A STUDY OF CUSTOMER E-READINESS FOR ACCEPTING THE AUTO E-INSURANCE IN IRAN

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Abstract— Customer e-readiness is one of the most challenging issues in e-commerce deployment. Literature review reveals that most studies are mainly focused on national and/or organizational level and rarely from customer’s point of view, in particular in developing countries. This subject is covered by evaluating e-readiness of customers in insurance industry through a field study (survey) among auto insurance customers in I.R. Iran. Although, high readiness of customers are assumed by default, but results of the current research endorsed on doubt among insured customers to accept e-commerce. This research reveals that customer motivation, as one of the key factors of e-readiness, plays main and significant role on e-commerce acceptance among other effective components. Not clear benefits sought by purchasing through Internet and ambiguity on Internet usage are the most important factors reducing customer’s e-readiness.

Keywords— Customer Ability; Customer Motivation; e-Readiness; e-Commerce; e-Insurance; Role Clarity; Technology Acceptance.

1. INTRODUCTION

Nowadays, all industries are under the influence of a growing trend towards adopting new electronically offers/ideas. One of the potential areas that can immensely benefit from using Internet and other information and communication technologies (ICT) is insurance industry. The successful installation of electronic products in insurance is an inter-level issue that requires suitable infrastructure at national (industry), organizational (companies), and market (customers) levels. Without a comprehensive infrastructure at these three levels being already in place, the allocation of large investment, use of advanced equipment and inner organizational readiness are not even collectively enough to succeed in utilizing new technologies.

The level of customer support and usage of products and services offered by companies depends (to a great extend) on the degree of readiness and tendency of customers. In connection with electronic products, of course, customer readiness itself rests upon public access to Internet (Zhu et al., 2017).
"Customer readiness" is one of the main factors affecting the decisions made by companies. This is so since at this level, customer's readiness realizes real market potential. His/her acceptance of innovative products shows that which one will assist the company most to attain a sustainable profit margin.

For instance, suppose insurance companies offer best e-enabled products under the most favorable terms and conditions to potential customers, but when they lack readiness to incline to the offer, the effort fails. This is like trying to supply products for which there is not much demand. In other words, such an effort will be worthless and will not score any credit for the insurance companies. Therefore, prior to invest on new innovation, it's very important to evaluate customer readiness and explore significant components to increase/decrease customer tendency toward new technologies. This study will evaluate the current situation and investigate to what extent customers are ready to adopt electronic insurance products. In other words, the customer e-readiness variables that might affect e-commerce success in Iran auto insurance, as a developing country, will be studied.

This paper is organized as follows. First of all, e-commerce adoption in the Iranian insurance industry will be provided and then customer e-readiness will be studied. After briefing adopting research methodology, the research finding will be presented by evaluating customer e-readiness. And finally, the research will be concluded by suggesting further research topics in this regard.

7. E-COMMERCE ADOPTION IN THE IRANIAN INSURANCE INDUSTRY

Due to the relative youth of e-commerce, there are not yet widely agreed on definitions of what is meant by this term. Kalakota & Whinston (144) have defined e-commerce from different points of view including communications perspective, services perspective, business processes perspective, and online perspective. They concluded that e-commerce is 'the buying and selling of information, products and services via computer networks, primarily over the Net.' According to Turban et al. (124), e-commerce is one of the fresh concepts affecting sales and purchases, products/services exchange, and information process through Internet networks.

The term is generally used to encompass not only the buying and selling (as described above) but also the use of Internet technologies, such as email and intranets, to exchange or share information either within the firm itself or with external stakeholders. It is this latter, wider definition of e-commerce that is used in this study. A review and classification of e-commerce research has been provided in Ngai & Wat (154). Most researches recently concentrated on exploration of significant factors affect on e-commerce success (failure) and their benefits, obstacles, and so on (Bromideh & Arabi, 157; Gunasekaran & Nagi, 159; Turban et al., 124).

One of the benefits of wide spread use of e-commerce is the promotion of traditional supply channels of goods and services and their replacement with web-based purchase and sale. It is expected that a significant part of incomes gained by organizations and commercial firms will be through sales of goods and services via their Web sites. In fact, the wide spread use of Internet is changing the way companies interact with their customers. In a study carried out by Helm and Sinha (131) the importance of deliverable values of e-commerce to customers are highlighted.

7.1. E-INSURANCE: E-COMMERCE IN INSURANCE

To days, insurance industry is facing with rising cost of R&D, and relevant information technologies and shrinking profit margin of providing insurance services. As a result, the industry is confronted with serious challenges standing in the way. Due to the use of Internet, the supply channels of insurance and financial services too are undergoing tremendous changes. Thus, most worldwide insurance firms provide a wide range of information on their products through Internet.

The establishment of an insurance contract does not need much more than an exchange of information. In fact, only a set of information is required to conclude an insurance contract. In most contracts, the data set remains unchanged unless damage actually occurs. Greatest part of interaction between the insurer and the insured consists of information that must be exchanged to perform the contract. The payment of premium, assessment of damage, and its compensation often involves the
The effect of e-commerce on Iran's insurance companies was studied by Bromideh & Aarabi in which they deliberated on the benefits and obstacles of utilizing e-commerce. On the whole, e-insurance reduces the cost of management and administration via business automation and improves management information system. It also reduces the commissions paid to the brokers or agents by providing the means to sell insurance policy directly to the customers. Ultimately, in a competitive market, such cost reductions will allow lower insurance premiums encouraging more customers to purchase insurance policies. It is proposed that cheaper policy will results in the spread of insurance industry across countries.

Generally, Internet provides the new comers with a shortcut to avoid the long and costly process of setting up traditional sales networks. Therefore, it is anticipated that older issuers and underwriters encounter increasing competitive pressure. Insurance policies that require little consultation are more suitable for sale via internet. But in the case of complex insurance products with high business values for which customers are inclined to spend more on consultancy, there is not much demand for online sale.

On the other hand, only those insurance products are suitable for marketing and distribution on Internet that can be standardized to such a degree that can be described and valued with only a few parameters, say auto insurances, liabilities, and life insurance (Bromideh & Aarabi). This does not mean that other insurance products should not get benefits from the great opportunities of e-commerce. Now a days, information technology are extensively used in insurance companies for matters like making contact with insurance representatives, issuance of insurance policy, notice of insurance premium, market analysis, sales forecasts and accounting operations.

Although there is no official and credible statistics to indicate the share of e-commerce from the total trade in the Islamic Republic of Iran, the total volume of purchase and sales via Internet are not easy to estimate in this case. But by the growth of financial transactions between the Iranian banks, it is expected that the share of e-commerce in Iran to rise.

All Iranian insurance company has a website and they provide variety of information to the visitors. Most insurance companies in Iran are mainly using the Internet to introduce and advertise their products and rarely offering online transaction.

**IMPORTANCE OF CUSTOMER E-READINESS**

Consumer readiness is an important factor for decision makers because it reflects the potential market volume, and thereby determines the extent to which innovations can be translated into profitability. There is no single accurate definition for e-readiness; different groups describe it differently. Consumer readiness is a condition or state in which a consumer is prepared and likely to use an innovation for the first time (Meuter et al.,). Consumer readiness is also a combination of consumer willingness and Internet penetration. They continued to identify customer readiness as a combination of clarity (do customers know what to do?), ability (do customers have the ability to use the technology), and motivation (do customers perceive a benefit for using the technology?).

An overview of e-readiness definitions has been provided by Lou in which he defined e-readiness as “measure of the degree to which a country, nation or economy may be ready, prepared or
willing to obtain benefits which arise from the digital economy.” In most cases, this measure is presented by indices to rank and gauge how ready a country, company, customer to involve in electronic activities.

This paper takes the position of e-readiness as measure of the degree to which a nation/country, business/company, market/customer may be ready, prepared or willing to obtain benefits from an innovation. The successful deployment of e-commerce depends on the existence of a set of factors and conditions. Even if for a company, the best website is designed with data exchange facilities, when customers have no access to the network, and yet no suitable legal system has been compiled for resolving disputes over exchanges of e-commerce and no financial and banking infrastructure has come to existence, obviously e-commerce cannot have any significant effect. Therefore, a bear minimum of electronic mobilization must take place at all levels; otherwise the implementation of e-commerce will not succeed. This means that the assessment of electronic mobilization must be carried out at all levels and layers. Dimension of e-readiness is described in the following.

**Ⅲ. DIMENSIONS OF E-READINESS ASSESSMENT**

In general, the level of readiness for accepting an innovation is worth considering from three viewpoints visualized in the figure Ⅰ. Most of the e-readiness studies focus on national and organizational (firm) level (Molla & Licker, 2004; Lou, 2010). What is missing is e-readiness evaluation from customer’s point of view, which is the main focus of the current research.

![Figure Ⅰ - Level of E-readiness Assessment](image)

At national level, electronic mobilization is concerned with factors that are propounded across the nation, such as the codified law of e-commerce, convenient commercial systems to support companies, provisions for foreign and domestic investment in the infrastructure of e-commerce, enactment of incentive tax regulations towards the interchanges of e-commerce. The most important characteristics of parameters considered at this level are that they spread across the country and the direct role of government is to change, provide and regulate them. Most international e-readiness assessment, reports and rankings published for measuring e-readiness, make their assessment at macro level.

Molla & Licker (2004) recommended that alongside nationwide infrastructure development, business must pursue organizational and managerial development. The preparedness and the conditions of every industry differ from others in e-commerce perspective. The differences points back to the conditions that prevail in every industry and its special features. The readiness of an industry hints at that of the group of competitors, suppliers, service providers and other beneficiaries that operate within that industry.

In 2004, according to EIU (2004), 50 countries were ranked in terms of e-readiness, among them, Iran stood at 54th position. In 2005, its rank was 58 out of 51 countries. This means that Iran was the least ready country to use e-commerce. Figure Ⅰ shows the trend of Iran’s national e-readiness.
At the organizational levels, sources such as computers with Internet connections, management tendency towards using e-commerce, access to financial resources to provide for e-commerce, positive perception of staff towards e-commerce (inner concerns), collection of conditions and industrial variables that dominate the environment in which the organization operates (outer concerns) have significant importance.

Successful implementation of e-commerce does not merely rely on the readiness of nation, industry and the organization that employs e-commerce but also depends on the readiness of market and customers. Measures that are intended at this level mainly indicate the relationship between an organization and her customers in terms of mutual trust, expectations and needs, level of customer satisfaction, and etc.

Generally, readiness at national level comprises macro variables linked to e-commerce. Readiness at this level plays a vital role in paving the way for using e-commerce and despite its significance, the importance of readiness at industrial and organizational levels are undeniable. The companies for implementing e-commerce successfully must possess a line of resources and abilities, which must be used to attract customer’s favorable view and encourages them to use e-commerce.

But, although the assessment of e-readiness at market and customer levels are important, most designed models cited mainly concentrate on assessing e-readiness at national and industrial levels. On the other hand, models that somehow indirectly refer to e-readiness of organizations and customers are brought forth to identify factors that either facilitate (or hinder) the use of e-commerce. For this reason, the need to pay more attention to models that can assess the e-readiness of customers is felt.

A REVIEW ON E-READINESS ASSESSMENT MODELS

Today, a vast number of e-readiness assessments, reports, and rankings have been formulated through quantitative and qualitative research by numerous institutions such as, government, private, non-private organizations. Each report is often the product of different methodologies and divergent definitions of e-readiness. Hence, the results of the various studies are not consistent with each other. Nonetheless, every e-readiness assessment, report and ranking is mainly used as a benchmark for comparison purposes among nations (Lou, 2011).

At the national level, the Economist Intelligence Units’ rankings are commonly used. Also, there are remarkable studies at industry and organizational level (Lou, 2011). Molla & Licker (2006) proposed a research model for e-commerce readiness in developing countries based on organizational e-readiness perspective. Meuter et al. (2002) showed that consumer readiness, consisting of role clarity, motivation, and ability, mediated the relationship between self-service technologies (SST) innovation characteristics and individual traits and customers’ willingness to try a newly introduced SST.

Role clarity reflects the customers’ knowledge and understanding of what kind of participation needs to take place. The rationale is that if customers know what to do and how they are expected to perform, they are more likely to do what is needed. Indirectly, this expresses a need to inform customers about the activities and behaviors that are needed for an effective service encounter (Wünderlich, 2004). Customer motivation denotes on the customer’s perception that there is a benefit in using the new innovations. Customer ability reflects the customer’s self-confidence that s/he possesses the skills and has the necessary equipment to use new innovations (Meuter et al., 2002). The figure visualizes the most recent accepted framework of e-readiness measurement.
Figure 1- Key predictors of consumer trial of Self-Service Technologies (Adapted from Meuter et al. (2003))

The interaction between demographics (e.g. age, gender, education and income) and personality traits (e.g. technology anxiety, need for interaction and technology innovativeness) and their effect on intentions to use SSTs was researched by Lee et al. (2015).

**V. RESEARCH FRAMEWORK AND METHODOLOGY**

The main objective of the current research is the evaluation of customer e-readiness to embrace e-insurance. We conceptualize customer readiness by role clarity, motivation, and ability, as the e-readiness factors (Binter et al., 2011; Meuter et al., 2003). As explained in the previous section, role clarity reflects the consumer’s knowledge and understanding of what to do, motivation refers to a desire to receive the rewards associated with using the new technologies (Internet), and ability relates to possessing the required skills and confidence to complete the task.

Moreover, the factors affect on customer e-readiness along with their relationship with other components have been explored in the study. Figure 1 shows the proposed research framework.
A quantitative approach was adapted to the study after a preliminary qualitative research to test the factors extracted from the literature by industry experts. Data collection instrument, i.e. questionnaire, passed through rigorous content, construct, convergent and validity, readability and reliability tests. Actually, through a pilot study, we pre-tested the survey instrument for further insight and wording was adapted as needed, and ambiguous questions were clarified or deleted. A random sample of 1,000 policy holders (who recently bought an auto insurance product) was extracted from the selected insurers' lists.

Respondents were asked to express their degree of agreement on a five-point Likert-type scale ranging from 1 (strongly agree) to 5 (strongly disagree). Finally, 1,000 valid questionnaires were collected and entered to SPSS ver. 17 for further analyses. A response rate of 68% is acceptable for this kind of investigation, which creates a foundation of getting reliable answers.

2. ANALYSIS AND FINDINGS

The finding reveals that, for a trial purchasing, about 68% of respondents are interested in e-insurance products and almost 9% indicated a low interest to purchase auto insurance online. Human interaction plays main roles and some customers are interested in going to agents and enjoy of interacting with sale forces. Probable concern on new technologies’ security, due to non-positive news on Internet hacks/attacks, created negative image among the respondents. 91% of respondents can not trusted on new technology and they have a negative perception on that, in contrast 57% of the policy holders have not shown a negative image. Problems and troubles obtained in using of new technologies such as Automated Teller Machine (ATM) and Tele-banking which is widely used in countrywide, made no-positive experiences to 59% of the respondents.

According to the proposed framework, customer e-readiness is calculated by three main factors, namely customer ability, motivation and role clarity. Therefore, its components should be calculated beforehand, which in the next parts will be provided.

1. **Role Clarity**: The role clarity is measured by “tangible benefit by Internet purchase” and “Internet usage procedure.” Almost 9% of the respondents find the role clarity satisfactory and to 47% it is not clear. The analysis clarified that purchasing procedure through Internet is clearer than the benefits sought by Internet purchasing.

2. **Customer Motivation**: Customer motivation plays a key role in e-readiness, as 49% of the respondents are motivated to embrace e-commerce. An increase in purchase time and flexible buying are at top of the five components constitute this item.
7. **Customer Ability**: The survey reveals that only 13% of respondents are not able to use Internet properly, and in contrast, almost 87% of them are well able to use Internet. Availability of computers and access to Internet are the main factors to enable people in this regard, as 87% of the respondents are equipped with. About 65% of them are regularly connected to Internet.

As well explained before, customer e-readiness is constituted by three components: role clarity, customer motivation and ability. About 85% of respondents are eager to purchase their auto insurance from the insurance company website online. Almost 4% of the respondents are in lowest e-readiness level. Intangibility of benefits sought by online buying (role clarity) is the most important factor inhibiting customers to embrace e-commerce. Figure 6 visualize this result.

![Customer e-readiness components and calculated values](image)

**Figure 6 - Customer e-readiness components and calculated values**

On the other hand, intention to buy insurance products (for the first time) has been considered as one of the direct factors promoting customer e-readiness. To explore the relationship among the variables, in figure 7 correlation analysis has been provided. Correlation analysis denotes on existence of a linear relationship among the proposed factors.

![Significant correlation coefficient among factors affect on e-readiness](image)

**Figure 7 - Significant correlation coefficient among factors affect on e-readiness (P-values within parentheses)**

The positive linear correlation between role clarity, customer motivation and ability is statistically significant. In fact, an increase in one of them will positively affect on others. Income of respondents is positively correlated with those three factors. The linear correlation between education and motivation is not statistically significant. A positive correlation between age and role clarity, 0.219, means that an increase in age will increase role clarity (P-value = 0.001). Perceived risk is negatively correlated with customer motivation and human interaction has negative correlation with role clarity, customer motivation and ability.

8. **Conclusion**
Currently, all insurance companies and their agents/brokers have an exclusive website in that the company and her products/services are introduced. From time to time we hear the installation news of another sale system through the Internet. However, there is yet a long way ahead. These companies believe that the main reason for the imperceptibility of e-insurance in comparison to traditional insurance sales is the weakness of infrastructure that is required for implementing proper e-insurance.

Perhaps one of the missing links that the companies have been unaware of is customer readiness to accept e-insurance. In the direction of promoting the degree of success in reaping the benefit of e-commerce, this research attempts to exploit this issue. It is expected that the insurance companies that are interested in installing e-insurance in Iran come to know the importance of customer readiness.

Although the research findings indicate a high level of customer e-readiness, there is a significant number of customers who not only have a negative perception of e-insurance, they have misgivings about it. This noticeable anxiety stems from technological weaknesses, insecure network, unfamiliar results of making purchases over the Internet, in comparison to buying in person, and pretty low-speed connection to Internet are among the primary factors that have a negative effect on customer's attitude and readiness.

This research is focused on the customers of auto insurance. It would not be easy to extend the findings to other insurance policies. This extension may be considered by other keen researchers in the subject as further work. The development of the model presented in this article and the comparative study into private and public companies opens up new horizons to insurance business firms.

\section*{Acknowledgment}

I continued this article and brought it to a close at this point in memory of my dearest friend, Mr. Kourosh Emami who shared this research work with me before becoming a memory and turning my memory into a treasure.

\section*{References}


