percentage number of population accessing the internet, while the poorer Arab countries tend to have a lower GDP index and a lower HDI indexes and therefore tend to have a lower ICT index. The analysis showed that ICT has the potential to impose a creative destruction effect in the Arab world. On the other hand, (Shannak and Al-Debei, 2006) introduced a summarization of the current state of e-commerce in Jordan. The study concluded that Jordan has efficient e-commerce requirements, but there is no suitable and appropriate community culture in order to reach e-commerce e-readiness stage. Another study conducted by (Moolman, 2006) found that globalization of commercial ventures increasingly demands that organizations become

Research model

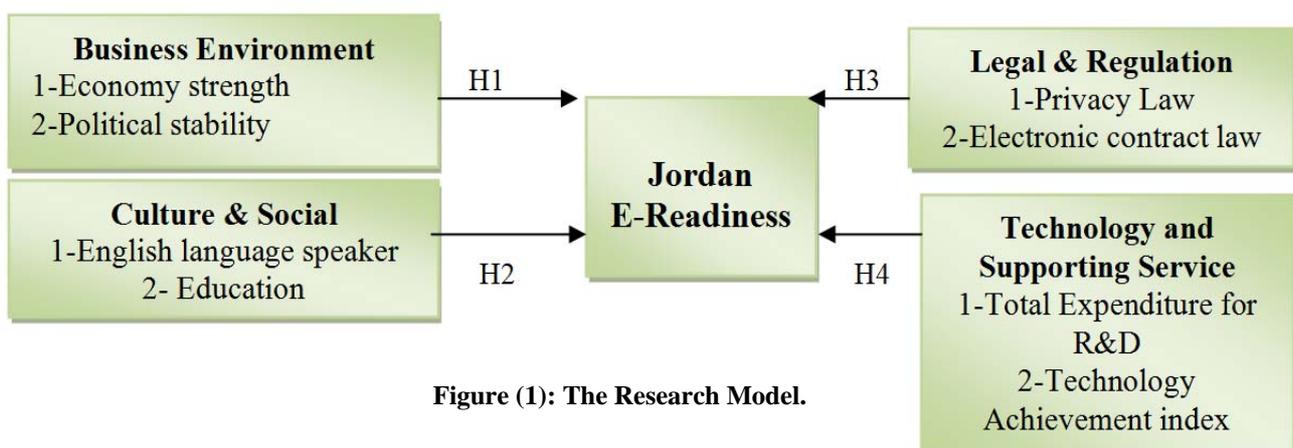


Figure (1): The Research Model.

more competitive by introducing Information Technology. E-readiness of warehouse workers does not suffer from technophobia, nor are they really intimidated by technology. They need guidance and expert facilitation to become successful e-learners. Therefore, the e-maturity of an organization can greatly benefit from warehouse workers' involvement in e-learning.

Research Hypotheses

Main Hypothesis: There is no significant effect of E-readiness enablers (business environment, culture, regulation and technological support) on the e-readiness stage in Jordan's public shareholding companies.

Sub-Hypotheses:

1- Ho: There is no significant effect of business environment on the e-readiness stage in Jordan's public shareholding companies.

2- Ho: There is no significant effect of culture on the e-readiness stage in Jordan's public shareholding companies.

3- Ho: There is no significant effect of regulations on the e-readiness stage in Jordan's public shareholding companies.

4- Ho: There is no significant effect of technological support on the e-readiness stage in Jordan's public shareholding companies.

Research Methodology

Research Design

According to Verschuren (1999), knowledge is classified into five types: descriptive, explanatory, predictive, evaluative and prescriptive knowledge. This research aimed at generating descriptive and explanatory knowledge. Questionnaire was selected as a research method for generating descriptive knowledge about e-readiness requirements and factors that influence e-readiness in the selected companies. The case study research is appropriate for this study. It provides an ability to employ different data collection techniques as well as the ability to conduct both quantitative and qualitative analyses. Cronbach alpha for reliability test, factor analysis, KMO and Bartlett test multiple regression analysis and sequential regression analysis have been used as statistical methods to analyze the data collected in this study. However, a literature review was used for obtaining descriptive knowledge about e-readiness model and the requirements of e-readiness.

Data Collocation Methods

According to Skran (2000), suitable research methods for descriptive and explanatory research are survey research and case study. A survey research is able to describe the situation of a company from information gathered through a questionnaire. It is also possible to form explanations based on statistical analysis of data. Another research method which might be applicable to meet the above criteria is case study as it can generate deep and rich information about an actual situation, which is important to build comprehensive descriptive knowledge. A research methodology justifies the techniques adopted for collecting, analyzing and interpreting data (Turabian, 1971). There is a number of research methods that can be adopted. These include interviews, questionnaires, one to- one discussions, observations, etc...

Study Population and Sample Selection

The study population consisted of public shareholding companies in Jordan, which were registered in Amman Financial Market. The questionnaire has been distributed to the upper and middle levels in those companies. The number of companies has reached 250, divided into four economic sectors (according to Amman Financial Market list in 2008, September 27): banking sector, 16 companies, insurance sector, 28 companies, service sector, 127 companies and industry sector, 79 companies.

Unit of Analysis

Stratified random sample was taken from 250 Jordanian public shareholding companies distributed on the four economic sectors in Jordan (manufacturing, service, insurance and banking sectors) following the percentage of each sector according to the study community, where the questionnaires were distributed to the e-commerce directorates or their representatives (who represent the analysis unit in this study).

The sample volume law was used for computing the study sample volume.

$$no = \frac{z^2 p (1 - p)}{e^2}$$
$$n = \frac{noN}{no + (N - 1)}$$

where: no = the sample volume without the correction coefficient, z = interval level, e = review error, p = choosing percentage, N = community volume, n = sample volume with the existence of correction coefficient. The companies to which the questionnaire was distributed were 110 companies.

Sources of Selected Variables

In order to cover all the study factors, the questionnaire has been developed based on these factors. Each factor located in a separate paragraph, the indicators of each factor have been converted into a

question formula and located under the factor paragraph. An initial draft of the questionnaire has been developed based on an extensive literature review and the existing

measures. The resources of the questionnaire factors and their indicators are as follows:

Table 1: Questionnaire Paragraphs and Resources.

Independent Variable	Factors	Sources
Business Environment	Economic environment	(Economic Intelligence Agency,2006); (Ruikar,2004); (Grigorovici and Collaborators, 2004)
	Political stability	(Ozmen,2003); (Peppers and Rogers Group,2006);(Economic Intelligence Agency,2006)
Culture	Social aspects	(Asian Development Bank, World Bank and Inter-American Bank,2004); (Economic Intelligence Agency,2006)
	Values and ethics	(Payne,2000); (Economic Intelligence Agency,2006)
Regulation	Electronic Law	(Tung X. Bui and Collaborators,2003); (Economic Intelligence Agency,2006)
	Regulations	(Asian Development Bank, World Bank and Inter-American Bank,2004); (Economic Intelligence Agency,2006)
Technological Support	IT development	(Mecconell,2001); (Economic Intelligence Agency,2006)
	IT spread	(Kauffman,2005);(Asian Development Bank, World Bank and Inter-American Bank,2004); (Economic Intelligence Agency,2006)
Dependent Variable	Internet usage	(Peppers and Rogers Group,2006);(Budhiraja,2003); (Economic Intelligence Agency,2006)
	Computer usage	(Economic Intelligence Agency,2006)

Internal Reliability

Cronbach alpha has been used to determine the variables' reliability. Table (2) shows a clear statistical acceptance because (α) values are greater than the accepted percent (0.06). Cronbach alpha for the first independent variable; business environment was 0.760, for the second independent variable; culture was 0.815, for the third independent variable; regulations was 0.806, for the last independent variable; technological support was 0.859. For the dependent variable; e-readiness stage, Cronbach alpha was 0.788.

Table 2: Internal Reliability.

Question Numbers	Variable	Reliability
1-7	Business environment	0.760
8-13	Culture	0.815
14-20	Regulations	0.806
21-27	Technological support	0.859
27-43	E-readiness stage	0.788

Measurement of Study Variables

Factor analysis that has been used in this study involved exploring the patterns of relationships among a set of variables. These patterns of relationships are represented by the principle components. The researcher can identify the character of underlying factor by investigating the loading of the variables on a factor.

Factor Analysis for the Independent Variable; Business Environment

The analysis showed a clear discriminate and convergent validity, since all loaded factors were more

than 0.5. The first factor contains 5 items (questions 1, 2, 3, 4 and 6) related to economic environment and the other factor is related to the political stability (questions 5 and 7). The total variance explaining the first factor was (42.844) and that explaining the second factor was (31.140). Eignvalue was for factor one (2.999) and for factor two (2.180). Based on the above analysis, 2 new variables have been created, presenting two factors using sum scale technique and naming them economic environment for factor one and political stability for factor two.

Table 3: Business Environment Factor Analysis.

Articulation Items	F1 loading	F2 loading
1. Business environment in Jordan encourages my company to make its business deals through the internet.	0.730	0.105
2. The inflation percentage stability in the Kingdom helps enhance the electronic correspondences in my company.	0.741	0.0109
3. The economical growth in the Kingdom encourages and develops the electronic readiness of my company.	0.853	7.908 E-02
4. The political stability in the Kingdom contributes in encouraging e-readiness in my company.	0.027	0.966
5. The business environment in Jordan contributes in encouraging the electronic readiness which can be achieved through internet in my company.	0.769	-0.381
6. The banking interest percentage affects the company's electronic readiness.	-2.348 E-02	0.963
Variance	42.844	31.140
Eignvalue	2.999	2.180

Factor Analysis for Independent Variable; Culture

The analysis showed the relative significance of the sample responses about the culture variable. It showed a two factor solution of culture. The results showed a clear discriminate and convergent validity, since all loaded factors were more than 0.5. The first factor contains 5

items (questions 9, 10, 11, 12 and 13) related to social aspects and the second factor is related to the values and ethics (questions 8 and 14). The total variance explaining the first factor was (32.283) and that explaining the second factor was (18.589). The eignvalue was for factor one (2.260) and for factor two

(1.301). 2 new variables have been created presenting under one dimension) and named as social aspects for two factors using sum scale technique (mean of variable factor one and values and ethics for factor two.

Table 4: Culture Factor Analysis.

Articulation	F1 loading	F2 loading
7. The spread of English language in my company enhances the electronic readiness.	0.162	0.653
8. The increase in education in the company helps in increasing the electronic readiness in Jordan.	0.509	-0.365
9. Internet culture enhances the company's electronic readiness.	0.722	0.037
10. The Jordanian society aspects encourage the idea of using internet for all life purposes.	0.691	-0.032
11. Having Arabic web-sites enhances serving many employees who use internet.	0.718	0.353
12. The company's employees are aware of the easy usage of internet which may enhance the internet using opportunities.	0.617	-0.047
13. My company is part of the Jordanian young and educated community enhancing the spread of internet culture.	0.283	0.783
Variance	32.283	18.589
Eignvalue	2.260	1.301

Factor Analysis for the Independent Variable; Regulation

Table 5: Regulation Factor Analysis.

Articulation	F1 loading	F2 loading
14. The present legal legislations enhance encouraging the electronic readiness in the company.	-4.40E-02	0.616
15. Jordan has an electronic commerce law that helps in controlling the use of internet in my company.	0.943	-9.94E-02
16. Having a clear law of electronic intellectual property in Jordan helps in increasing the electronic readiness in my company.	0.866	-0.184

Articulation	F1 loading	F2 loading
17. Jordan is considered ready from the legal aspect for applying electronic commerce that encourages the e-readiness of my company.	0.896	-2.31E-02
18. Feeling safe in dealing with internet helps in increasing the company's electronic commerce.	0.630	0.532
19. The electronic regulations in Jordan are distinguished by clarity and efficiency which encourages using e-commerce in my company.	0.612	0.524
20. There are clear articles in the Jordanian law specialized in electrical commerce in particular and electronic business in general which encourages the e-readiness in my company.	0.134	0.762
Variance	25.133	23.702
Eignvalue	1.759	1.659

Table (5) represents the relative significance of the sample responses about the regulation variable. It shows a two-factor solution of regulations. The analysis shows clear convergent validity since all loaded factors are more than 0.5. The first factor contains 5 items (questions 16, 17, 18, 19 and 20) related to electronic laws, and the other factor is related to the legislation (questions 21 and 15) with a total variance explaining the first factor of (25.133), and for the second factor the total variance was (23.702). The eignvalue was for factor one (1.759) and for factor two (1.659). The researcher created 2 new variables that present two factors using sum scale technique (mean of variable under one dimension) named as electronic law for factor one and regulations for factor two.

Factor Analysis for the Independent Variable; Technological Support

Table (6) represents the relative significance of the sample responses about the technological support variable. It shows a two-factor solution of technological support. The analysis shows a clear discriminate and convergent validity since all loaded factors are more than 0.5. The first factor contains 5 items (questions 23, 24, 25, 26 and 27) related to IT development and the other factor is related to the spread of IT (questions 22 and 28) with a total variance explaining the first factor of (36.782), while for the second factor the total variance is (20.733). The eignvalue was for factor one (2.575) and for factor two (1.451). Based on factor analysis, the researcher created 2 new variables that present two factors using sum scale technique (mean of variable under one dimension) named as IT development for factor one and IT spread for factor two.

Table 6: Technological Support Factor Analysis.

Articulation	F1 loading	F2 loading
21. The company's programs appreciate all the needed technical support to make Jordan electronically ready.	0.002	0.632
22. The increase in expenditure volume on research and development enhances the electronic readiness of the company.	0.835	-0.055
23. Development in PC enhances the electronic readiness of the company.	0.569	0.120
24. Having developed anti- virus programs may enhance the electronic readiness in my company.	0.697	-0.360
25. The spread of computers and technical companies contributes in increasing the electronic readiness in the company.	0.814	0.029
26. The spread of technical development enhances the electronic readiness chances in the company.	0.638	0.469
27. My company encourages all the new ideas that may develop the Kingdom electronically.	0.002	0.827
Variance	36.782	20.733
Eignvalue	2.575	1.451

Factor Analysis for the Dependent Variable; E-Readiness Stage

Table (7) presents the relative significance of the sample responses about the e-readiness stage variables. It shows a two-factor solution of e-readiness. The analysis shows a clear discriminate and convergent validity since all loaded factors are more than 0.5. The first factor contains 4 items (questions 29, 30, 32 and 33) related to internet usage and the other factor is related to

computer usage (questions 34 and 31) with a total variance explaining the first factor of (32.469), and for the second factor the total variance is (22.977). The eignvalue was for factor one (2.275) and for factor two (1.608). Based on the above analysis and the objective of factor analysis, the researcher created 2 new variables that present two factors using sum scale technique (mean of variable under one dimension) named as internet usage for factor one and computer usage for factor two.

Table 7: E-readiness Stage Factor Analysis.

Articulation	F1 loading	F2 loading
28. The increase of internet users in the company contributes in encouraging electronic readiness.	0.722	0.110
29. The Jordanian electronic lines are distinguished in their efficiency and lack of disconnections, which may facilitate dealing with internet.	0.543	-0.706
30. The increase of computer users in the company contributes in encouraging the e-readiness.	0.389	0.691
31. The decrease in internet subscription enhances Jordan's electronic readiness.	0.745	7.786 E-02
32. Internet line efficiency and speed enhance the Kingdom's electronic readiness.	0.640	0.297
33. I use the computer to implement my daily routine work.	0.247	0.720
Variance	32.469	22.977
Eignvalue	2.275	1.608

Measuring the Relationship between Dependent and Independent Variables Using Multiple Regression

Multiple regression is recommended for research question where there is a relationship between two or more variables, and one dependent variable (Malhotra, 2000). This research has used this type of analysis in order to analyze the relationship between the independent variables consisting of 2 factors and the dependent variable. SPSS is a multivariate method that encompasses multiple regression for examining dependence relationships, employing the

techniques of analysis of multiple relationships and factor analysis, which represent unmeasured concepts with multiple variables to estimate a series of interrelated relationships.

- **Sub-hypothesis1**

Ho: There is no direct effect of business environment on the e-readiness stage.

Ha: There is a direct effect of business environment on the e-readiness stage.

Table 8: Multiple Regression of Sub-hypothesis One.

Variable	Internet Usage			Computer Usage			E-Readiness Stage		
	Beta	Sig.	T	Beta	Sig.	T	Beta	Sig.	T
Economic environment	0.392	0.000	6.613	0.697	0.000	15.484	0.711	0.000	15.424
Political stability	0.158	0.008	2.666	0.082	0.070	1.820	0.089	0.059	1.935
R Square	0.156			0.513			0.490		
F	22.945			131.212			119.387		
Sig.	0.000			0.000			0.000		

From Table (8), the multiple regression results show that there is a direct effect of business environment on the e-readiness stage. $R^2 = 0.490$ which means that the independent variable explained 49% of the variance in the e-readiness stage because ($F= 119.387, p< 0.05$). So we reject the null hypothesis and accept the alternative one which indicates the effect of business environment on the e-readiness stage. To determine which dimension affects the variable, the beta value shows that there is a

direct effect of economic environment on the e-readiness stage ($Beta = 0.711, p<0.05$), but the model shows that there is no direct effect of political stability on the e-readiness stage ($Beta =0.089, p>0.05$).

- **Sub-hypothesis 2**

Ho: There is no direct effect of culture on the e-readiness stage.

Ha: There is a direct effect of culture on the e-readiness stage.

Table 9: Multiple Regression of Sub-hypothesis Two.

Variable	Internet Usage			Computer Usage			E-Readiness Stage		
	Beta	Sig.	T	Beta	Sig.	T	Beta	Sig.	T
Social aspects	0.390	0.000	6.131	0.297	0.000	4.400	0.487	0.000	8.709
Values and ethics	0.059	0.380	0.876	0.296	0.000	4.890	0.202	0.000	3.607
R Square	0.173			0.250			0.356		
F	26.121			41.500			70.27		
Sig.	0.000			0.000			0.000		

From Table (9), the multiple regression results show that there is a direct effect of culture on the e-readiness stage. $R^2 =0.356$ which means that the independent variable explained 35.6% of the variance in the e-readiness stage because ($F= 70.27, p< 0.05$). So we reject the null hypothesis and accept the alternative one which indicates the effect of culture on the e-readiness stage. To determine which dimension affects the variable, the beta value shows that there is a direct effect of social aspects on the e-readiness

stage ($Beta =0.487, p< 0.05$). On the other hand, the model shows that there is a direct effect of value and ethics on the e-readiness stage ($Beta = 0.200, p > 0.05$).

- **Sub-hypothesis 3**

Ho: There is no direct effect of regulation on the e-readiness stage.

Ha: There is a direct effect of regulation on the e-readiness stage.

Table 10: Multiple Regression of Sub-hypothesis Three.

Variable	Internet Usage			Computer Usage			E-Readiness Stage		
	Beta	Sig.	T	Beta	Sig.	T	Beta	Sig.	T
Electronic laws	0.303	0.000	5.131	0.013	0.819	0.230	0.234	0.000	4.112
Legislation	0.187	0.002	3.160	0.407	0.000	7.011	0.366	0.000	6.445
R Square	0.132			0.158			0.197		
F	19.014			24.583			30.624		
Sig.	0.000			0.000			0.000		

From Table (10), the multiple regression results show that there is a direct effect of culture on the e-readiness stage. R Square = 0.197 which means that the independent variable explained 19.7% of the variance in the e-readiness stage because (F= 30.624, p < 0.05). So we reject the null hypothesis and accept the alternative one which indicates the effect of regulation on e-readiness stage. To determine which dimension affects the variable, the beta value shows that there is a direct

effect of electronic laws on the e-readiness stage (Beta = 0.234, p<0.05). On the other hand, the model shows that there is a direct effect of legislation on the e-readiness stage (Beta = 0.366, p < 0.05).

• **Sub-Hypothesis 4**

Ho: There is no direct effect of technological support on the e-readiness stage.

Ha: There is a direct effect of technological support on the e-readiness stage.

Table 11: Multiple Regression of Sub-hypothesis Four.

Variable	Internet Usage			Computer Usage			E-Readiness Stage		
	Beta	Sig.	T	Beta	Sig.	T	Beta	Sig.	T
IT development	0.217	0.000	3.584	0.064	0.254	1.144	0.118	0.040	2.068
Spread of IT	0.224	0.000	3.697	0.461	0.000	8.218	0.433	0.000	7.623
R Square	0.092			0.219			197		
F	12.637			34.972			30.493		
Sig.	0.000			0.000			0.000		

Table (11) shows that there is a direct effect of culture on the e-readiness stage. R Square = 0.197 which means that the independent variable explained 19.7% of

the variance in the-readiness stage (F= 30.493, p< 0.05). So we reject the null hypothesis and accept the alternative one which indicates the effect of

technological support on the e-readiness stage. To determine which dimension affects the variable, the beta value shows that there is a direct effect of IT development on the e-readiness stage (Beta = 0.118, $p < 0.05$). On the other hand, the model shows that there is a direct effect of spread of IT on the e-readiness stage (Beta = 0.433, $p < 0.05$).

- **Main Hypothesis**

Ho: There is no direct effect of (business environment, culture, regulation, technological support) on the e-readiness stage.

Ha: There is a direct effect of (business environment, culture, regulation and technological support) on the e-readiness stage.

Table 12: Multiple Regression of Main Hypothesis.

Variable	R	R ²	F	Sig.		Beta	T
Business environment	0.700	0.490	11.387	0.000	Factor 1(BE)	0.583	8.025
					Factor 2(PS)	0.112	1.539
Culture	0.744	0.553	76.390	0.000	Factor 1(SA)	0.323	4.591
					Factor 2(VE)	0.053	0.443
Regulation	0.745	0.554	50.802	0.000	Factor 1(EL)	0.076	1.008
					Factor 2(R)	0.062	0.679
Technological support	0.748	0.559	38.538	0.000	Factor 1(ITD)	0.106	1.415
					Factor 2(ITS)	0.076	0.731

(BE): Business Environment; (PS): Political Stability; (SA): Social Aspects; (VE): Values and Ethics; (EL): Electronic Laws; (R): Regulation; (ITD) Information Technology Development; (ITS): Information Technology Spread.

Table (12) shows that there is a direct effect of e-readiness enablers (business environment, culture, regulation and technological support) on the e-readiness stage; where:

1- R² for the business environment equals 0.490 which means that the independent variable explains 49% of the variance in the e-readiness stage (F= 11.387, $p < 0.05$). So we reject the null hypothesis and accept the alternative one which indicates the effect of business environment on the e-readiness stage. To determine which dimension affects the variable, the beta value

shows that there is a direct effect of economic environment (F1) on the e-readiness stage (Beta = 0.583, $p < 0.05$). On the other hand, the model shows that there is a direct effect of political stability (F2) on the e-readiness stage (Beta = 0.112, $p < 0.05$).

2- R² for culture equals 0.553 which means that the independent variable explains 55.3% of the variance in the e-readiness stage (F= 76.390, $p < .05$). So we reject the null hypothesis and accept the alternative one which indicates the effect of culture on the e-readiness stage.

To determine which dimension affects the variable, the beta value shows that there is a direct effect of social aspect (F1) on the e-readiness stage (Beta = 0.323, $p < 0.05$). On the other hand, the model shows that there is a direct effect of values and ethics (F2) on the e-readiness stage (Beta = 0.053, $p < 0.05$).

3- R^2 for regulation equals 0.554 which means that the independent variable explains 55.4 % of the variance in the e-readiness stage ($F= 50.802$, $p< 0.05$). So we reject the null hypothesis and accept the alternative one which indicates the effect of culture on the e-readiness stage.

To determine which dimension affects the variable, the beta value shows that there is a direct effect of electronic laws (F1) on the e-readiness stage (Beta = 0.076, $p< 0.05$). On the other hand, the model shows that there is no direct effect of regulation (F2) on the e-readiness stage (Beta=0.062, $p < 0.05$).

4- R^2 for the technological support equals 0.559

which means that the independent variable explains 55.9 % of the variance in the e-readiness stage ($F= 38.538$, $p< 0.05$). So we reject the null hypothesis and accept the alternative one which indicates the effect of technological support on the e-readiness stage. To determine which dimension affects the variable, the beta value shows that there is a direct effect of IT development (F1) on the e-readiness stage (Beta= 0.106, $p< 0.05$). On the other hand, the model shows that there is no direct effect of IT spread (F2) on the e-readiness stage (Beta = 0.076, $p < 0.05$).

Table 13: Sequential Regression Results.

	Step 1	Step 2	Step 3	Step 4
VARI_1	0.711*	0.571*	0.590*	0.583*
VARI_2	0.089	0.079	0.099	0.112
VAR2_1		0.296*	0.278*	0.323*
VAR2_2		-0.023	0.026	0.053
VAR3_1			0.013	0.076
VAR3_2			-0.067	-0.062
VAR4_1				-0.106
VAR4_2				-0.076
R^2	0.490	0.553	0.554	0.559
F	119.387	76.390	50.802	38.538
R Change	0.490	0.063	0.001	0.005
F Change	119.387*	17.536*	0.386	1.333

Sequential Regression Results

From step1, the business environment variable was taken in the model, where it explained 49% of the variance in the e-readiness stage. The results show the importance of business environment, where (beta=0.711, $p<0.05$). In step 2, the model takes in account the culture factor where the model explains 55.3%. The new factor adds significance explained by 0.063 ($F=17.536$,

$p<0.05$). From step 3, the regulation variable was taken in the model, where it explained 55.4% of the total model (R^2 Change = 0.001, F Change = 0.368, $p> 0.05$). So, this means that this variable does not add any significant change in R^2 . In step 4, the technological support was taken in the model, where it explained 55.9% of the total model (R^2 Change = 0.005, F Change = 1.333, $p> 0.05$). So this means that this variable does

not add any significant change in R².

Summary and Main Findings

E- readiness weakness reasons in targeted companies were:

1. Lack of awareness of the ability of making electronic commercial deals throughout the internet.
2. Lack of trust of the electronic services.
3. Lack of efficiency of the regulative rules concerned in the trading operations through internet (such as electronic signature).
4. Lack of safety and security elements of internet services.
5. High cost needed by the internet infrastructure.
6. High cost of managing the web-site limits the spread of the service.

Specific Contributions and Recommendation

The specific contributions of this research are as follows:

- This research study provides an appropriate model that can be used to assess e-readiness directly by assessing the e-readiness enablers required to be e-ready.
- It offers a transparent situation analysis about the current state of e-readiness in Jordan public shareholding companies.
- It provides guidance to those companies that do business electronically or those that want to start doing business electronically in Jordan.

The researcher recommends the following:

- The legal system concerned with the use of e-business in Jordan has to be improved to meet all the details that could face the citizens while using internet and e-business.

- Management should define the focus, direction and scope phasing required for their e-readiness plans. Planning should be based on a clear assessment of the existing procurement environment.

- Managing coordination and collaboration between all public enterprises and the Ministry of Communication and Information Technology. This can be carried out by creating groups each consisting of a number of commissioners from all the participating enterprises in the development process toward electronic readiness.

- Improving and developing services provided by the Jordanian mailing system. The development process should be supported by the government programs throughout increasing the financial support for the mailing sector, developing human resources, computers and internet skills.

Best practices can be used by organizations to improve the overall quality of IT software development and support through the life-cycle of software development projects, with particular attention to gathering and defining requirements that meet the business objectives.

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