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FACTORS AFFECTING CUSTOMER E-READINESS TO EMBRACE AUTO E-INSURANCE IN IRAN

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Abstract

A paucity of attention has been taken to e-readiness from customer point of view, despite extensive studies in e-readiness topics. This study examined the factors influencing customer e-readiness to adopt e-insurance. We used a questionnaire and analyzed the data using SEM. We found that age and human interaction negatively affected customer e-readiness and perceived compatibility, ease of use and role clarity were at the top of positively influencing factors.

Keywords: **Customer Ability; Customer Motivation; e- Readiness; e-Commerce; e-Insurance; Role Clarity; Structural Equation Model (SEM).**

INTRODUCTION

Utilizing a new innovation requires deliberation on the following three major questions. First, to what extent national/governmental infrastructures are ready to initiate and support the innovation? Second, to what extent industries and organizations are ready to implement? And finally, to what extent customers are ready to use the innovation? Therefore, readiness assessment can be regarded as one of the main factors affecting the decisions made by decision makers to use or not to use an innovation.

There is a threefold approach to study readiness mater: Nation, organization and customer. Most of studies and reports in readiness have covered the first two groups [Yaghoubi et al. 2011] and rarely on the third one. In fact, customer's readiness realizes real market potential and his/her acceptance of innovative products shows that which one will assist the company to a sustainable profit margin. Likewise, 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 e-products, of course, customer readiness itself depends on public access to the Internet (Zhu et al., 2002).

Currently, all industries are under the influence of a growing trend towards adopting new innovative ideas (say electronically products/services). One of the potential areas that can immensely benefit from using new innovational ideas, in particular the Internet is insurance industry [Odoyo & Nyangosi 2011; Grossman et al. 2004]. The successful installation of e-products in insurance is an inter-level issue that requires suitable infrastructure at the national (industry), organizational (companies), and market (customers) levels. 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 will fail. 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. Hence, prior to investing on new innovations, it's very important to evaluate customer readiness [Odoyo & Nyangosi 2011] and explore significant components to increase customer tendency toward new technologies.

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

This paper is organized as follows. The next section is dedicated to e-insurance and the importance of customer e-readiness will be studied in section 3. In the following, research methodology will be discussed and the research findings will be presented in section 5. Finally, the research will be discussed and concluded in the last section.

E-INSURANCE: ADOPTION OF E-COMMERCE IN INSURANCE INDUSTRY

The insurance industry is recently 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 on the way.
Due to the use of the Internet, the supply channels of insurance and financial services too, are undergoing tremendous changes [Grossman et al. 2004]. Thus, most insurance firms, worldwide, provide a wide range of information on their products through the Internet [Alipour et al. 2011].

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 insurer, underwriter, and intermediaries such as brokers and agents as well as the insured [Alipour et al. 2011; Bromideh & Aarabi 2006]. This indicates that a tremendous amount of information is exchanged between these four parties. Therefore, one can recognize insurance as an information-intensive activity that suites e-commerce.

According to [Bromideh & Aarabi 2006] e-insurance in common terms means the use of Internet and information technology in developing, producing, distributing, and selling insurance services. More specifically, e-insurance is termed analogous to an insurance cover whose policy may be requested, presented, negotiated and concluded over the Net (online). Also, e-insurance is also referred to as the Internet base insurance (i-insurance).

E-INSURANCE INDUSTRY IN IRAN

The effect of e-commerce on Iran's insurance companies was already studied by [Bromideh & Aarabi 2006] 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 [Odoyo & Nyangosi 2011; Grossman et al. 2004]. Ultimately, in a competitive market, such cost reductions will allow lower insurance premiums encouraging more customers to purchase insurance policies.

Generally, Internet provides the newcomers 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 [Grossman et al. 2004]. Insurance policies that require little consultation are more suitable for sale via the 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 [Odoyo & Nyangosi 2011; Bromideh & Aarabi 2006].

On the other hand, only those insurance products are suitable for marketing and distribution on the 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 2006; Grossman et al. 2004]. This does not mean that other insurance products should not get benefits from the great opportunities of e-commerce.

Nowadays, information technology is 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.

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. A feasibility study of e-insurance implementation in one of the Iranian insurers has been recently studied by [Alipour et al. 2011]. Most insurance companies in Iran are mainly using the Internet to introduce and advertise their products and rarely offering online transaction. These companies probably believe that the main reason for imperceptibility of e-insurance in comparison to traditional insurance sales is the weakness of infrastructure that is required for implementing proper e-insurance [Bromideh & Aarabi 2006]. There is no official and credible statistics to indicate the share of e-commerce from the total trade in Iran; hence, the total volume of purchase and sales via the Internet is not easy to estimate in this case.

IMPORTANCE OF CUSTOMER E-READINESS

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 [Danish 2006]. Customer readiness is also a combination of customer willingness and the 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?) [Meuter et al. 2005].

An overview of e-readiness definitions has been provided by [Lou 2010] 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 is 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 bare 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.

E-READINESS EVALUATION APPROACHES

In general, the level of readiness for accepting an innovation is worth considering from three viewpoints visualized in the Figure 1. Most of the e-readiness studies focus on the national and/or organizational (firm) level [Molla & Licker 2005; Lou et al. 2008; 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 1- Level of e-readiness assessment

At the 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 assessments, reports and rankings published for measuring e-readiness, make their assessment at macro level. It is recommended that alongside nationwide infrastructure development, business must pursue organizational and managerial development [Lou et al. 2008; Molla & Licker 2005]. The readiness of an industry hints at that of the group of competitors, suppliers, service providers and other beneficiaries that operate within that industry.

At the organizational levels, sources such as computers with the 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 [Lou et al. 2008; Molla & Licker 2005].

Successful implementation of e-commerce does not merely rely on the readiness of nation, industry and the organization that employs e-commerce but 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, etc. 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 [Odoyo & Nyangosi 2011].

AN OVERVIEW OF E-READINESS ASSESSMENT MODELS

Recently, 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 was often the product of different methodologies and divergent definitions of e-readiness. Hence, the results of the various studies were not consistent with each other. Nonetheless, every e-readiness assessment, report and ranking was mainly used as a benchmark for comparison purposes among nations [Lou 2010; Lou et al. 2008].

At the national level, the Economist Intelligence Units' rankings were commonly used [Meuter et al. 2005]. For instance, according to [EIU 2010], 65 countries were ranked in terms of e-readiness, among them, Iran stood at 59th position in 2005. In 2010, its rank was 69 out of 70 countries. This means that Iran was the least ready country to use e-commerce.

Also, there were remarkable studies at industry and organizational level [Lou 2010]. Recently [Yaghoubi et al. 2011] have introduced an analytic hierarchy process (AHP) methodology to measure e-readiness at the organizational level. It was proposed a research model for e-commerce readiness in developing countries based on organizational e-readiness perspective [Molla & Licker 2005].

It was 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 ([Lou 2010; Lou et al. 2008; Meuter et al. 2005; Walker et al. 2002; Lee et al., 2010]. 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. 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. 2005].

RESEARCH FRAMEWORK AND METHODOLOGY

The prime objective of the current research was to examine the factors affecting customer e-readiness to embrace e-insurance. For the sake of clarity and simplicity, we chose auto insurance as the area of interest and hence, we wanted to identify the factors influencing the e-readiness of the Iranian auto insurance customers to use the Internet for e-insurance.

We included the main factors of customer e-readiness by role clarity, motivation, and ability [Bitner et al. 2002; Meuter et al. 2005] and intention to trial use. Moreover, the two groups of factors affecting customer e-readiness were included to the proposed models.The Figure 2 showed the proposed research framework and the included factors.

The first group, on the right, comprised of age, education, income, image of technology and needs to interaction (human interaction). Need for interaction was defined as the importance of human interaction to the consumer in service encounters [Dabholkar & Bagozzi 2002]. Image of technology denotes on the customers' perception towards new innovation/technology [Meuter et al. 2005].

The second group of factors was shown on the left of the Figure 2. It consisted of perceived ease of use, perceived compatibility, relative advantage, tialiblity and perceived risk. Perceived ease of use defined by [Davis et al. 1989] as "the degree to which a person believes that using a particular system would enhance his job performance." Compatibility defined by [Rogers 2003, p. 240] as "the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters." Relative advantage is similar to perceived usefulness [Wu & Wang, 2005] defined by [Rogers 2003, p. 219] as "the degree to which an innovation is perceived as being better than the idea it supersedes." Trialability denoted on the degree to which an innovation may be tested with on a limited basis [Rogers 2003, p. 258]. Perceived risk defined by [Warkentin et al. 2002] as "the subjective expectation of suffering a loss in pursuit of desired outcome."

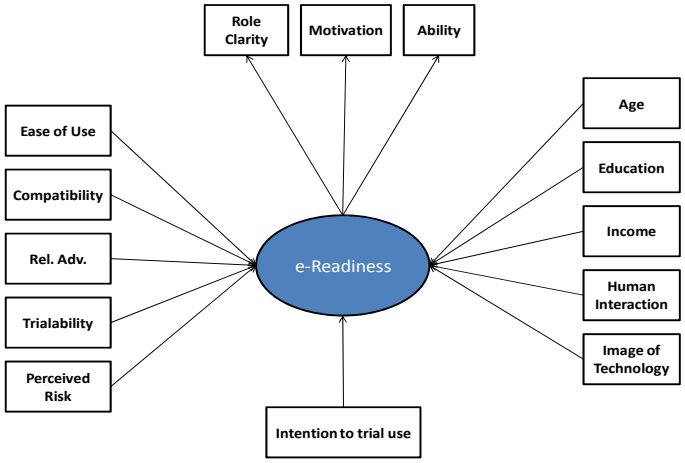

Figure 2- Research framework for customer e-readiness evaluation

By adopting a quantitative approach, we designed a questionnaire to collect the required information. To ensure of its validity and reliability, it passed through rigorous content, construct, convergent and validity, readability and reliability tests. For instance, through a pilot study (28 sample), we pre-tested the survey instrument for further insight and wording; hence ambiguous questions were clarified or deleted. All the procedure proposed by [Koufteros 1999] was followed to ensure research rigor and validity of the

results.
A few of 22 active Iranian insurance companies, offer only a very limited e-insurance products, such as fire, liability, life and auto insurance. Auto insurance, among other insurance products, is mandatory by law and all car owners must have, at least, the third party auto insurance; otherwise they will be stopped by the police. Only two insurers provided auto insurance policy online. Sina insurance company (sinainsurance.com) was the only e-auto insurance insurer and Mellat insurance co. (mellatinsurance.com) only offered a renewal possibility for the customer who has insured his/her automobiles at their company. Other insurers only provide a price quotation for auto insurance!

A random sample of 250 policyholders who recently (within the last 6 months) bought an auto insurance product was extracted from the two insurers' lists and contacted for their convenient time. We sent the questionnaires and asked them to fill in the questionnaires. Respondents were asked to express their degree of agreement on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaires were carefully examined for blank/missed responses. To increase the rate of responses, we kept in touch with them to forward the completed questionnaires. Finally 218 responses were accepted as valid responses for further analysis after removing a few erroneous and missing items. The data were coded and entered into SPSS and analyzed using AMOS ver. 20. A response rate of 87.2% is acceptable for this kind of investigation, which creates a foundation of getting reliable answers. We observed Cronbach's alpha of 0.81, for the reliability measure of the research. Finally, a Structural Equation Modeling (SEM) was used to test the proposed model.

ANALYSIS AND FINDINGS

The analysis of demographic characteristics of respondents reveals that 89.4% of them were men; 34.9% were less than 30 years old, 20.7% in 30-40 and 21.1% in 40-50 age group; 51.5% were graduated from university; and finally about 73% of them had a monthly income between 2.5 – 7.0 million IRR. Moreover, we found that for a trial purchasing of insurance products, about 84% of respondents were interested and almost 9% indicated a low interest to purchase auto insurance online.

We performed a Confirmatory Factor Analysis (CFA) to the proposed model. The CFA was fitted well over the proposed model and the results were not satisfactory. In fact, the fit statistics are $X^2_{(77)}$ = 137.91 (P-value= 0.004), GFI = 0.91, NFI=0.70, CFI=0.87 and RMSEA= 0.057). Therefore to reach a valid model, we tuned the research framework and re-specified the model by creating new connection between factors and removing not significant factor (say intention to trial use of e-insurance products), so that the satisfactory results were obtained. The key fit statistics showed a value of Chi (61df) = 62.95 (P-value=0.41, GFI of 0.94, NFI of 0.82, IFI, TLI, and CFI of 0.99 and RMSEA of 0.015 (PCLOSE 0f 0.93). These values indicated a good fit and the derived model was confirmed. The final model (with standardized estimated parameters) is shown in Figure 3.

Role clarity, customer ability and motivations were positively affected customer e-readiness which the factor loads were statistically significant. The role clarity played significant impact on customer e-readiness with a significant loading factor of 0.61. As more clear Internet usage procedure, the more role clarity will be perceived. Only 28% of

the respondents were not found the procedure well clarified.
The survey revealed that only 13% of respondents were not able to use Internet properly, and in contrast, almost 68% of them were well able to use Internet. That's why customer ability showed a direct effect of 0.50 on customer readiness to embrace e-insurance offers. The third item is customer motivation which showed a significant impact on e-readiness with .25 loading factor.

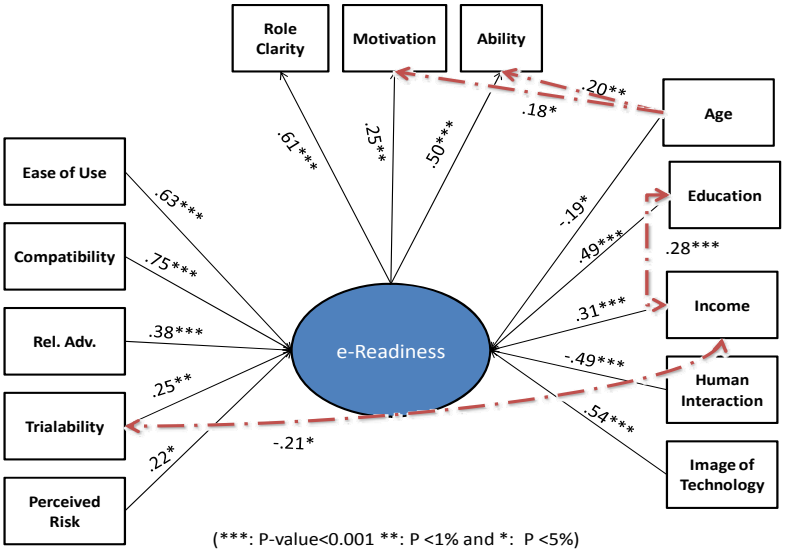

Figure 3- The re-specified customer e-readiness model

Age of respondents affected positively customer ability and motivation. The correlations among these factors are statistically meaningful and the connections are new to our proposed initial model. This meant that older respondents are able to use computer and the Internet and therefore, they showed high motivation toward new innovations.

Only two factors were negatively impacted customer e-readiness: Age and human interaction. As far as customers needed to interact with sales persons they would hesitate to embrace new innovations. On the other hand, as being older the customers, they will be more conservative and ultimately they will not easily adopt e-insurance. Moreover, education, income and image of technology positively impacted respondents on their e-readiness. Also, a positive and meaningful correlation between education and income revealed.

Probable concern on new technologies' security, due to non-positive news on the Internet hacks/attacks, created negative image among the respondents. 34% of respondents did not trust on new technology and they have a negative perception on that, in contrary 57% of the policy holders have not shown a negative image about new innovations. 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 25% of the respondents.

Perceived compatibility, risk, relative advantage, ease of use and trialibilty positively influenced customer e-readiness. A negative correlation between income and trialibilty was also realized. The impact of perceived compatibility on customer e-readiness was

found high and meaningful.
This meant that the respondents realized that the Internet is consistent with their needs. Ease of use also influenced customer e-readiness with high loading factor of 0.63. Any effort to make e-insurance more easier, the more customer e-readiness will be observed.

Intention to trial use (for the first time) for e-insurance was not significantly affected customer e-readiness (P-value=0.189) and therefore, it is eliminated from the final model to get better goodness-of-fit statistics.

CONCLUSION

Readiness can be studied from three point of views: readiness at national level, readiness at organization and company level and finally readiness at customer and market level. A proper exploiting from an e-commerce system needs high readiness at all those levels. We found that most researches/reports in e-readiness have been done from national and/or organizational perspective. A paucity of attention has been taken to customer e-readiness that is why we aimed at embarking on such study. We explored and examined the factors affecting on customer e-readiness.

The role clarity and ability showed high impact on customer e-readiness and customer motivation followed after these two important factors. As much as customer's knowledge and understanding of what to do (role clarity) and the skills to use the Internet (ability) increase, customer e-readiness will be significantly increased. Education level and the image of customers about technology showed a positive and significant impact on e-readiness. But, older people and human interacted customers were at low readiness to adopt e-insurance. Except intention to trial use, other factors (compatibility, ease of use, relative advantage, trialibility, and perceived risk) significantly influenced customer e-readiness.

For the managerial implication, we recommend that insurers not only invest on implementation of e-insurance and extension of product range, but also they should educate the insured by explaining the procedure what to do and how to use the Internet to purchase of e-insurance. As far as the procedure and using the website are perceived simple and easy to use, the e-readiness of customers will be ultimately increased.

This research was confronted with some limitation. First, we focused on auto insurance and then the generalization of the results to other insurance products required us to extend the study scope toward all insurance products. Second, we tried to get access to the master file of all policyholders (in particular, auto-insured customers) which are recoded and stored at central insurance of Iran, but we failed to persuade them to cooperate. To save time and cost, we used the lists of the two insurers which offer purchasing of auto insurance on their websites. It is recommended that future research in this area cover more insurers and compare the results. The development of the model presented in this article and the comparative study into private and public companies or even with other industries (say banking) opens up new horizons to insurance business firms.

REFERENCES

Alipour, M., Dorodi, H., and Pishgahi, Sh., (2011), "Feasibility Study of e-Insurance Services in Iranian Insurance Companies(Asia Insurance Co)", International Journal of Business and Social Science, Vol. 2, No.10.

Bitner, Mary Jo; Ostrom, Amy L.; and Meuter, Matthew L. (2002), "Implementing Successful Self-Service Technologies," Academy of Management Executive, 16 (4), 96-109.

Bromideh, Ali A., and Aarabi, Narjes, (2006), "The Impact of e-Commerce on the Iranian Insurance Companies," MSc. Dissertation, Lulea University of Technology (available at: http://epubl.ltu.se/1653-0187/2006/03/index-en.html, accessed on 12 Jan 12).

Dabholkar, P. and Bagozzi, R. P., (2002), "An Attitudinal Model of Technology-Based Self-Service: Moderating Effect of Consumer Traits and Situational Factors," Journal of the Academy of Marketing Science, vol. 30, 3, pp. 184-201.

Davis, F. D.; Bagozzi, R. P.; and Warshaw, P. R., (1989), "User acceptance of computer technology: A comparison of two theoretical models", Management Science 35: 982–1003.

EIU, (2010), "The e-readiness rankings 2010: The usage Imperative," Economist Intelligence Unit (EIU) Research Reports and IBM Institute for Business Value.

Grossman, Martin; McCarthy, Richard V; and Aronson, J E, (2004), "E-Commerce Adoption in the Insurance Industry," Issues in Information Systems, Vol. V, No. 2.

Koufteros, X., (1999), "Testing a model of pull production: A paradigm for manufacturing research using structural equation modeling," Journal of Operations Management, 17, 467-488.

Lee, H., Cho, H., Xu, W. and Fairhurst, A. (2010) "The Influence of Consumer Traits and Demographics on Intention to Use Retail Self-Service Checkouts," Marketing Intelligence and Planning, 28(1), pp.46-58.

Lou, E.C.W., (2010), "e-readiness: how ready are UK construction organizations to adopt IT," In: Egbu, C. (Ed) Proc. 26th Annual ARCOM Conference, 6-8 September 2010, Leeds, UK, Association of Researchers in Construction Management, 947-956.

Lou, E.C.W., Goulding, JS, and Alshawi, M, (2008), "Global e-Readiness – The alignment of National Policies to Organizational Strategies", 8th BuHu International Postgraduate Research Conference (IPGRC), Prague, Czech Republic, June 2008, 135-145.

Meuter, M., Bitner, M., Ostrom, A. and Brown, S., (2005), "Choosing Among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies", Journal of Marketing, 69, 61-83.

Molla, A and Licker, P. S., (2005), "Perceived E-readiness Factors in e-Commerce Adaption: An Empirical Investigation in a Developing Country," International Journal of Electronic Commerce, 10(1), 83-110.

Odoyo, F.S. and Nyangosi, R. (2011), "e-Insurance: An Empirical Study of Perceived Benefits," International Journal of Business and Social Science, Vol. 2 No. 21, Special Issue – November.

Rogers, E. M.,(2003), "Diffusion of Innovations," (5th ed.), New York: Free Press.

Walker, RH.; Craig-Lees, M.; Hecker, R.; and Francis H., (2002), "Technology-Enabled Service Delivery: An Investigation of Reasons Affecting Customer Adoption and

Rejection", International Journal of Service Industry Management, 13 (1): 91-106.
Warkentin, Merrill, David Gefen, Pavlos Pavlou, and Greg Rose. (2002), "Encouraging Citizen Adoption of eGovernment by Building Trust," electronic Markets: the International Journal of Electronic Commerce & Business Media, Vol. 12, No. 3, pp. 157-162.
Wu, J., and Wang, S., (2005), "What drives mobile commerce? An empirical evaluation of the revised technology acceptance model," Information & Management, 42(5), 719-729.
Yaghoubi, N.M., Fallah Tafti, S., and Hazrati, M. (2011), "E-readiness Measurement through Fuzzy Analytical Hierarchy Process (FAHP) Case Study: Tehran Stock Exchange," Australian Journal of Basic and Applied Sciences, 5(3): 436-441.
Zhu, K., Kraemer, K. L. and Xu, S., (2002), "A Cross Country Study of Electronic Business Adoption Using the Technology-Organization-Environment Framework", the 23rd International Conference on Information Systems (ICIS).