Effective Factors on Adoption of E-Commerce in SME Cooperative

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Abstract
The present study investigated factors influencing on the adoption of electronic commerce(EC) in small and medium enterprises(SME), cooperatives in the city of Ardabil is trying by identifying factors influencing on the adoption of e-commerce provides One of the primary and basic steps to develop e-commerce companies. In this study survey four factors (Organizational Factors, Electronic Commerce Benefits, E-Commerce Risks, Compatibility, Perceived Ease of Use) as independent variables influence in e-commerce adoption in small-medium companies. Dependent variable in this study is the acceptance of e-commerce in co-operatives enterprise that taking into account the above top five factors as independent variables and design five hypotheses, to review and approval is a significant and positive relationship. Statistical community is all managers of small and medium co-operatives companies in Iran (Ardabil). Research goal is applied and terms of nature and method is descriptive - analysis of type correlation. As well as data collection method is field and for collect data has been used from the questionnaires. For data analysis was used from multiple regressions and the correlation coefficient. The results indicated that all of hypothesis is accepted.

Keywords: Electronic Commerce, E-Commerce Benefits and Risks, Compatibility, Perceived Ease of Use

1- Introduction
Since in many developing countries governments want their administrative body to be small, the role of cooperative companies is important and focusing on these kinds of companies, as economical – social organizations, is necessary for governments. The distinguishing characteristics of SMEs represent both advantages and disadvantages to SMEs competitiveness and growth. For instance, compared with large firms, relatively smaller customer base makes it possible for SMEs to react faster and more dynamically to customer needs, while a lack of financial resources and specialists will prevent SMEs from entering into global market. However, e-Business, referring to conduct of business with assistance of Internet and other information technologies, can effectively exploit SMEs advantages and offset drawbacks. It has been observed and verified in many studies that SMEs have been actively looking for suitable solution and methods of adopting and integrating Electronic Commerce into their business process (Benbasat, Bergeron and Dexter, 1993; Cragg and King, 1993; Dos Santos and Peffers, 1998; Massey, 1986; Purao and Campbell, 1998). Although there is a growing body of literature dedicated to the analysis of the technical and operational aspects of Electronic Commerce, there is little empirical research on topics relating to the factors that would lead to the successful adoption of this emerging technological innovation and business practice. Moreover, there is little empirical research to date that examines the success of Electronic Commerce deployments in organizations once the technology has been adopted.

Several other organizational factors that inhibit technology adoptions were also identified after conducting preliminary interviews and an extensive literature search. Among these are the cost of technology, a lack of managerial and technological skills, a lack of system integration and a lack of financial resources (Pfeffer, 1992; Saunders and Clark, 1992; Swatman and Swatman, 1991; Cragg and King, 1993; Iacovou, Benbasat and Dexter, 1995; Nilankantan and Scamell, 1990). These inhibitors are expected to play a big role in the context of small organizations, where resources and computer sophistication are limited (Swatman and Swatman, 1991). Indeed, previous empirical findings further suggested that economic costs and lack of technical knowledge are two of the most important factors that hinder IT growth in small organizations (Cragg and King, 1993). These findings were consistent with the study done by Kwon and Zmud (1987) who commented that successful technology implementation occurs when organizational resources (eg. time, funding, and
technical skills) are positively supported for initial motivating and implementing effort. Thus, contributing to another important variable of the organizational factor in this study – the organisational factors for Electronic Commerce adoption.

2- Literature Review

2.1 E-Commerce

In today's business environment is characterized by increasing competition, more forward fighting is going to win every day. (Gilaninia & et al, 2011) As a whole, the empirical work undertaken since the mid-1990s, particularly for advanced economies, has identified a large and varied number of determinants of Internet and e-commerce adoption and development (factors to do with the competitive environment, technological and organizational factors, etc.), which has led some authors (such as Fillis et al. 2004, and Kim and Galliers 2004) to review them. However, more empirical work is needed to test the choice of these determinants.

As an application of the Internet, e-commerce depends on information infrastructures and telecommunications for its development. Specifically, Stewart et al. (2002) point to the broadband penetration rate as one of the factors best explaining the different levels of e-commerce adoption and development observed in developed countries such as the United States, Canada, United Kingdom, and Australia, where in any case the conventional Internet access infrastructure is widely available (Dutta, 1997). Iran in the field of e-commerce and internet as result internet banking, ranking 58th as a result the world. With the rapid development of internet and e-commerce and financial and banking sector, customers are encouraged to use online banking (Gilaninia & et al, 2011, Moradian, 2004, Yiu etal, 2007).

Indeed, the penetration of low-cost broadband in the population allows companies to provide a better service to their customers, since it allows them to develop websites with personalization mechanisms (Ansari, 2003) and personal interaction with the customer services area, or other personnel from the organization (McGowan et al., 2002), and to incorporate various differentiating hypermedia elements (Porter, 2001). Thus, many authors have found evidence of the positive effect of designs that are advanced and suited to the audience on the results of e-commerce operations (Dholakia et al, 1998; Lohs et al, 1999; Mandel et al, 2002, among others).

On the other hand, the adoption and development of e-commerce also depends on the degree of involvement of the public authorities in developing a legal framework and a set of policies that favor its development (Fillis et al, 2004; Fisher et al, 2004; Javalgi et al, 2001).

2.2 Small and Medium Enterprises (SME)

The term SME covers a wide range of definitions and measures, varying from country to country and varying between the sources reporting SME statistics. Some of the commonly used criteria are the number of employees, total net assets, sales and investment level. However, the most common basis for definition is employment, and here again, there is variation in defining the upper and lower size limit of an SME. Despite this variance, a large number of sources define an SME to have a cut-off range of 0-250 employees. Our discussion of SMEs focuses mostly on the manufacturing sector since two of our three indicators focus on SMEs in this sector. SMEs are defined as formal enterprises and are thus different from informal enterprises. In countries such as the USA, Britain, and Canada, small-scale business is defined in terms of annual turnover and the number of paid employees. In Britain, small-scale business is defined as that industry with an annual turnover of 2 million pounds or less with fewer than 200 paid employees.

Iranian Industries Organization considers the number of employees for SME’s criteria. So small enterprise has less than 50 employees and between 50 and 100 are considered medium-sized enterprise. SME’s are important in job creation, added value, their share in GDP, and technological innovation in new products or processes. Another definition of small companies, to institution said that is working with less number than fifty of human resources in a specific area And with limited capital, specific operational area and limited In the shortest time To reach the stage of production or service And no complex structure. (Gilaninia, 2010)
Table 1: E-commerce adoption barriers in small-medium businesses

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce with products or services is not compatible and fit</td>
<td>Hadjimanolis.(1999) Eid et al.(2002)</td>
</tr>
<tr>
<td>E-commerce is not compatible with the way work by customers of the organization</td>
<td>Hadjimanolis.(1999)</td>
</tr>
<tr>
<td>Lack understand the advantages and benefits of applying e-commerce</td>
<td>Lawrence(1997) Hadjimanolis.(1999)</td>
</tr>
<tr>
<td>Lack of technical knowledge about how to use e-commerce technology.</td>
<td>Farhoomand et al Mirchandani and Motwani(2001)</td>
</tr>
</tbody>
</table>

Summary characteristics of SMEs

- Small and focused management With a short-term vision
- Establishment and development of small and medium business needs very little resources
- Strong desire show to independence So prevent from business risks and initiatives So does not affect their independence
- Small and medium business enjoys a high degree of employment.
- decision-making process is intuitive in the SME
- Small and medium businesses are often based on domestic resources.
- Small and medium businesses have high flexibility.
- Small and medium businesses are considered experienced and professionals forces grower for big business.
- Small and medium businesses locate are conducted to facilities and in favor of the government's regional policy.
- Development of small and medium businesses reduce distance class in community

Research conceptual model been taken Ghoreshi and Ali Karimi conceptual model. That about it discuss in Following. The present study examined effective factors on adoption of electronic commerce. In model, the compatibility, e-commerce benefits, e-commerce risks, Organizational Factors, perceived ease of use considered as independent variables and also acceptance of e-commerce is used as the dependent variable. This research intends with the identify factors influencing on the adoption of e-commerce because we found one of the basic and primary steps for develop of e-commerce in companies.
Compatibility: This is that small and medium enterprises how think about new innovation And how it are consistent fits with their existing business processes. This term is associated with the extent to which a person believes innovation are consistent with existing values, past experiences and needs (Hsiu-Fen, 2010). Studies show that an innovation when the job responsibilities of individuals and their value system is consistent, is more likely to be accepted (Herandez. et al, 2006, p73).

Electronic commerce Risks: Dangers and risks of electronic commerce mean that with using electronic commerce by businesses increase Assess Risk disclosure of customer information. Company that the importance of information security it has a higher value, It is expected that Lower levels of use of e-commerce to be assumed. If enterprise knows the health of low exchange towards use EC will be reluctant.

Perceived Ease of Use: Degree is which a person believes that using a special system will be needed Additional efforts.

Organizational factors: to degree of financial resources, expertise and technological resources available at the company called

Electronic commerce Benefits: the concept of e-commerce benefits mean that using electronic commerce by businesses raises Companies benefit rate. The company that it has a higher value Reduce costs and increase sales importance .It is expected that assumed a higher level of business application.

3- Research hypotheses
1- There is a significant relationship between Organizational Factors and acceptance of electronic commerce in small and medium cooperative enterprises.
2- There is a significant relationship between Electronic commerce Benefits and acceptance of electronic commerce in small and medium cooperative enterprises.
3- There is a significant relationship between Electronic commerce Risks and acceptance of electronic commerce in small and medium cooperative enterprises.
4- There is a significant relationship between Perceived Ease of Use and acceptance of electronic commerce in small and medium cooperative enterprises.
5- There is a significant relationship between Compatibility and acceptance of electronic commerce in small and medium cooperative enterprises.

4- Research methodology
Research goal is applied and terms of nature and method is descriptive - analysis of type correlation. In this study statistic community is all managers of small and medium companies’ cooperatives in Iran (Ardabil). They were 956. Sample size by using formula \( n = \frac{N \sigma^2}{(z^2 \cdot (1-1/d) \cdot \sigma^2)} \) (N=956, z=1.96, \( \sigma^2 = .25 \), d=.1) is determined 87. Due to the availability of the list of corporate managers, Sample select from among the statistical community as Simple random. As well as data collection method is field and for collect data has been used
from the questionnaires. In this study, to increase the validity of questionnaire used from following instruments:

1 - Read books and articles relating to research and determine the require information items.
2 - Use of management teachers and specialists opinions.
3 - To survey past articles and research, and determine its strengths and weaknesses.
4 - Primary distribution of questionnaires, among number from companies and applying corrective feedback.

Due to the analysis results, validity of question was confirmed. Questionnaire to measure the reliability of each variable using Cronbach's alpha coefficient was greater than 70% shows that questionnaire is reliability. For data analysis was used from multiple regressions and the correlation coefficient.

5- Data Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>21.8</td>
<td>19</td>
</tr>
<tr>
<td>30-40</td>
<td>46</td>
<td>40</td>
</tr>
<tr>
<td>40-50</td>
<td>27.6</td>
<td>24</td>
</tr>
<tr>
<td>50-60</td>
<td>4.6</td>
<td>4</td>
</tr>
<tr>
<td>&gt;60</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>Male</td>
<td>67</td>
<td>77</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>diploma</td>
<td>15</td>
<td>7.5</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>15</td>
<td>67.2</td>
</tr>
<tr>
<td>Bachelor</td>
<td>50</td>
<td>10.4</td>
</tr>
<tr>
<td>Master &amp; over</td>
<td>7</td>
<td>7.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research hypotheses</th>
<th>Correlation coefficient</th>
<th>SIG</th>
<th>Hypotheses status</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Organizational Factors and acceptance of Ec</td>
<td>0/33</td>
<td>0.01</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H2: Electronic commerce Benefits and acceptance of Ec</td>
<td>0/47</td>
<td>0.01</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H3: Electronic commerce Risks and acceptance of Ec</td>
<td>-0/50</td>
<td>0.01</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H4: Perceived Ease of Use and acceptance of Ec</td>
<td>0/67</td>
<td>0.01</td>
<td>Confirmed</td>
</tr>
<tr>
<td>H5: Compatibility and acceptance of Ec</td>
<td>0/52</td>
<td>0.01</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>

1- There is a strong and positive relation between Organizational Factors and acceptance of electronic commerce. Also electronic commerce increased with the increase of Organizational Factors($r=0/33$, $p<0/01$). The results are compatible with the results of Karimi et al (2008) ghoreishi (2009) that review of the research model.

2- There is a strong and positive relation between Electronic commerce Benefits and acceptance of electronic commerce ($r=0/47$, $p<0/01$). Also electronic commerce increased with the increase of Electronic commerce Benefits. This result is consistent with the result of karimi et al (2008).
3- There is a strong and negative relation between Electronic commerce Risks and acceptance of electronic commerce (r=-0.50, p<0.01). Also electronic commerce decrease with the increase of Electronic commerce Risks. This result is consistent with the result of karimi et al (2008) and sanaei(2009).

4- There is a strong and positive relation between Perceived Ease of Use and acceptance of electronic commerce (r=0.67, p<0.01). Also electronic commerce increased with the increase of Perceived Ease of Use. This result is consistent with the result of Ghoreishi (2009) and Sanaei(2009).

5- There is a strong and positive relation between Compatibility and acceptance of electronic commerce (r=0.52, p<0.01). Also electronic commerce increased with the increase of Compatibility. This result is consistent with the result of Ghoreishi (2009) and Sanaei(2009).

Table 4 Results of Multiple Regression Test

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Beta</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Factors</td>
<td>0.33</td>
<td>0.26</td>
<td>3.70</td>
<td>0.000</td>
</tr>
<tr>
<td>Electronic commerce Benefits</td>
<td>0.06</td>
<td>0.04</td>
<td>0.58</td>
<td>0.561</td>
</tr>
<tr>
<td>Risks Electronic commerce</td>
<td>-0.16</td>
<td>-0.22</td>
<td>-2.98</td>
<td>0.004</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>0.63</td>
<td>0.47</td>
<td>6.39</td>
<td>0.000</td>
</tr>
<tr>
<td>Compatibility</td>
<td>0.24</td>
<td>0.26</td>
<td>3.69</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Dependent variable: adoption of electronic commerce

Organizational factors variable (beta=0.26, p<0.0005), Perceived ease of use and acceptance (beta=0.47, p<0.0005), compatibility (beta=0.26, p<0.0005) are significant predictors for the adoption of e-commerce and it will predict positively and electronic commerce risks variable (Beta=-0.22, p<0.004) is Significant predictor for the acceptance of electronic commerce and it will predict negatively. Electronic commerce Benefits (Beta=0.04, P=0.561) There wasn’t a significant predictor. In Here see Perceived Ease of Use in comparison with other variables in the acceptance of electronic commerce has more positive contribution and after it Order compatibility and Organizational Factors.

6- Conclusion and suggestions

Internet and Initialize the digital century has created massive changes in various aspects of economic activity And new challenges has emerged in front of economic actors. Characteristics of small and medium industries cause that these companies in embrace technologies face obstacles and problems of its own particular. World different countries with the knowledge that Lack remove these barriers and lack use of the capabilities and opportunities presented by the Internet, reduce competitive of small and medium businesses and are limited their commercial activity. Considering that these issues cause irreparable injury to the national economy, Broad protection Policies have taken in order Internet use in this sector (small and medium enterprises). In formulating policies to support small and medium businesses, actions should be based on extensive studies of science until adopted policies have been requiring efficiency.

Practical suggestions:

- Support Fund established for E-commerce development in small companies, Electronic commerce training seminars aimed at informing and creating a positive attitude towards Electronic commerce among companies by providing actual cases from use of e-commerce and the benefits created, Offering tax benefits to Internet exchange in small companies, provide services of Management and technical consulting to
application companies using Electronic commerce. Such as major policies are in development and promote Electronic commerce place among small and even medium companies.

- Also another factor is most understanding managers from electronic commerce benefits for small and medium industries. Therefore is recommended that Provide examples of successful e-commerce in small-medium industries and the introduction of attractive and expose the samples, to this understanding will help. In fact, an important indicator in acceptance of any model development is to be successful.

- pass legislation Electronic commerce, Create the necessary legal infrastructure in it and efforts to improve security systems of new technology. It is the most important policies that Governments can adopt in support of small-medium companies.

- Implicit promoting (indirectly) by IRIB and other mass media for introduce more efficient electronic commerce and promote positive perceptions of it as attractive and useful direction introduction, make confidence and culture.

- Management training needs assessment of Small-medium industries in the area of Electronic commerce and design of special courses and their implementation.
References


