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Technology of e-banking: perspective of costumers' perceived risk and uncertainty

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Abstract

The topic of perceived risk and uncertainty helps in facilitating the perception of consumers' attitude toward marketers. The main aim of this study is to explore the effect of consumers' perception of risk and uncertainty on the rate of using internet banking as a new service and enhancing knowledge scope in this area. Examined risk and uncertainty includes 13 dimensions of security risk, financial risk, operational risk, psychological risk, time risk, social risk, consequences uncertainty, information uncertainty, knowledge uncertainty, choice uncertainty, brand uncertainty, needs uncertainty, and post purchase uncertainty. Regression analysis and multiple regression techniques have been employed for theory analysis. Statistical tests indicate that risk and uncertainty components have negative significant relationship with the rate of internet banking usage. Multiple regression analysis indicates that of 13 dimensions being explored, four dimensions of uncertainty of choice uncertainty, psychological risk, uncertainty about results and operational risk could fully explain 0.709 of variations in dependent variable of rate of internet banking usage. Meanwhile the selection dimension alone could explain 0.54 of internet banking usage variable.

Keywords: Consumer Behavior, Perceived Risk, Perceived Uncertainty, Internet Banking.

Introduction

Several researches show that the rate of accepting, using and leaving a goods/ services (particularly creative goods and services) are affected by perceptions, thoughts, and feelings which consumer faced during purchasing procedure (Mostafavi, 2005; Simcock *et al.,* 2006). Moreover, studies had proven that one of the important and outstanding perceived cases is customers' risks and uncertainties which they perceived during purchasing situation (Gerrard & Cunningham, 2006; Boshoff & Ward, 2011). The issue of perceived risk and uncertainty has been there in many experimental studies during 4 past decades (Nena, 2003).

In some majors like economics, psychology, statistical decision making theory, and game theory, the concept of risk and uncertainty is related to selection conditions which is along with probable positive results (profit or victory) and negative outcomes (loss or defeat). But, the attention is focused on probable negative results (loss or defeat) while studying consumers' behaviors (Hofstede, 2001). Therefore, the concept of risk is different in marketing major comparing with the other majors. When the purchasing behavior is studied as conscious behavior, there will be no doubt that the result of a purchasing decision is to fulfill a need as positive results are expected. Thus, if a negative consequence will appear in purchasing situations, no hope may exist for accessing the desired level (Stone & Gronhaug, 1993). Research identifies different dimensions of risk and uncertainty conditions in relation with goods and services. Regarding the e-banking as a modern service, the identified risk and uncertainty dimensions are as the followings: security risk (Gebauer & Kline, 2011), financial risk (Parasuraman & Grewal, 2000), operational risk (Fang *et al.,* 2011), time risk (Sridhar, 2007), social risk (Almousa, 2011), psychological risk (Klerck & Sweeney, 2007), consequence uncertainty (Agumya & Hunter, 1999), information uncertainty (Belkhamza and Wafa, 2009), knowledge uncertainty (Hong, 2006), choice uncertainty (Sokolowska, 2006), brand uncertainty (Amit *et al.,* 1995), needs uncertainty (Garratt, 2007), and post purchase uncertainty (Price & Dawar, 2002). The present research is going to study the relation of the rate of e-banking and these dimensions.

Statement of the problem

Nowadays regarding the age of new technologies in processing and transferring data, new methods are introduced for presenting mentioned services and new economy is influenced by electronic revolution, computers, computerized networks (Dabholkar, 1995; Andriy, 2001). On the other hand, several researches had introduced the idea of give and take (trade) in market-space instead of traditional trade in market-place (Rayport & Sviokla, 1995) and banks were not exception as they can facilitate trade procedure digitally in the ritual space along even by a more significant role (Laukkanen & Cruz, 2008). Unfortunately in Iran, the statistics show that the lack of complete use of ritual space for presenting online services signifies that less than 40 % of ATM holders use internet shopping as only 5.5 % of customers of a big bank like Saderat use internet services (DTB, 2011).

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A direct relation exists between customers' orientation, acceptance, and using electronic bank services as internet banking and their perception of the features of the desirable service (Bauer, 1960). There are factors about using internet methods for receiving banking services by customers which may cause their concern and problems and create situations proper for risk and uncertainty for them. The rate of using this channel will affect servicing (TELNA, 2011). Some cases like expensive internet and wasting time for performing bank operations may cause the mentioned problem (Gerrard, 2006). Destructive internet attacks like billion theft of hackers and hacking of banks websites, the lack of social components like trust, unity and responsibility in the internet world (Li, 2011), inability of users in tracing transaction, lack of knowledge and mastery, the lack of trust and reliance in presented information and document in the ritual space than the real space (Ameli, 2001), negative self-perception about creative phenomenon and uncertainty in brand and reputation of institute, the feeling no need for this channel to access services, the post purchasing anxiety due to various reasons like the lack of legal supports or insurance coverage and so on are of the related issues (Littler & Melanthiou, 2006).

Importance and objectives of the study

Regarding the expanding procedure of development of information technology and electronic trade and the role of internet all over the world and Iran too, it can be concluded that paying attention to this issue and planning is an inevitable and necessary fact. Since a good and proper planning is in association with accurate understanding of problems and obstacles in one hand and the understanding of resources and potentialities on the other hand, the identification of risks and uncertainties in using internet banking seems to be significant and necessary. Regarding the expansion of markets and increasing customers' needs, the allocation of banks priorities to electronic banks in order to meet competition and the increase of market portion and added value of presenting these services for banks, the positive relation between the continuity of customers' relation and their perception of trust, it can be concluded that the understanding of customers' perceived risk and uncertainty and managing them in order to decrease risk and ensure the reliability would be a necessity and important need (Mitchell & Boustani, 1994).

The present era is the age of knowledge and information and information technology is the first priority in it. One of the most important applications of information technology is relating to e-banking which has many fruitful merits for both banks and customers. In this paper, the major aim is to "study and increase the cognitive domain about the effects of consumers' perception of risk and uncertainty on the rate of their use of electronic banking as a modern service".

Perceived risk and perceived uncertainty

Raymond A. Bauer (1964) entered the concept of perception of risk in the researches of consumer's behavior for the first time in 1964. He confirmed that consumer's behavior is related to risk in which every action from his/her side will have an unpleasant consequence for him/her (Mitchell, 1999). An individual often is able to predict only some probable consequences due to her/his cognitive limitations. Dowling and Staelin (1994) indicated some situations in which consumers' behavior while purchase is faced with uncertainty than risk too. The difference between risk and uncertainty words in researches related to consumers' behavior wiped out gradually as they used interchangeably (Stone & Gronhaug, 1993). Several researches were carried out in last thirty five years concentrating on perceived risk and uncertainty of goods and services in which the following table would signifies a part of these studies:

E-Banking

From 1994 upwards, banks have begun exploration in internet in order to use internet as a recommended system of delivery for their products and services in internet banking. Web technology has aided banks to preset a person-oriented and new service for their customers (Kim & Prabhakar, 2000; Hennigs *et al.,* 2010; Li, 2011). The most important merit of internet banking is to decrease the expenses for banks in which it increases the possibility of accessing bank services for customers via penetrating into new markets (Lai & Li, 2005; Lee, 2008; Kim *et al.,* 2009; Yousafza *et al.,* 2009). Till January 1995, only 24 banks were on internet network. In spite of the fact, 800 other banks were added on year later. At first, banks' websites were limited to those cases which were on their advertising brochures but they expand and develop their websites for transferring resources, bills, mortgages, automatic facilities, insurance products, trade security and so on. This fact has aided the banks to compete with non-banking institutes indirectly. SFNB which was the first real internet bank and was inaugurated in October 18th 1995 in order to perform trade issues, open the path for internet banking. Nowadays, lots of banks all over the world apply electronic services as a means for developing market, improving service to customer, decreasing expenses and upgrading productivity and efficiency (SeyyedJavadin & Yazdani, 2005).

*The dimensions of customers' perceived risk and uncertainty from E-Banking services: Financial risk***:** It refers to consumers' concern about how much certain money should be paid for how much goods and services and the fact that if a goods or service does not work properly, how much certain money will be wasted. Moreover, additional expenses which happen in purchasing (like the expense of learning new technology, etc) can be considered as a part of financial risk (Mitchell, 1998; Parasuraman & Grewal, 2000).

*Security risk***:** It refers to the most serious and probable loss from electronic banking. The fear of

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stealing and accessing other people to one's financial details and every kind of monetary transfer or withdrawal from a one's private account are due to insecurity of the network (Mintel, 2000; Gebauer & Kline, 2011). Cases such as internet theft, hacking bank sites can provide this risk too (Littler & Melanthiou, 2006).

*Operational risk***:** It signifies that a product does not perform its task as it is expected and thus it cannot provide given promise (Mitchell & Harris, 2005; Fang *et al.*, 2011). Several factors may be comprehend as the harmful operational effects via internet like: website efficacy such as download speed and time of the movement of web pages, the lack of justification in presented services to customers' needs and so on (Littler & Melanthiou, 2006).

*Social risk***:** Social risk is generated from families' and friend's thought about customer's weak or improper choice (Mitchell, 1998; Almousa, 2011). The social fame of a consumer from electronic banking may be affected by the perceptions of family or friends or counterparts as it can decrease or increase the intensity of individual's perception (Littler and Melanthiou, 2006).

*Psychological risk***:** This risk signifies that customer's self-perception may be affected by e-banking negatively (Littler & Melanthiou, 2006; Klerck & Sweeney, 2007). This risk can be referred to an individual feeling about the purchased product which does not have a good mark or the disproportion of product with person's perception.

*Time risk***:** Time risk points out the needed time for purchasing a product or the time which is wasted due to product fall (Mitchell & Harris, 2005; Sridhar, 2007). Standing in queue and waiting for accessing the product are another issues as far as the services are concerned (Sally, 2006). Wasted time for removing communicational errors, continuous breaks or low speed of explorer can be considered for electronic banking (Littler & Melanthiou, 2006).

*Choice uncertainty***:** Uncertainty in selection or choice uncertainty refers to consumer's decision making for performing deals when the dominant condition on consumer's choice (like goods variety and price/ service replacement), a criterion which a person use to evaluate supplied products (services) and time value are considered. Personal traits are the most important determiners of these concerns (Mitchell & Boustani, 1994; Sokolowska, 2006).

*Brand and reputation uncertainty***:** Customer's perception of brand and good reputation of institute in comparison with other sellers in ritual condition, the perceived validity or other aspects of accessible brand may create uncertainty in the customer's mind for online purchasing of goods or services (Amit *et al.*, 1995; Ghosh & Chakraborty, 1995).

*Needs uncertainty***:** Customer's mental perplexity while choosing a special channel and consumer's psychological dependence and trust in the traditional method, the lack of understanding significant difference and macro savings of a new technology and this perception that whether a person's need will be provided really or not would provide uncertainty situation for fulfilling a need (Garratt, 2007; Littler & Melanthiou, 2006).

*Uncertainty of information***:** The level of accessing resources and all types of required information for selection and using a goods/ service ensure customer's trust in the information. In electronic banking, obtaining information about security, type of communications, the method fulfilling a need and the sources of obtaining information (like clerk in traditional banking) are the sources of uncertainty for an individual (Littler & Melanthiou, 2006; Belkhamza & Wafa, 2009).

*Knowledge uncertainty***:** Having a relevant (fundamental) knowledge is one of the important necessities for selecting, using and decreasing uncertainty about proper selection of a goods/service. This important issue is more important about technological goods/service. Regarding purchasing online services, knowledge of computer, ritual communication, required services and so on are very important and vital (Hong, 2006; Littler & Melanthiou, 2006).

*Consequence uncertainty***:** Understanding the procedure of operation and relevant test of result validity in each stage of self-services, inflexibility of designed system, inaccessibility of information about e-banking, good reputation of internet banking is of cases which may lead to uncertainty that is going on till the final stage of purchasing the service and its outcomes (Agumya & Hunter, 1999; Littler & Melanthiou, 2006).

*Post purchase uncertainty***:** The perception of the lack of fulfillment for a customer through using a product, confusing world of advertisement, the inclusive presentation of a product by a supplier, the weakness in regulations and so on leaded to understanding customer's anxiety after purchasing a product or service. Considering services, their special features like infeasibility, inseparability, immeasurability, and so on intensify this uncertainty in which the stress of atmosphere for presenting services and new technology can be added (Price & Dawar, 2002; Littler & Melanthiou, 2006).

Research hypotheses

Hypothesis 1: there is a meaningful negative relation between consumers' perceived financial risk and the use of e-banking.

Hypothesis 2: there is a meaningful negative relation between consumers' perceived operational risk and the use of e-banking.

Hypothesis 3: there is a meaningful negative relation between consumers' perceived social risk and the use of e-banking.

Hypothesis 4: there is a meaningful negative relation between consumers' perceived time risk and the use of e-banking.

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Hypothesis 5: there is a meaningful negative relation between consumers' perceived psychological risk and the use of e-banking.
Hypothesis 6: there is a meaningful negative relation between consumers' perceived security risk and the use of e-banking.
Hypothesis 7: there is a meaningful negative relation between perceived knowledge uncertainty and the use of e-banking.
Hypothesis 8: there is a meaningful negative relation between perceived information uncertainty and the use of e-banking.
Hypothesis 9: there is a meaningful negative relation between perceived needs uncertainty and the use of e-banking.
Hypothesis 10: there is a meaningful negative relation between perceived brand uncertainty and the use of e-banking.
Hypothesis 11: there is a meaningful negative relation between perceived post purchase uncertainty and the use of e-banking.
Hypothesis 12: there is a meaningful negative relation between consequence uncertainty and the use of e-banking.
Hypothesis 13: there is a meaningful negative relation between perceived choice uncertainty and the use of e-banking.

Research methodology

The present research is applied as far as the aim is concerned (Yin, 2003) and it is descriptive as far as the method of data collection (research design) is concerned which is carried out as a field study (Kumar, 2005). The tool of collecting data is questionnaire. SPSS18 software is used for analyzing and designing methods of descriptive statistics of the collected data and correlation coefficient analytical method along with multiple regression method (Kumar, 2005) are used for testing and analyzing the hypotheses. Since dependent and independent variables are distanced in the measurement level, Pearson coefficient is used accordingly.

The research statistical population includes all present customers in all branches of Saderat bank in Mashhad city who their bank information profile in are available. In this research, the researcher made use of class and cluster sampling method appropriate for the sample size. Therefore, two branches were selected in each one of nine-lateral domains of Mashhad city randomly. Totally, questionnaires distributed among 18 branches (based on the density of the number of customers).

The researcher made use of the standard formula (Fig.1) for determining the sample size in which *z* is the standard distribution statistics that equals 1.96 by 95% Confidence level (Kumar, 2005). Moreover, *p* is the probable success, (*1-p*) is the probable defeat and e is the standard error rate. In this research, the probability of success and defeat were considered by precautionary method equals 50% and *e* equals 7% too.

Fig.1. Sampling method

$$n = \frac{Z^2_{\alpha/2}.p.(1-p)}{e^2} \Rightarrow n = \frac{1.96^2.0/5.(1-0/5)}{0/07^2} = 196$$

of 300 questionnaires which distributed among customers, 236 questionnaires were completed and returned in which 200 questionnaires were selected after omitting improper ones. The questionnaires were reviewed by some distinct professors, experts of marketing and banking modern services and operational managers In order to prove the validity. The Cronbach Alpha method was used for testing reliability of questionnaires too. The Cronbach Alpha of each variable is depicted in table 2. The total Cronbach Alpha of questionnaires was 0.949 which signified that the questionnaire has a high internal validity.

Research findings

At first, the researcher takes a glimpse on the characteristics of the sample. 41 persons of 200 respondents were female and the rest means 159 persons were male. Regarding the distribution of education, the respondents were the holder of different degrees such as: 15.5 % below diploma, 25.5 % diploma, 18.5 % above diploma, 33.5 % B.A, 4.5 % M.A and 2.5 % Ph.D. and above. Considering the type of job or trade, the respondents were in association with different trades and jobs as the followings; 22.5 % financial services (insurance and bank), 20.5 % other services, 6 % firms, 7 % civil and engineering, 22.5 % part and whole sales, 4.5 % legal, 3 % transportation, 2.5 % physicians, 2 % imports and exports and 9.5 % other trades. Regarding job ranking, the respondents have different jobs and ranks such as; 13 % workers, 30 % clerks, 4.5 % adaptor and experts, 20.5 % managers, 2 % pensioners, 19.5 % salespersons, 2.5 % housekeepers, and 8 % other occupations. The distribution of the research dependent variable shows that about 60 percent of people do not use internet banking or its presented services or rarely use this channel. 21% of people sometimes make use of internet banking and only 19 % of people often or always use e-banking for receiving the above services. Moreover, the results of Pearson correlation test between the dimensions of the perceived risk and uncertainty and the use of electronic banking are depicted in the Table 3.

Since the dimensions of the perceived risk and uncertainty are considered as a perceptive pack, the researcher made use of multilateral regression analysis for increasing the exploratory power of dimensions. The essence of these two methods is based on this factor that variables in determining dependent variables are measured along with each other and these variables are recognized from those variables which play a special meaningful role in increasing the determination of variance by calculating correlative co-efficiencies. Table 4 shows the results of multilateral regression analysis.

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Table 1. The history of carried out researches about perceived risk and uncertainty

Theory/Research	Case/ Field of Study	Results	Reference
Risk enters the behaviorist concepts	Role of information, trade mark, trust in purchase	Consumers' behavior is in relation with risk.	Bauer (1960)
Presenting the components of perceiving risk	Presenting the model of the components of perceived risk and its measurement	Risk has two components: 1. The probability of accruing negative results, 2, the importance of negative results	Cunningham (1967)
Determining and studying effect factors on risk and perceiving dangers	Effective factors on perceived risk and simulative factors of risk from mouth brand acceptances	Eleven factors were determined: time, purchasing situation, the type of perceived shortage, purchasing, mental picture of brand, mental picture of shop, free samples, the word mouth, government's supervision and attention,	Roselius (1971)
Identifying the dimensions of risk	The study of perceiving risk for 12 products	Determining and designing 61.5 % of total risk changes by five dimensions of risk including financial, physical, psychological, social and operational	Jacoby & Kaplan (1972)
Studying the nature and dimensions of risk	class of products: private writing appliances, grass cutting instrument, color TV	The perceiving risk should be studied multi dimensionally and with regards to the special class of goods or service.	Zikmund & Scott (1973)
Generalizing the concept of innate and inhibited risk in consumers' behavior	Studying brands and risk reduction methods	Costumers think about perceived risk or about a concept of importance and probable results and determining risk of product class and the risk of certain product	Dowling & Steilin (1994)
Predicting the rate of the acceptance of e-services: (presenting services through internet)	Special dimensions of risk and three other variables are included in the model: perceiving of being beneficial, perceiving of user's ease and acceptance intention	The positive relation of seven variables of risk on risk perceiving and the negative relation of usefulness, ease and acceptance intention and the positive perceiving of user's ease on acceptance intention and perceiving usefulness, were accepted and confirmed.	Featherman & Pavolou (2002)
Perceived risk as an obstacle for the application of internet in electronic trade	The mutual effects of personality factors and behavioral factors on the elements of risk perceiving (stealing of credit card and exposing private information) were studied.	Users in contrast with non-users, women in contrast with men, old people in contrast with young, married people in contrast with single people, less educated people in contrast with high educated ones received higher risks and the negative relation of using rate and the perceived risk is accepted and confirmed.	Liberman & Eshtavski (2002)
The study of the importance of perceives from consumers' risk in applying strategies of part sale	Two different levels of risk were included: brand level and selecting shop. The positive and negative features were extracted according to costumers' viewpoint and based on instrument-target chain model.	A) The importance of target chain, B) major negative stimuli of selecting shop which are related to tangible and non-tangible features. C) Determining risk stimuli related to shop characteristics and behavioral consequences of purchasing.	Mitchel & Harris (2005)
Studying perceived risk and uncertainty of consumers on the behavior of purchasing services, e-banking case.	Six factors of risk and seven factors of uncertainty were identified: financial, operational, security, time, social, psychological risks and result, information, knowledge, choice, brand, needs, post purchase uncertainties.	The effects of all factors were accepted and confirmed. The perceived uncertainties on consumers' behavior are more effective among all. Obtaining information, chopping experience and learning and creating a proper condition can decrease the consumers' skepticism to a large extent.	Littler & Melanthiou (2006)

Table 2. The Obtained cronbach alpha coefficients for each variable

Variable	Alpha	Variable	Alpha
Financial	0.89	consequence	0.86
Operational	0.83	Knowledge	0.88
Choice	0.87	Information	0.87
Social	0.80	Needs	0.77
Time	0.80	Brand	0.90
Psychological	0.89	Security	0.88
Post purchase	0.82		

The multi-variable regression analysis for determining the rate of using internet banking shows that four variables of total 13 variables including choice uncertainty, psychological risk, consequence uncertainty and operational risk entered the equation in which they could determine 0.709 percent of changes in the dependent variable. Meanwhile, the choice or selection dimension could determine 0.546 percent of variables of using internet banking solely. Regarding the fact that 70.9 percent of the variance of the rate of using internet banking are determined by these variables, $1\text{-}R^2$= 29.1 % of the variance of the dependent variable is not analyzed by our variables. Totally, the obtained determination coefficient shows that the regression equation for

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Table 3. The rate of correlation between risk dimensions and uncertainty and the rate of using e-banking

Path		Correlation	Path		Correlation
Financial	E-Banking	-0.599	Knowledge	E-Banking	-0.701
Security	E-Banking	-0.613	Information	E-Banking	-0.666
Social	E-Banking	-0.367	Postpurchase	E-Banking	-0.689
Psychological	E-Banking	-0.722	Need	E-Banking	-0.513
Operational	E-Banking	-0.512	choice	E-Banking	-0.734
Time	E-Banking	-0.634	consequence	E-Banking	-0.703
Brand	E-Banking	-0.390			

Table 4. Main elements of multivariable analysis by multilateral regression method

Model	Variables	R	R^2	R^2 Reformed	Standard Error of Test
1	Choice Uncertainty	0.745	0.546	0.542	3.709
2	Psychological risk	0.811	0.658	0.650	3.136
3	Consequence Uncertainty	0.831	0.690	0.680	2.999
4	Operational risk	0.842	0.709	0.696	2.924

predicting dependent variable possesses a good power of prediction. The Table 5 shows a meaningful depiction of the amount of multilateral correlative coefficient square. Moreover, R^2 is confirmed and accepted in ANOVA and F-test tables.

In addition, Table 6 shows the chart of major elements of regression equation. Statistical indexes for determining internal variables of regression equation like regression coefficient (b) for raw scores and β for standardized scores can be observed I this table as well as the T test outcomes.

Regarding the results of the above table, the obtained multi variable regression equation for predicting dependent variable which has four major variable would be as the followings:

$Y=25.362-(0.551).x_1-(0.339).x_2-(0.451).x_3-(0.290).x_4$

In which:

Y; The score of predicting the rate of using internet banking

X_1; Choice uncertainty

X_2; Psychological risk

X_3; Consequence uncertainty

X_4; Operational risk

Table 7 shows the independent variables which had not entered into equation in the fourth stage. T-test for partial correlation of variables out of the equation with dependent variable (the rate of using internet banking) shows the fact that no one of these variables could not add a significant amount to R^2. In the other words, the added amount of these variables was not in the minimum level of difficulty and could not enter the equation.

Table 5. ANOVA result from regression for meaningfulness test

Model		Total Square	Freedom Degree	Mean Square	F	Sig.
Total Remained Regression	1	1430.888 1241.602 95	1 94 2672.490	1430.888 13.209	108.331	0.000
	2	1757.777 914.712 2672.490	2 93 95	878.889 9.836	89.358	0.000
	3	1844.978 827.511 2672.490	3 92 95	614.993 8.995	68.373	0.020
	4	1894.252 778.237 2672.490	4 91 95	473.563 8.558	55.374	0.003

Conclusion and recommendations

Hennigs *et al.* (2010) studied the interplay between consumers' individual risk orientation (e.g., risk averseness, innovativeness) and the different risk perception aspects (i.e., financial, functional, individual, and social) that are supposed to influence the attitude towards and usage of online banking. On the other hand Yousafza *et al.* (2009) have achieved these results that trust in internet banking have Multi-dimensional role on risk perception aspects. Influence of different risk perception aspects on internet banking has been showed in other researches (Lee, 2008; Kim *et al.,* 2009; Kim & Prabhakar, 2000; Gebauer & Kline, 2011). This studying attempt to show the relationship between perceived risks and internet banking based on past researches and field research in Iran.

Following the development in using communications and electronic devices as well as cultural revolution in association with paying attention to the aims of electronic government and increasing individual's dependences to internet banking, the necessity of learning and using internet banking as the most electronic channel of presenting bank services in Iran is completely tangible. This research is going to study the relation of the rate of using internet banking with certain dimensions along with increasing the domain of understanding concerns and the dimensions of consumers' risk and uncertainty in using internet banking channels for receiving service.

The descriptive data received from the respondents shown that 79.5 % of them were male and the rest means 20.5 % are female and 59 % were university degree holders. The occupation like clerks, managers, salesmen had the maximum frequency among all as their dominant jobs or trades were part or whole sales (businessmen), financial (insurance and bank) and services. In addition, the level of using internet banking as the modern channel of servicing by sample people is very lover that the expected indexes. The people's perceived risk and uncertainty along with other challenging cases of accepting new technology and using a modern goods/service are considered by many researchers and rhetoricians of consumers' behavior in which this factor can be considered as one of the most important reasons for the lack of the expected

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Table 6. Parameter calculations (main elements of regression equation)

Model		Non-Standard Coefficients		Standard Coefficients	T	Sig.
		B	Standard Error B	Beta		
1	Constant Factor (α)	22.015	.025		21.484	0.000
	Choice Uncertainty	-1.267	0.122	-0.732	-10.408	0.000
2	Constant Factor (α)	23.703	0.931		25.447	0.000
	Choice Uncertainty	-0.899	0.123	-0.519	-7.312	0.000
	Psychological Risk	-0.475	0.082	-0.409	-5.765	0.000
3	Constant Factor (α)	24.218	0.906		26.731	0.000
	Choice Uncertainty	-0.621	0.148	-0.359	-4.210	0.000
	Psychological Risk	-0.384	0.084	-0.330	-4.561	0.000
	Consequence Uncertainty	-0.488	0.157	-0.279	-3.114	0.002
4	Constant Factor (α)	25.362	1.004		25.267	0.000
	Choice Uncertainty	-0.551	0.147	-0.318	-3.748	0.000
	Psychological Risk	-0.339	0.084	-0.292	-4.028	0.000
	Consequence Uncertainty	-0.451	0.153	0.258	-2.942	0.004
	Operational Risk	-0.290	0.121	-0.161	-2.400	0.018

using of internet banking in the understudied sample.

The interpretive data obtained via the calculations of Pearson correlative coefficient shown that there is a negative meaningful correlation between the components of perception of risk and uncertainty and the rate of using internet banking as the researcher can accept all acclaimed hypotheses. The rate of using internet banking shown a weaker negative relation with some dimensions such as brand uncertainty, needs uncertainty and social risk and shown a stronger negative relation with some dimension like choice uncertainty, consequence uncertainty, knowledge uncertainty, and psychological risk. Regarding the negative and rather weak relation between brand dimension and the rate of using internet banking, it can be concluded that though the understudied organization could not remove this problem and concern, but it could have a rather acceptable reputation and validity in the minds of its customers considering the presenting of modern services. The rather weak and negative relation between social risk and the rate of using internet banking shown the rather high social class and desirability of users for this channel among friends, coworkers and family and so on.

There is no strong relation between the perceived needs uncertainty dimension and the rate of using internet banking signified that consumers accept the primary channel of modern servicing. consumers have felt the need of using internet banking but the rather strong relation of choice uncertainty and internet banking shown their skepticism towards this channel in the decision making stage. The researcher can count some factors like an orientation towards tradition, the replacing channels, less knowledge and several other factors which may be responsible for people's doubt for choosing a goods/service. Consequence uncertainty, knowledge uncertainty, information uncertainty, and psychological risk which have a rather high positive correlation with choice uncertainty can be considered as factors responsible for intensifying doubt and orientation towards the other channels.

Table 7. The elements of variables out of the equation in the fourth stage

Stage 4 Model	Partial Coefficient	Beta	T	Sig.
Financial Risk	-0.041	-0.027	-0.386	0.700
Security Risk	-0.065	-0.050	-0.651	0.540
Social Risk	-0.196	-0.110	-1.898	0.061
Time Risk	-0.113	-0.076	-1.081	0.283
Brand Uncertainty	-0.164	-0.108	-1.579	0.118
Knowledge Uncertainty	-0.084	-0.063	-0.798	0.427
Information Uncertainty	-0.137	-0.100	-1.309	0.194
Post Purchase Uncertainty	0.047	0.039	0.445	0.658
Needs Uncertainty	0.157	-0.105	-1.510	0.135

While independent studying of the factors, the above results may be concluded, but the positive relation between risk dimensions and uncertainty with each other can signify the meaningful interaction and effect of risk dimension and uncertainty on each other. To do so, the multilateral regression analysis was used. Entering risk dimensions and peoples perceived uncertainty for determining dependent variable of the rate of using internet banking shown that four variables of thirteen independent variables of the research model means choice uncertainty, psychological risk, consequence uncertainty, operational risk which had entered the equation, could determine 0.709 percent of the dependent variable of the rate of using internet banking successfully. Meanwhile, choice dimension could determine 0.535 percent of using internet banking variable solely. Choice uncertainty as the most effective variable in the rate for using internet banking signifies that the change in technology and consequently change in customers' needs make the choosing of the channel for receiving bank services challenging for them and as the level of mental perplexity of consumers for choosing the channel for internet banking services as self-service had been increased.

Regarding the meaningful negative relation between the risk dimensions and uncertainty and the rate of using internet banking, it is suggested that this perceptive obstacle along with other accepting obstacle and the use of creative services should be focused specially. Considering the fact that the most important problematic factor is customers' choice uncertainty, it is recommended that special attention should be paid to the procedure of decision making and the selection of

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modern services by customers. With regards to the fact that psychological risk plays an important role in the rate of using internet banking while it itself has complex dimensions which affects the other risk and uncertainty dimensions directly or indirectly, it is suggested that special planning should be carried out along with studying the degrees of people's risk takings in order to decrease this risk. Regarding the strong relation between knowledge uncertainty and choice uncertainty, it is suggested that the gate of decreasing these concerns should be opened by establishing appropriate opportunities for teaching such as computer knowledge, economic and banking knowledge, internet and communication knowledge, and so on (in organization itself, customers and society).

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