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Effects of Perceived Risks of Internet Banking on Customer Loyalty

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ABSTRACT

Nowadays there are a lot of concerns about the impact of perceived risk of Internet banking on the loyalty of its customers. Regarding to the current era, keeping customers is of great significance. The main objective of this study is to evaluate the impact of perceived risk of internet banking on customer loyalty through customer. This study examines the effect of time risk, financial, performance, social security and privacy of customer satisfaction. The present Research is descriptive - survey and the population in this study are customers of Melli(national) and Mellat(people) Banks in Kermanshah selected using cluster sampling. The results suggest that the risk of financial, performance, social security and privacy customer satisfaction is reduced. Then we can conclude that the increase in the perceived risks of Internet banking leads to reduce customer loyalty.

KEYWORDS: online banking, internet banking risks, customer satisfaction, customer trust, loyalty and commitment in a relationship.

INTRODUCTION

Today keeping and strengthen customer loyalty for companies that are concerned with the preservation and development of their competitive position in the market is a strategic challenge and companies spend the cost of acquisition strategies for understanding this concept and applying it to boost its performances (Namin Tajzadeh, 2010, p 2).

The most appropriate strategy useful for bank is customers' loyalty. In fact it can be said that banking foundation is the customer. In today marketing, the cost of losing a customer equals to lose interest of service to the customer needs in his lifetime (Venus and Safaeian, 2004, p 37). The emergence of electronic commerce and the growing trend of global as well as the formation and development of new electronic banking and methods of increasing monetary transactions has increased the probability of failure in the banking system of a country and expand risks of it to other countries which could jeoperdize financial stability at the international level. Therefore the risks and how to manage the electronic banking are particularly concerned authorities. It is therefore necessary to provide the appropriate infrastructure for further expansion of commerce and electronic banking and how to manage the risks of electronic banking should be considered as well (Kahzad, 2005, p 142).

The life of the word electronic banking in the world is less than two decades. Internet banking is a branch of electronic banking in which the customer is allowed to use the Internet with a website designed by the banks and use a wide range of banking services such as money transfer, bill payment and balance information, services of investments and check (Khedmat Gozar and et al, 2010, p 50).

The benefits of e-banking can be considered in two aspects; customers and financial institutions. Of the costumers' perspective, they can save money, time and access to multiple channels for banking operations and from the perspective of financial institutions can be mentioned features such as creation and enhancement of renowned banks, creating opportunities to search for customers in the markets, the establishment of geographic activity and perfect competition (Yaghoobi and AliZadeh, 2006, p. 229-227).

One of the concepts that have been used in the study of customer behavior is the perceived risk of the customer. Researchers of customer behavior, often define perceived risks as the customer's perception about uncertainty and the potential adverse consequences of buying a product or service. Many studies have shown that customers understand different shapes or sizes of risk. The predictive value of each of these dimensions of risk and reducing behavior is dependent on the class or service of a product. If we consider buying a spot as a short-term relationship between buyer and seller, certainly aspects of perceived risk in Internet banking which is a long-term relationship will see a more complex character which needs to be surveyed more accurately(Khedmat Gozar and et al, 2010;

Variables such as perceived risks of online banking customers have been examined, including financial risk, performance risk, social risk, time risk, security risk, privacy risk, physical risk, psychological risk. According to the

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mentioned issues and the impact of internet banking on customer loyalty and perceived risks, this paper is to examine the relationship between perceived risk of customers' loyalty of internet banking in Melli Bank as state bank and Mellat Bank as an example private banks.

Loyalty

Different definitions have been presented by various scholars for loyalty which this topic is acceptable regarding to the concept of multi-dimensional and complexity of loyalty. Customer loyalty is the costumer's commitment to do a deal with a specific organization and frequently purchasing. (Elahi and Haider, 2005, p 154). The most accepted definition for loyalty defines it as a prejudice to brand and behavioral responses over time in which the person prefers a particular brand to other brands and decides about it as a mental commitment(Haghighi and Akbari, 2011, p 98). Loyalty to other structures serves different concepts and there are different definitions of loyalty. The concept of service loyalty is more complicated than brand loyalty that is normally used for goods. Service loyalty must be loyalty both to brand and store. Loyalty can be found in service or its provider and this adds to the complexity of this type of loyalty (Hamidizadeh and et al, 2009, pp. 135-134).

Dick and Basou in 1994 presented a model for behavioral and attitudinal loyalty in which the two approaches are somewhat the same direction. The first figure indicates "attitude of dependency" on the vertical axis is broken down into two parts by two indexes. The horizontal axis also support "frequent support" which are divided into two more or less. Therefore according to this matrix, loyalty is defined as four positions;

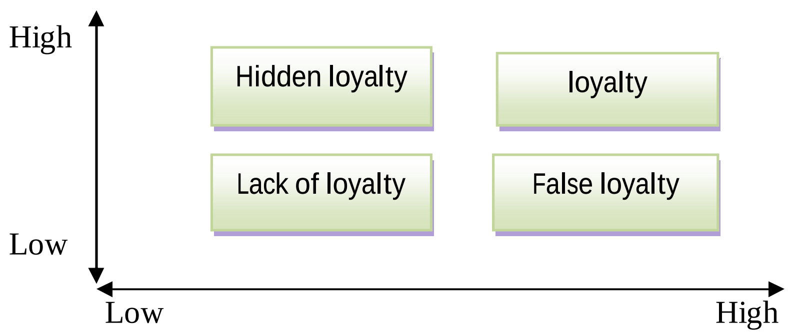


Figure 1; four positions of loyalty

The loyalty is shown in a situation in which a consumer shows so much dependence on one supplier and the repurchase rate is high at the time, but such a situation does not exist in any other state. For example, in the case of false loyalty, repurchase rates is high while there is a low level of positive attitude. It may be for several reasons. For example, a consumer may have the same view of the various suppliers but out of habit, purely out of habit, be more focused on one of them. Here, the supplier has no preference or advantage to any particular. Hidden loyalty is based on the fact that there may be a deep attachment to a brand, but it is not associated with a high rate of purchase. It means that the consumer may be entitled to a certain proportion of the supplier but for various reasons, such as limited resources or time, or financial reasons, or mentally he is not able to buy from his supplier. Of course, other reasons may be obstacles in the way of consumers that he is not interested in buying from any supplier. In disloyalty mode, there is not also a favorable attitudes toward supplier and purchase rate is low (Dick and Basou, 1994, p 107).

Satisfaction

Satisfaction or dissatisfaction is an emotional response to an evaluation of the product or service used or proposed to be given and has five key elements. Customer satisfaction provides many benefits for companies. Higher customer satisfaction leads to loyalty. Finally, maintaining good customer is more useful than perpetually replacing a customer who has left the company and gain a new customer. Customer satisfaction psychologically is an emotion which is as a result of the comparison between obtained product with customers' demands or needs and social expectations with the product. It is interesting to note that the concept of customer satisfaction is that customer satisfaction does not depend on business activities of an organization or position in the market, but also depend on the ability of the organization to provide quality customer satisfaction the customer's expected. Increasingly, organizations are in the pursuit of customer satisfaction as a competitive weapon, because foundations of the traditional separation, such as product features, price and distribution are no longer responsive. Customers can simply compare the price and features thanks to the explosion of online information. This means that it is difficult to differentiate based on product or service, because the characteristics of goods and services can be easily copied. The prices can be adjusted and can be better distributed. Instead of copying the factors that will delight customers, such as excellence in customer service often is difficult for competitors for two reasons. First, these factors are built into work processes and organizational culture cannot be copied or build overnight. Second, a lot of time and accurate data is required to determine exactly what factors can raise customer satisfaction (Moradi, 2010, p 123). Several studies have been conducted on the relationship between customer satisfaction and loyalty, which has been given in Figures 2,3,4, the relationship between customer satisfaction and loyalty can be observed. In figure (2-2) can be seen a direct relationship between satisfaction customer loyalty that the higher levels of customer satisfaction, the higher loyalty (Harrison, 2000, p 129).

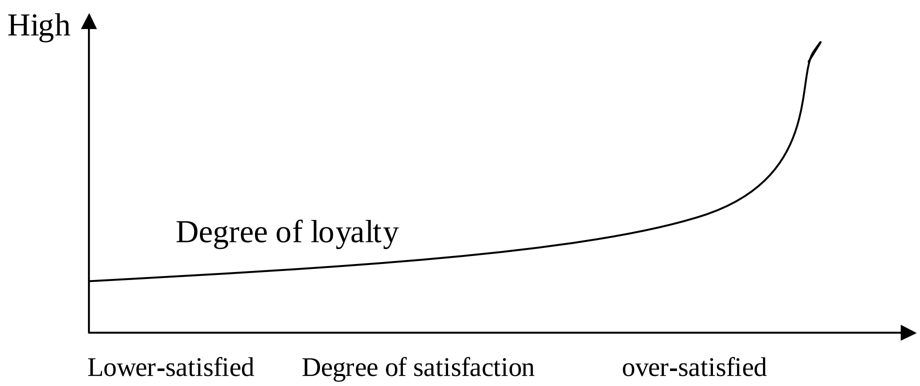


Figure 2; the relationship between customer satisfaction and loyalty (Harrison, 2000, p 129)

As it can be seen in Figure 3, Trust will be considered as a result of customer satisfaction and as commitment on customer loyalty. In this figure, reference points are customer commitment and customer trust (Donio et al, 2006, p 407).

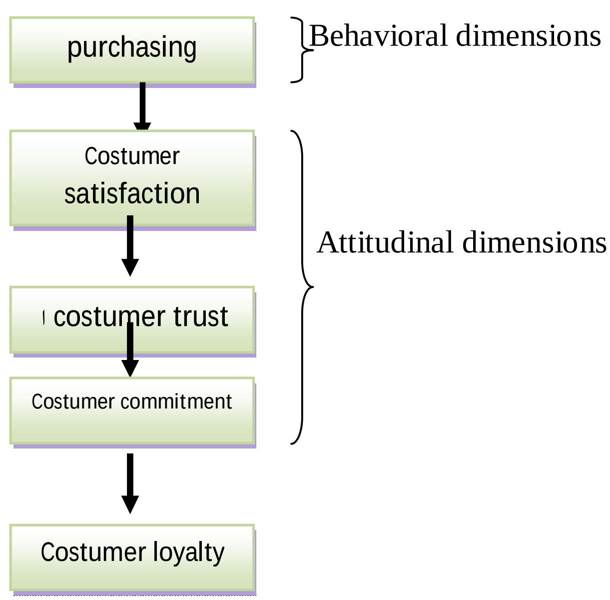


Figure 3: The dynamic model of customer satisfaction (Donio et al, 2006, p 407).

In Figure 4, the case of (1) shows that the concept of customer satisfaction and loyalty both are seen as the answer to a question. The case (2) shows that customer satisfaction is the core and heart of customer loyalty and customer loyalty is maintained by the customer satisfaction. In the case (3) it is mentioned that customer satisfaction should not be regarded as the core and center of customer loyalty, but should only be considered as part of it. Condition (4) shows that customer loyalty as pervasive as customer satisfaction is a part of a comprehensive concept of loyalty. In case (5) it is mentioned that concept of customer satisfaction is a part of customer loyalty, but customer satisfaction is not considered as a key factor in achieving to loyalty in all aspects. In case (6) it is mentioned that customer satisfaction form the basis of a process that will eventually lead to loyalty (Oliver, 1999, p. 34-40).

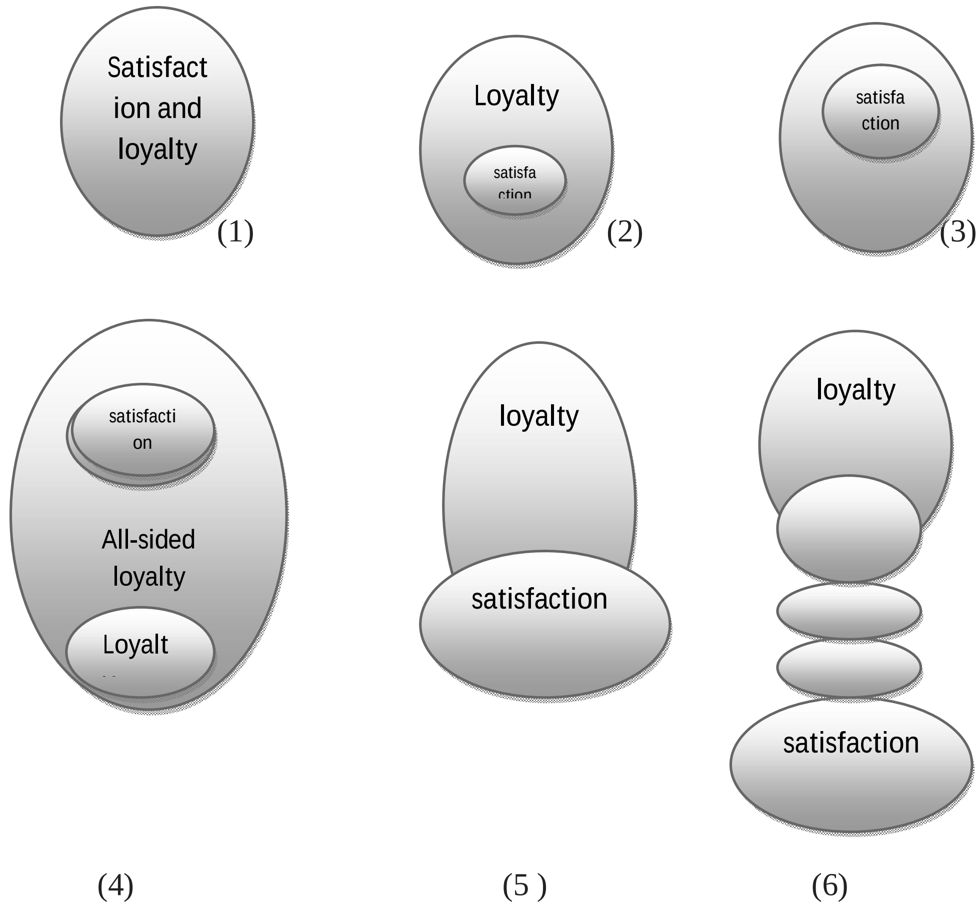


Figure 4: Six understanding of the concept of loyalty (Oliver, 1999, p. 36-40)

Dimensions of perceived risks

Six dimensions of internet banking risks are defined as follows:

Performance risk: This risk refers to factors of system's performance internet banking of the customer.

Social Risk: This risk refers to the customers’ concerns about the attitude of family and society toward the Internet.

Security risk: Concern about the security of World Wide Web.

Privacy Risk: This risk refers to the concept that Internet users of the bank want to control every aspect of their collected personal data.

Time risk: The risk refers to consumers' concerns about time in the use of Internet banking.

Financial risk: The risk refers to customers' concerns about the potential financial loss (servant et al, 2010, p. 55-54).

Theoretical framework

Based on literature studies, proposed model is presented below.

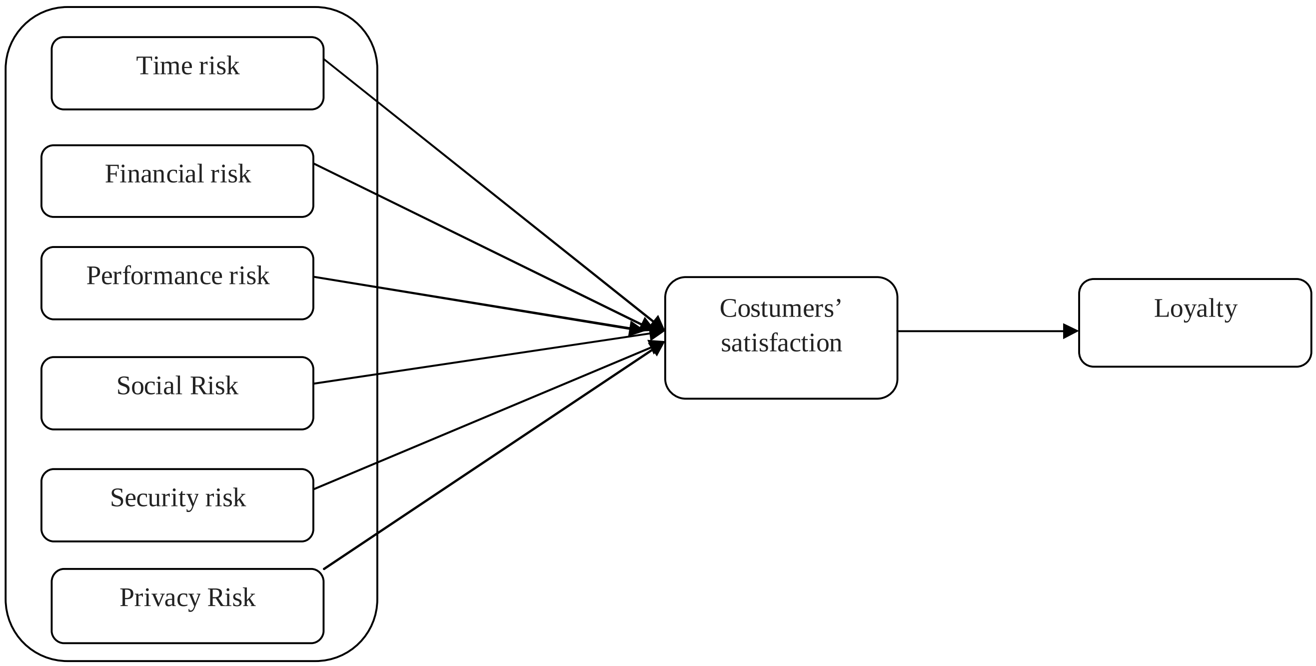


Figure 1. Conceptual model made by the researcher

Explanation of the research hypotheses

For the research, twenty-five hypotheses are proposed as follows:
Hypothesis1. Increase in time risk leads to reduction in customer satisfaction.
Hypothesis 2. Increase in financial risk leads to reduction in customer satisfaction.
Hypothesis 3. Increase in performance risk leads to reduction in customer satisfaction.
Hypothesis 4. Increase in social risk leads to reduction in customer satisfaction.
Hypothesis 5. Increase in security risk leads to reduction in customer satisfaction.
Hypothesis 6. Increase in privacy risk leads to reduction in customer satisfaction. Hypothesis 7) increase in customer satisfaction leads to increase in loyalty

The scope of the research

From the time perspective, the study was performed at period July 2012 to December 2012. Spatial domain of the research

In terms of the spatial domain, this research examines the factors listed in costumers' loyalty of Mellat and Melli Bank. Sampling was conducted in multiple areas of the city of Kermanshah in places like banks, business centers, government agencies, private companies.

Hypothesis Testing

Hypothesis1. Increase in time risk leads to reduction in customer satisfaction.

For this reason, Spearman correlation coefficient is calculated between variables of time risk and customer satisfaction. If the significance level be more that 0.05, there not exists statistically significant relationship between the variables. As it is seen in Table 1, the correlation coefficient between these two variables is -0/605 and significance level is 0.000, which is less than 0.05 and the correlation coefficient is negative. So the hypothesis is confirmed and Increase in time risk leads to reduction in customer satisfaction.

Table 1: Results of Spearman correlation coefficients between time risk and customer satisfaction

customer satisfaction	**Variables**	
-0.605	correlation coefficient	**time risk**
0.000	significance level	
209	**Numbers**	

Hypothesis 2. Increase in financial risk leads to reduction in customer satisfaction.

For this reason, Spearman correlation coefficient is calculated between variables of financial risk and customer satisfaction. If the significance level be more that 0.05, there not exists statistically significant relationship between the variables. As it is seen in Table 2, the correlation coefficient between these two variables is -0.656 and significance level is 0.000, which is less than 0.05, and the correlation coefficient is negative. So the hypothesis is confirmed and Increase in financial risk leads to reduction in customer satisfaction.

Table 2. Results of Spearman correlation coefficients between the variables of financial risk and customer satisfaction

customer satisfaction	Variables	
-0.656	correlation coefficient	**Financial risk**
0.000	significance level	
209	**Numbers**	

Hypothesis 3. Increase in performance risk leads to reduction in customer satisfaction.

For this reason, Spearman correlation coefficient is calculated between variables of performance risk and customer satisfaction. If the significance level be more that 0.05, there not exists statistically significant relationship between the variables. As it is seen in Table 3, the correlation coefficient between these two variables is -0.707and significance level is 0.000, which is less than 0.05, and the correlation coefficient is negative. So the hypothesis is confirmed and Increase in performance risk leads to reduction in customer satisfaction.

Table 3: Results of Spearman correlation coefficients between the variables of performance risk and customer satisfaction

customer satisfaction	Variables	
-0.707	correlation coefficient	**Performance risk**
0.000	significance level	
209	**Numbers**	

Hypothesis 4. Increase in social risk leads to reduction in customer satisfaction.

For this reason, Spearman correlation coefficient is calculated between variables of social risk and customer satisfaction. If the significance level be more that 0.05, there not exists statistically significant relationship between the variables. As it is seen in Table 4, the correlation coefficient between these two variables is -0.487and significance level is 0.000, which is less than 0.05, and the correlation coefficient is negative. So the hypothesis is confirmed and Increase in social risk leads to reduction in customer satisfaction.

Table 4: Results of Spearman correlation coefficients between the variables of social risk and customer satisfaction

customer satisfaction	Variables	
-0.487	correlation coefficient	**Social risk**
0.000	significance level	
209	**Numbers**	

Hypothesis 5. Increase in security risk leads to reduction in customer satisfaction.

For this reason, Spearman correlation coefficient is calculated between variables of security risk and customer satisfaction. If the significance level be more that 0.05, there not exists statistically significant relationship between the variables. As it is seen in Table 5, the correlation coefficient between these two variables is -0.635and significance level is 0.000, which is less than 0/05, and the correlation coefficient is negative. So the hypothesis is confirmed and Increase in security risk leads to reduction in customer satisfaction.

Table 5: Results of Spearman correlation coefficients between the variables of security risk and customer satisfaction

customer satisfaction	Variables	
-0.635	correlation coefficient	**security risk**
0.000	significance level	
209	**Numbers**	

Hypothesis 6. Increase in privacy risk leads to reduction in customer satisfaction.

For this reason, Spearman correlation coefficient is calculated between variables of privacy risk and customer satisfaction. If the significance level be more that 0.05, there not exists statistically significant relationship between the variables. As it is seen in Table 6, the correlation coefficient between these two variables is -0.657and significance level is 0.000, which is less than 0/05, and the correlation coefficient is negative. So the hypothesis is confirmed and Increase in privacy risk leads to reduction in customer satisfaction.

Table 6: Results of Spearman correlation coefficients between the variables of privacy risk and customer satisfaction

customer satisfaction	Variables	
-0.657	correlation coefficient	**privacy risk**
0.000	significance level	
209	**Numbers**	

Hypothesis 7. increase in customer satisfaction leads to increase in loyalty.

For this reason, Spearman correlation coefficient is calculated between variables of loyalty and customer satisfaction. If the significance level be more that 0.05, there not exists statistically significant relationship between the variables. As it is seen in Table 7, the correlation coefficient between these two variables is -0.861and significance level is 0.000, which is less than 0.05, and the correlation coefficient is negative. So the hypothesis is confirmed and increase in customer satisfaction leads to increase in loyalty.

Table 6: Results of Spearman correlation coefficients between the variables of loyalty and customer satisfaction

customer satisfaction	Variables	
0.861 **0/**	correlation coefficient	**customer satisfaction**
0.000	significance level	
209	**Numbers**	

Statistical models and structural equations

In this model, the relationship between the independent variables as risk, financial risk, performance risk, social risk, security risks and privacy risks of customer satisfaction is surveyed on the dependent variable. Multiple Regression was used for this purpose. For use of Multiple Regression, the dependent variable should always be normally distributed. After assuming normal distribution of the dependent variable, customer satisfaction is checked. Kolmogorov - Smirnov test was used to investigate the normal distribution of variable of customer satisfaction. Null hypothesis and opposite hypothesis is defined as follows:

Null hypothesis; distribution of variable of customer satisfaction is normal

opposite hypothesis: variables are not normally distributed.

If significance level be less than 0.05, the null hypothesis is rejected and we conclude that the distribution of the variable is not normal. As can be seen in Table 8, significance level to the variable of customer satisfaction is 0.764 and is more than 0.05. Therefore, it is concluded that the distribution of these variables is normal.

Table 8; Kolmogorov - Smirnov test to investigate the normal distribution of variable of customer satisfaction

Sig level	Statistical value	SD	Mean	Number	Variable
764.0	**0.668**	**0.67663**	**3.082**	**209**	**Costumer's satisfaction**

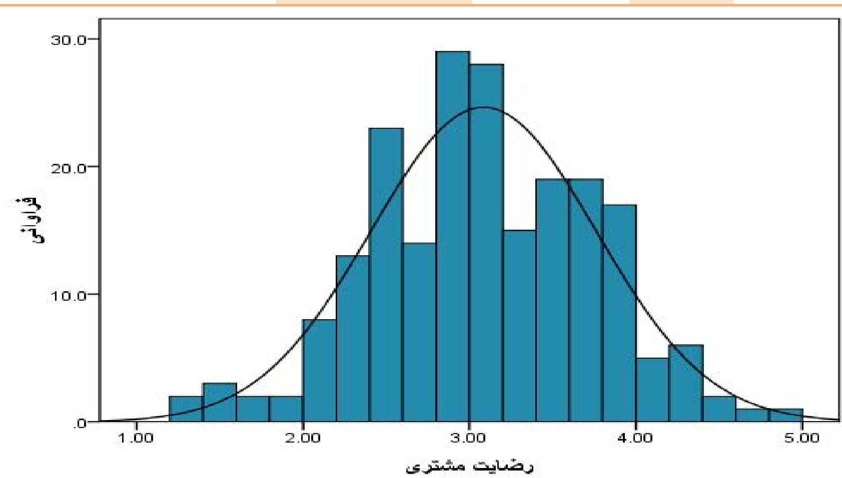
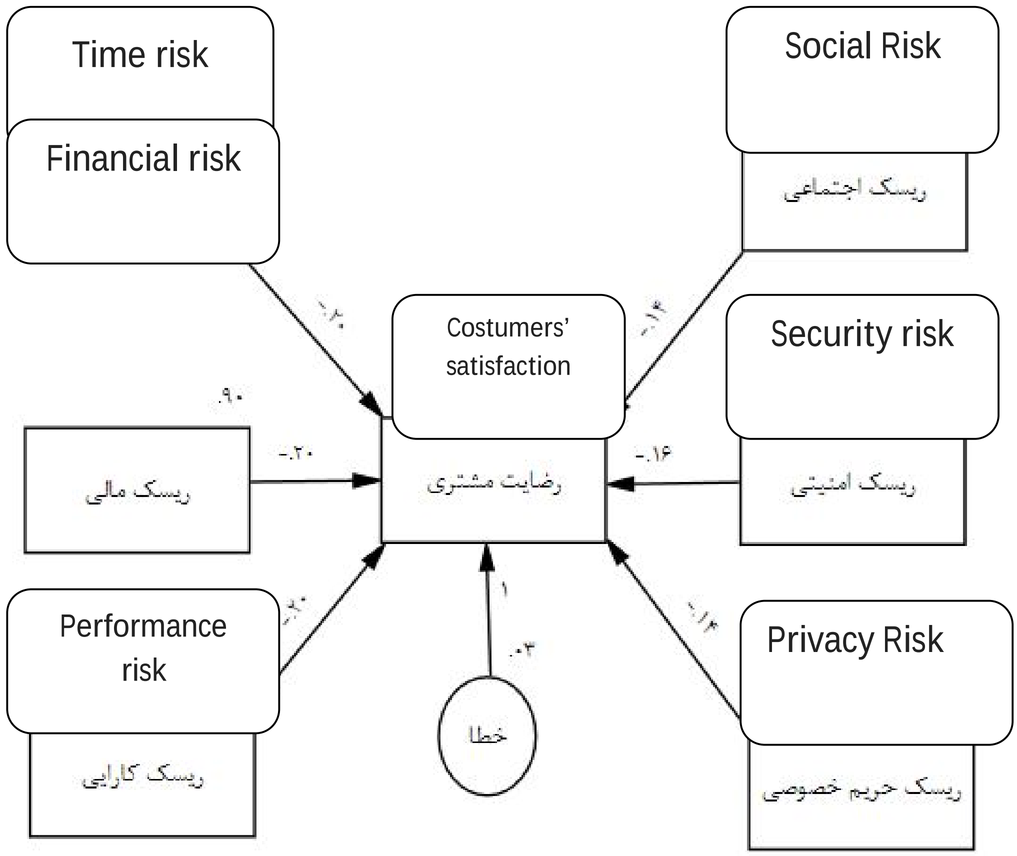


Diagram 1; normal distribution of variable of customer satisfaction

The considered model is as



follow;
In this diagram -0/20 shows the regression coefficients between the time risk and customer satisfaction variables. The number 0/70 also represents the variance of the time risk variable. Other values presented in the graph can be interpreted similarly.

Structural equation

If we show the independent variables of the time risk with X_1, the financial risk with X_2, the performance risk X_3, the social risk X_4, the security risks X_5 and privacy risks X_6 and show the dependent variable of customer's satisfaction with Y, regarding to Regression coefficients, the linear regression model fitted to the data, is as follows:

$$Y = 5.958 - 0.2X_1 - 0.195X_2 - 0.196X_3 - 0.138X_4 - 0.157X_5 - 0.139X_6$$

By using this regression model, the value of the variable of customer satisfaction can be predicted by using the time risk variables, financial risk, performance risk, social risk, security risks and privacy risks. Using Table 9, below hypothesis is tested:
"Null hypothesis: the linear regression model fitted to the data is not significant."
" opposite hypothesis: the fitted linear regression model is significant."
If the significance level is less than 0/05, the assumption is approved and fitted linear regression model is significant.
As seen in Table 9, a significant level is 0/000and is less than 0/05. Thus, the regression model presented above is appropriate.

Table 9; the first model variance analysis

Sig level	F value	Squares mean	Degree of freedom	Sum of squares	Change source
0.000	406.570	14.658	6	87.947	**Regression**
		0.036	202	7.283	**Error**
			208	95.229	**Total**

We will determine which of the independent variables have the greatest impact on the dependent variable. Standardized coefficients for the independent variables are computed, more standardized coefficient of each variable will have a greater impact on the dependent variable.
As seen in Table 10, the performance risk variables have the greatest impact and social risk variable has the least impact on customer satisfaction.

Table 10; standard coefficients of the first model

Ranking	standard coefficients	
3	-0.249	**Time risk**
2	-0.275	**Financial risk**
1	-0.296	**Performance risk**
6	-0.192	**Social risk**
4	-0.220	**Security risk**
5	-0.199	**Privacy risk**

Model appropriateness criteria

To evaluate the appropriateness of the model we use the following two criteria:
A) determination coefficient; determination coefficient of the model is 0/924, which indicates that this model is very appropriate.
B) values of NFI, RFI, IFI, and CFI, as these values are closer to the number one model is more appropriate. Also, if RMSEA value is less than 0.05, we can conclude that the model is ideal. If the amount is between 0.05 to 0.08, the best fitted model will be and if be more than 0.1, we can conclude that the fitted model is weak.
As seen in Table 11, the values show that this model is appropriate. These amounts have been calculated using Amos software.

4 offers

in any organization whether it is productive or servicing, customers are the most important factor for the maintenance and growth of the organization, if the organization is successful in satisfying their loyalty and be able to maintain them, long-term survival and growth of the field has provided. Researches have shown that when a company's customer relationships with corporate continues, profits rise sharply. Nowadays, banking industry is increasingly to be more competitive. One of the most important strategies to maintain a competitive advantage is to attract customers and build customer loyalty incentive to the bank that has a significant impact on business and performance. In this study, the impact of perceived risk of Internet banking on customers' loyalty of Melli and Mellat Bank of Kermanshah city has been studied. The following topics is recommended to interested scholars:

1. The state-owned banks and customer loyalty can be compared to. To do this, select several other state bank and variables that affect customer loyalty such as brand image, customer value and employee value added to the model presented in this paper and will be studied.
2. Examine the factors affecting customer loyalty in the bank's branches in provinces of Kermanshah and compare their loyalty.
3. Examine the factors affecting customer loyalty in the branches of the Melli Bank of Kermanshah and compare their loyalty.
4. The level of customer loyalty of Melli and Mellat Bank can be compared with private banks. For example, The level of customer loyalty of Melli and Mellat Bank can be compared with Parsian Bank customer loyalty.

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