

## **The Impact of Personalization on Customers' Loyalty and the Intention to Use E-banking Services**

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### **Abstract**

The present study aimed to answer the question of how personalization affects customer loyalty with the moderating role of technology experience consistency in the field of the e-banking industry in Iran. To achieve this goal, the statistical population of active users of e-banking of Refah Kargaran Bank including physicians, social security retirees, and employees working in Tabriz branches were determined and 502 customers were selected by the random sampling method. Content, convergent, and divergent validity, as well as the reliability of the questionnaire, have been confirmed by methods such as Cronbach's alpha and composite reliability. Furthermore, structural equation modeling techniques with AMOS software have been used to test the research hypotheses. Based on research findings, personalization has a positive effect on performance expectancy, effort expectancy, relationship quality, and intention to use e-banking services. The present study indicates that personalization is the main intention for using e-banking services that should be given special attention because it can be considered a link between customers' attitudes and behavior in e-banking services. This model helps electronic banking managers to identify essential points of attitude that lead to the emergence of using electronic banking services behavior and outlines better guidance for the electronic banking industry.

**Keywords:** Banking Marketing; E-banking; Consistency; Personalization; Relationship Quality

**JEL Classification:** G21, L84, M31.

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## 1. Introduction

With the increasing availability of the Internet and the use of its facilities in today's world, the number of customers using e-banking services has also increased. In addition, information orientation is experiencing increasing growth in industries such as banking and financial institutions that are active in the field of e-commerce (Wang, Cho, & Denton, 2017). On the other hand, due to the need to change customer behavior patterns in order to use Internet banking, the use of this technology can be very complex (Mattila, Karjaluoto, & Pento, 2003). With the development of information technology in the banking industry in recent years, the way of conducting banking operations has changed radically and customers can perform their banking activities 24 hours a day (Sayar & Wolfe, 2007). Through the banking website, internet banking allows customers to have extensive e-banking interactions in a faster and cheaper manner and without time and space limitations compared to traditional branches (Grabner-Kräuter & Faullant, 2008). Another benefit of online banking is the savings in maintenance costs of traditional branches (Shih, 2004). Different cultures and attitudes towards money and its credit in Iran are among the issues that force banks to pay more attention to the growth of information technology. Since there is avoidance of new product innovation in most countries, risk-taking, regardless of individual attitudes, has limited the new banking industry in Iran. Accordingly, few studies have been conducted on the increase of e-banking users in Iran and most studies have focused on the publication and acceptance of e-banking. Meanwhile, personalization is one of the factors that can be important in the customer's individual attitude because it affects various aspects of customer psychology, including information processing and decision making (Tam & Ho, 2006). Personalization allows service providers to offer services or products in which customer preferences are applied (Tam & Ho, 2005; Xu, et al., 2014).

According to Chakravarty, et al. (1996), increasing competition along with the relative similarity of banking products and services have changed customers' behavior. Therefore, banks must identify the factors influencing customer behavior change if they want to influence customer behavior. In this way, they can avoid the harmful

consequences of turning away customers and improve their long-term relationships with them. Especially in cyberspace, the importance of relationship quality is due to the nature of customer perceptions about cyberspace. Also, the main factor of success in many organizations, active in the online space, is the relationship quality in cyberspace, and numerous studies have mentioned the relationship between customer satisfaction and trust, loyalty, repeat purchases, and increased organizations' profitability (Fernández-González & Prado, 2007). Based on the experiences of marketers in today's world, the best way to communicate with customers is through the provision of changeable personal services as banking innovations for the customer. Given the capabilities of financial institutions and customer expectations, there is considerable diversity in personalization. Despite the importance of this issue, there is little research on its impact on decision-making processes in the field of e-banking (Laforet & Li, 2005; Xu et al., 2014). Furthermore, Internet users have experienced and learned different levels of technological complexity. Also, the ways users perceive personal banking services and consistency with their previous experiences are different. Some e-banking users have different bank accounts and experience of using different e-banking platforms, while on the other hand, there may be users who have limited banking services or no e-banking experience. Because customers may have different expectations about services, financial institutions try to better meet the needs of both experienced and inexperienced customers. In this regard, while investigating the impact of personalized e-banking services on relationship quality, the present study aimed to use the variables of loyalty, performance expectancy, and effort expectancy as well as empirical consistency with previous e-banking experience as a moderating variable in customers' intention to use e-banking and customers' loyalty.

Following we present the research background and hypotheses. Next, the conceptual model is presented based on the research literature and hypotheses. Then, the research methodology is discussed. The research statistical population consisted of active users of e-banking. In the next section, the research findings are presented by the two models (i.e. the main structural model and the moderating model of user's experiences

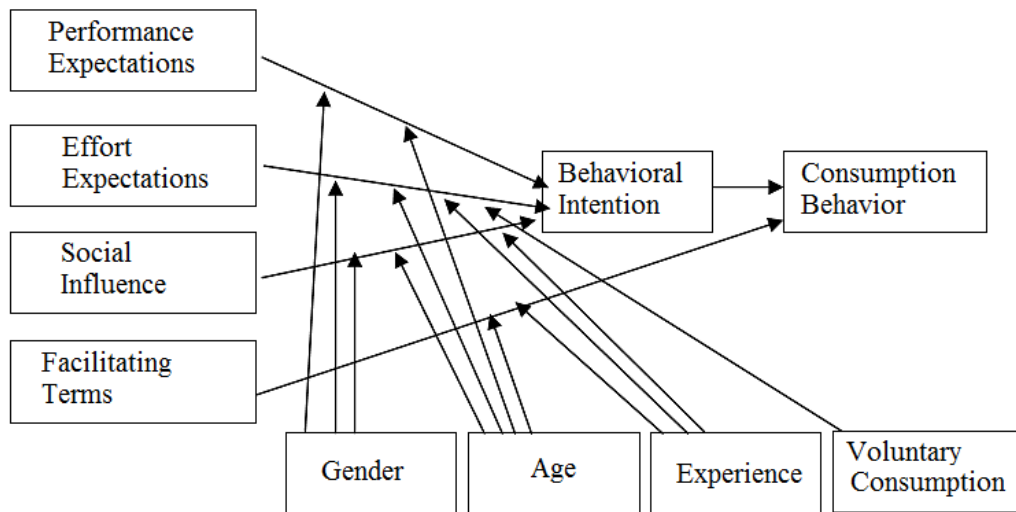
consistency). Finally, discussion and conclusion are presented.

**2. Research Background and Hypotheses**

**2.1. Unified Theory of Acceptance and Use of Technology**

The unified theory of acceptance and use of technology is achieved by combining eight models in the field of technology acceptance (theory of reasoned action, technology acceptance model, motivational model, theory of planned behavior, a combined theory of planned behavior/technology acceptance model, a model of personal computer use, the diffusion of innovations theory, and the social cognitive theory). This model has been used by Venkatesh et al. (2003) in the study of data related to employees of four organizations for six months and in three time periods (after training, one month after implementation, and three months after implementation). The actual usage behavior was measured after six months of training. The eight models can explain between 17% and 53% of the variance of behavioral intention. Then, the integrated theory of acceptance and application of technology was tested using the collected data.

Based on the results, the mentioned theory outperforms the other eight models and explains 69% of the variance in the intention to use the technology (Venkatesh, et al., 2012). This model is a combination of previous models in the field of technology acceptance presented by Venkatesh et al. (2003). The purpose of the unified theory of acceptance and use of technology is to explain the concept and intention of users to use information systems and usage behavior. Venkatesh et al. (2003) investigated the use of technology as a dependent variable that can be affected by performance expectancy, effort expectancy, social impacts (social influence), and facilitator conditions as independent variables. Behavioral tendencies are introduced as mediators. This model also recognizes four factors of age, gender, experience, and arbitrariness as moderating factors in the relationship between dependent and independent variables (See Figure 1). The performance of the unified theory of acceptance and use of technology has been successful in combining the previous models because it allows combining the reasoning capabilities of individual models and provides a comprehensive theory.



**Figure 1. Unified Theory of Acceptance and Use of Technology (UTAUT)**

Source: Venkatesh et al., (2003)

**Personalization**

Personalization can be defined as meeting the unique needs of individual customers through planning and service delivery. Personalization is

one of the key strategies in research related to Information Communication Technology (ICT) services and complementary strategies for customer loyalty to ICT service providers. This

makes products and services fitted to customer preferences (Gilmore & Pine, 1997; Xu et al., 2014). Personalization also allows service providers to offer services or products in which customer preferences are applied (Tam & Ho, 2005; Xu et al., 2014). Personalizing service in different ways can improve relationship quality and customer loyalty. A personalized product or service improves customer satisfaction, which in turn is a factor in the relationship quality and a prerequisite for increasing loyalty. Naturally, when services are fitted to the customers' needs, they are more satisfying than when a similar service is provided to all customers. Personalized services reinforce the belief in customers that the company is thinking of them, and this, in turn, increases satisfaction and, consequently, their loyalty. Finally, the direct effect of personalization on relationship quality and loyalty from sources such as customer orientation refers to the view that personalized services are those that cannot be easily replaced by other service providers (Ball, et al., 2006).

### **Performance Expectancy**

Performance expectancy is a measure of a person's belief that a system will help him or her to achieve job performance. Expected performance is the most influential factor that justifies behavioral tendency (Chaouali, et al., 2016; Venkatesh et al., 2003; Riffai, et al., 2012). Performance expectancy is the extent to which customers believe that using e-banking enhances the performance of banking tasks (Wang et al., 2017). According to Xu et al. (2014), there is a positive and significant relationship between technology suitability and performance expectancy in the field of mobile banking.

### **Effort Expectancy**

Effort expectancy measures the expected difficulty with using e-banking services (Wang et al., 2017). It is defined as "the degree of ease related to using the system". So people who think that online banking is easy will probably benefit from it. In addition, when the system is user-friendly, customers are more likely to increase their tendency to perform it. That is, when a system is not difficult to use, customers are less likely to work and can engage in other activities (Chaouali et al., 2016). When using the service, the user pays

attention to the ease of use of the system (Kim, et al., 2016).

### **Consistency**

Consistency is the degree to which a person perceives the innovation as consonant with existing values, past experiences, and needs. Higher consistency is usually associated with a higher acceptance rate (Rogers & Schumicker, 2000). When using e-banking services at a higher level of personalization, users feel comfortable. For instance, an online agent can be a good platform for e-banking customers to effectively achieve their goals. Also, users who understand current e-banking services at a higher level of consistency with their past experience can also perform their previous banking affairs with less effort. For instance, due to the ease of access to electronic financial services, it is preferable to use such electronic services or do less effort to do things related to online banking services. Online agents can also help customers save time and effort on difficult tasks (Wang et al., 2017).

### **Online Relationship Quality**

The online relationship quality is the level of satisfaction, trust, and commitment of the customer to the seller and the seller's expectation for repurchase. Buyer-seller relationships are considered quality only when past interactions are positive and future interactions with the seller are expected (Zhang et al., 2011). The high-quality buyer-seller relationship indicates that the buyer is confident in the seller's honesty and performance in the future (Ebrahimi & Aali, 2016). Like the physical environment, building a strong relationship with customers is an essential factor for the success of online service providers in the Internet environment. Therefore, similar to the traditional environment, satisfaction, trust, and commitment can be studied as the most important elements of online relationship quality (Brun, et al., 2014).

*Online Trust:* It is defined as a mental state in which a person becomes vulnerable electronically due to buying and selling (Salo, et al., 2008). Because consumers may feel anxious and insecure about buying something they cannot see or touch, trust is one of the key factors to overcome these concerns in online shopping (Hsu, et al., 2018). Trust is defined by Hsu, et al. (2018) as the consumer (trustee) tendency to the website (trust

party) in providing personal and financial information in exchange for goods, services, and promises that follow policies and procedures.

*Online Satisfaction:* Online customer satisfaction with a website is a complex equation whose unknown aspect is to identify the needs of online customers (Liu, et al., 2006). Huang and Kuo (2012) believe that consumer satisfaction is the overall assessment of the experiences of products or services purchased from the website.

*Online Commitment:* Morgan and Hunt (1994) define commitment as an essential element of a successful long-term relationship. Dwyer, et al. (1987) consider commitment as an implicit obligation to maintain a relationship between the parties to a relationship. Emphasizing the importance of this element, Roberts and Dowling (2002) state that among the various types of commitment, online commitment is the only emotional commitment that determines how much the customer is interested in maintaining their online relationship with the Internet business (Fullerton, 2005). Commitment refers to the motivation to stay with a supplier and has been defined as a lasting desire to maintain valuable relationships (Nadaf, et al., 2017).

*Online Customer Loyalty:* online loyalty is defined by Cyr, Hassanein, Head, and Ivanov (2007) as a customer's sense of enduring psychological belonging to an online service provider. True customer loyalty is a function of various behaviors such as the number of purchases, the time spent visiting a website, and the number of visits to a website. When a customer feels a sense of belonging to an online service or online shopping site, the expectation of continuing the relationship and the intention to buy will occur, and with continuing the relationship between the customer and the online business, online customer loyalty will increase. It is always clear that increasing customer relationships will lead to customer retention and thus customer loyalty (Sota, et al., 2018). Some studies suggest that online relationship quality has a positive effect on the customer's online loyalty (Zhang, et al., Ebrahimi & Aali, 2016).

### **The Intention to Use E-banking Services**

According to Atkinson (1964), attitude is formed based on human perceptual factors including

homogeneity of needs, expectations, and values. Thus, attitude affects people's intention to use. Bandura (1995), Azjen (1980), and Fishbein and Ajzen (1975) believe that an individual's intention to use is influenced by his/her attitude and shapes his actions and reactions.

### **2.2. Research Hypotheses**

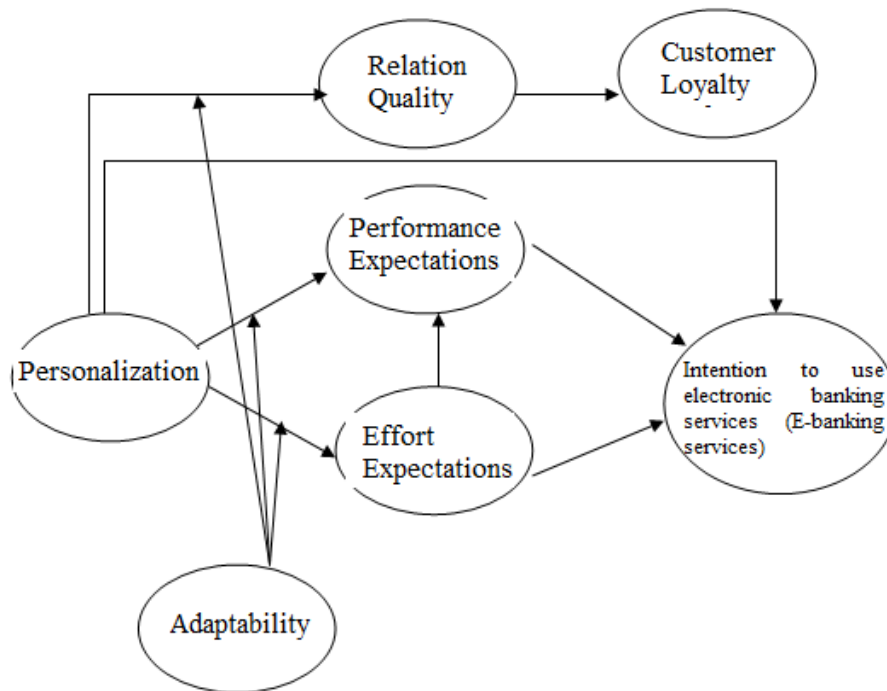
Regarding the purpose of the study, the following hypotheses have been formulated:

1. Personalization affects the performance expectancy of e-banking service users.
2. Personalization affects the effort expectancy of e-banking service users.
3. Personalization affects the relationship quality of e-banking service users.
4. The relationship quality affects the loyalty of e-banking service users.
5. Effort expectancy affects the performance expectancy of e-banking service users.
6. Personalization affects the intention to use e-banking service users.
7. Performance expectancy affects the intention to use e-banking service users.
8. Effort expectancy affects the intention to use e-banking service users.
9. Previous experiences consistency changes the intensity of the impact of personalization on the performance expectancy of e-banking service users.
10. Previous experiences consistency changes the intensity of the impact of personalization on the effort expectation of e-banking service users.
11. Previous experiences consistency changes the intensity of the impact of personalization on the relationship quality of e-banking service users.

### **3. Conceptual Model**

The conceptual model of Figure 2 is proposed according to the research literature and hypotheses related to the impact of personalization on customer behavior with emphasis on the moderating role of technology experiences consistency in the e-banking industry.

In this Model as is shown in the Figure 2, personalization considered as independent variable, performance expectancy, effort expectancy, social impacts introduced as mediator and customer loyalty considered as dependent parameter.



**Figure 2. Research Conceptual Model**

Source: Wang, et al. (2017)

#### 4. Research Methodology

The research statistical population consisted of active users of e-banking, including specialized and sub-specialized physicians working in the health sector, retirees of the Social Security Organization, and employees of the Refah Kargaran Bank, who have active (current, savings) accounts in all 23 branches of Tabriz. To reduce the potential error of the geographical area, a statistical sample was selected from all 23 branches of the Refah Kargaran Bank, which are located in different districts of the Tabriz metropolis. After negotiating with the heads of the branches, 30 questionnaires were provided to each branch and 30 customers were randomly selected from each branch. Finally, 690 questionnaires were randomly distributed among active customers of e-banking in three groups of employees, physicians, and social security retirees. The customers were asked to complete and return the questionnaire to the bank within a week. After one month of follow-up, 502 (166 colleagues, 127 physicians, and 209 retirees) out of 690 distributed questionnaires were completed and returned to the bank, which could be used and exploited. All research variables were measured using a five-point Likert scale. The number of items in each variable is shown in Table 1.

Structural Equation Modeling (SEM) has been used to test the research hypotheses. There are two approaches to using structural equation modeling: the one-stage approach and the two-stage approach. In the one-stage approach, the structural model and the measurement model analyses are performed simultaneously; however, in the two-stage approach, first the processing measurement model and then the structural model are estimated. In this study, the two-step approach is used because it prevents the interaction between the measurement model and the structural model and accurately shows the validity of the items of each variable (Anderson & Gerbing, 1988). The one-dimensionality of a variable provides principles for calculating validity and is validated when the items of a variable on a one-dimensional (single-dimensional) model provide an acceptable fit. Anderson and Gerbing (1988) believe that one-dimensional measurement models are considered to be more useful tools because they provide more accurate tests of convergent and divergent validity for measuring variables. Therefore, the purpose of this step is to ensure that items empirically measure a single dimension. One-dimensional evaluation of variables is performed before testing the validity and reliability of each variable (Hair, et al., 2006).

**Table 1. Items, Factor Load, and Reliability Coefficients of Research Variables (Source: Authors)**

Applied Structures & References	Item	Factor Loading	Cronbach's Alpha	Composite Reliability	Average Explained Variance
Personalization, Lee and Lin (2005), Wang et al. (2017)	Per 1	0.94	0.814	0.87	0.69
	Per 2	0.92			
	Per 3	0.59			
Performance Expectations, Venkatesh et al. (2003), Wang et al. (2017)	PE1	0.87	0.910	0.91	0.72
	PE2	0.91			
	PE3	0.85			
	PE4	0.76			
Effort Expectations, Venkatesh et al. (2003), Wang et al. (2017)	EE1	0.92	0.902	0.94	0.84
	EE2	0.92			
	EE3	0.92			
Relation Quality, Palmatier (2007), Mouri (2005), Odekerken et al. (2003)	Rela1	0.79	0.897	0.89	0.64
	Rela2	0.86			
	Rela3	0.84			
	Rela4	0.76			
	Rela5	0.74			
Customer Loyalty, Van Dolen et al. (2007)	Loy1	0.60	0.846	0.87	0.69
	Loy2	0.82			
	Loy3	0.74			
	Loy4	0.89			
Use Intention, Xu et al. (2014)	In1	0.87	0.911	0.91	0.72
	In2	0.91			
	In3	0.85			

Source: Authors

Each of the studied constructs including personalization, performance expectancy, effort expectancy, relationship quality, and customer loyalty was analyzed individually in a separate measurement model. In confirmation of each measurement model, items whose factor load was less than 0.5 were removed and the model was redefined. According to the results, two items were removed from personalization. The factor load of the final measurement models is described in Table 1.

**Reliability Assessment:** three methods of Cronbach's alpha, combined reliability (CR), and explained mean variance (AVE) were used to evaluate the reliability of the research variables. According to Bagozzi and Yi (1988), compound validity should be equal to or greater than 0.6, the mean variance explained should be equal to or greater than 0.5, and Cronbach's alpha should be equal to or greater than 0.7. Accordingly, as shown in Table 1, the values of CR, AVE, and Cronbach's alpha are all accepted. Therefore, it can be said that the reliability of the measurement models is acceptable.

**Validity Evaluation:** The research validity was evaluated by two methods of content validity and construct validity (convergent validity and divergent validity). Content validity was confirmed

by expert opinions. Also, considering that all the factor loadings of the items related to each of the constructs were statistically significant ( $P < 0.001$ ) and their values were more than 0.5; therefore, the convergent validity is also confirmed (Table 1). Finally, divergent validity was assessed by the method stated by Kline (2005). Kline believes that the satisfied correlation coefficient between the factors should not be more than 0.85 to confirm the divergent validity. In this study, the correlation between the factors was less than 0.85 and its divergent validity was confirmed.

Fornell and Larcker's criterion was also used to investigate the measurement model divergent validity. According to this criterion, the acceptable divergent validity of a model indicates that one construct in the model has more interaction with its characteristics than other constructs. Fornell and Larcker (1981) state that divergent validity is at an acceptable level when the amount of AVE for each construct is greater than the common variance between that construct and the other constructs in the model. Table 2 includes the values of the correlation coefficients between the constructs and the square root of the AVE values for each construct. Based on the results obtained from the correlations and the square root of AVE which is

entered on the diameter of the table, it is possible to conclude the divergent validity of the model at the structural level according to Fornell and Larcker criteria. The correlation coefficient of all constructs is less than the square root of the AVE index.

**Table 2. Correlation between Latent Variables and Squared AVE Values (Source: Authors)**

	1	2	3	4	5	6
Personalization	0.83					
Performance Expectations	0.62	0.85				
Effort Expectations	0.56	0.77	0.91			
Use Intention	0.56	0.79	0.74	0.85		
Relation Quality	0.27	0.30	0.22	0.33	0.80	
Loyalty	0.50	0.49	0.43	0.53	0.69	0.77

Source: Authors

### 5. Empirical Results

The structural equation modeling is conducted using the maximum likelihood method and its results are presented in Table 3. According to the obtained results, although the research hypotheses are statistically significant and confirmed at the

level of  $p < 0.001$ , the model does not have a sufficient fit (Table 4). Because some of the fit indices are not within the accepted level (RMSEA = 0.161, AGFI = 0.546 and  $\chi^2 / df = 6.637$ ). Therefore, it is necessary to make adjustments to the model so that the model has a sufficient fit. For this purpose, by examining the correction index, it was found that by correlating the errors of relationship quality and loyalty and the intention to use Chi-square, the amount will be reduced to at least 54.019. The results of the redefined model are presented in Table 5.

As Table 3 indicates, given that the significance level of all hypotheses is less than 0.05, the significance level of research hypotheses is statistically significant, and can be claimed that with 95% confidence, all variables have a positive and significant effect. Also, the fit indices of the modified model show that all fit indices are within the accepted range according to Table 4. Hence, the research model also has the necessary fit. Figure 3 indicates the pattern of the modified structural equation model of the research.

**Table 3. Hypotheses Testing using Estimation of Standardized Coefficients (Hypothetical Model) (Source: Authors)**

Hypothesis	Hypothesized Paths	Coefficients	Standard Error	Standardized Coefficients	T-Value	P	Result
H1	Personalization → Performance Expectations	0.518	0.041	0.573	12.711	0.000	Confirmed
H2	Personalization → Effort Expectations	0.693	0.046	0.770	15.047	0.000	Confirmed
H3	Personalization → Relation Quality	0.245	0.046	0.370	15.291	0.000	Confirmed
H4	Relation Quality → Loyalty	0.435	0.066	0.616	6.585	0.000	Confirmed
H5	Effort Expectations → Performance Expectations	0.439	0.044	0.438	9.895	0.000	Confirmed
H6	Personalization → Use Intention	0.438	0.068	0.483	6.439	0.000	Confirmed
H7	Performance Expectations → Use Intention	0.324	0.100	0.323	3.223	0.001	Confirmed
H8	Effort Expectations → Use Intention	0.197	0.066	0.196	2.984	0.003	Confirmed

Source: Authors

**Table 4. Fit Indicators of the Research Structural Model (Source: Authors)**

	X <sup>2</sup>	df	p	GFI	AGFI	TLI	NFI	CFI	RMSEA	X <sup>2</sup> /df
Prototype	1414.49	222	0.000	0.635	0.546	0.818	0.817	0.840	0.161	6.372
Modified Model	1173.796	214	0.000	0.889	0.899	0.948	0.948	0.972	0.047	5.485
Acceptable Quantities	-	-	-	0.90<	0.90<	0.90<	0.90<	0.90<	0.08>	1-5

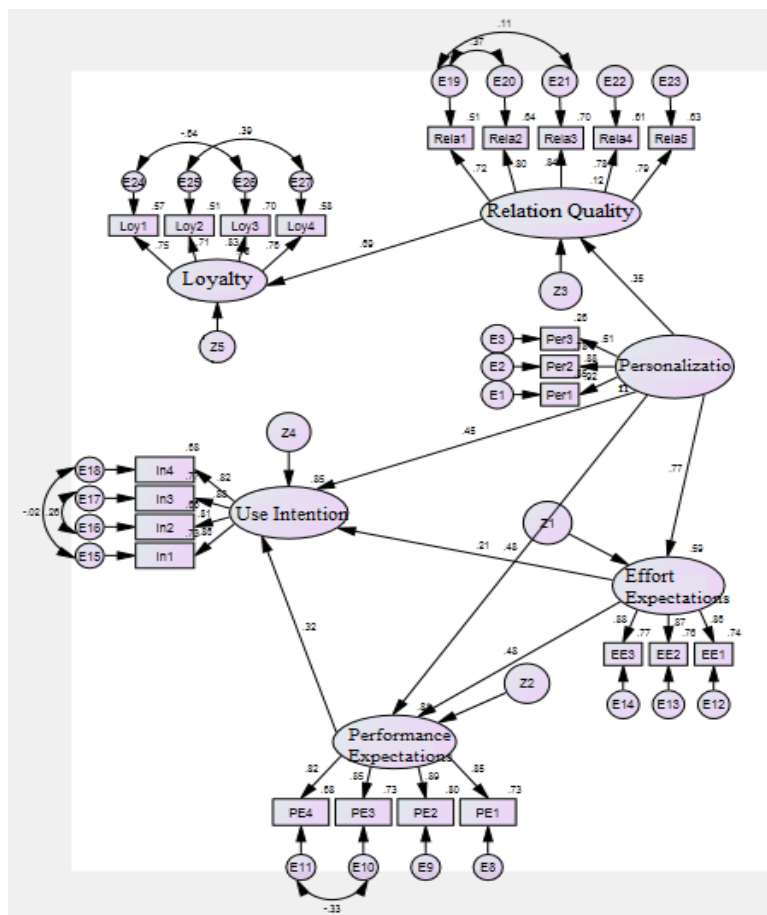
Source: Authors



**Table 5. Testing Research Hypotheses using Standardized Coefficient Estimation (Second Model) (Source: Authors)**

Hypothesis	Hypothesized Paths	Coefficients	Standard Error	Standardized Coefficients	T-Value	P	Result
H1	Personalization→ Performance Expectations	0.512	0.041	0.568	12.625	0.000	Confirmed
H2	Personalization→ Effort Expectations	0.693	0.046	0.770	15.051	0.000	Confirmed
H3	Personalization→ Relation Quality	0.219	0.045	0.342	4.832	0.000	Confirmed
H4	Relation Quality→ Loyalty	0.452	0.076	0.528	5.921	0.000	Confirmed
H5	Effort Expectations→ Performance Expectations	0.444	0.044	0.444	10.041	0.000	Confirmed
H6	Personalization→ Use Intention	0.517	0.066	0.582	7.793	0.000	Confirmed
H7	Performance Expectations→ Use Intention	0.279	0.098	0.283	2.843	0.004	Confirmed
H8	Effort Expectations→ Use Intention	0.143	0.064	0.145	2.227	0.026	Confirmed

Source: Authors



**Figure 3. Modified Structural Model of Research**  
Source: Authors

User's experiences consistency moderates the

relationship between personalization with performance expectancy, effort expectancy, and

the relationship quality of banking users; in other words, the relating hypotheses are as follows:

H9: previous experiences consistency changes the intensity of the impact of personalization on the performance expectancy of e-banking service users.

H10: previous experiences consistency changes the intensity of the impact of personalization on the efforts expectancy of the e-banking users.

H11: previous experiences consistency changes the intensity of the impact of personalization on the relationship quality of e-banking service users.

Multi-group structural equation modeling was used to test the effect of the moderating variable on the user experience. For this purpose, customers were divided into two groups in terms of consistency (with previous experience). By measuring consistency based on the 5-point Likert scale, users whose average consistency score was less than 3 were in the group of customers with previous experience inconsistency (152 people) and customers whose average consistency score

was higher than 4, were categorized in the group of customers with previous experience consistency (350 people). Then, a two-stage analysis of multi-group structural equation modeling was used to test the effect of the moderating variable on the user's previous experience. The first step was to perform the goodness-of-fit test of the one-sample model in multi-group structural equation modeling. The second step was to test the path coefficients uniformity in which the difference in  $\chi^2$  values was compared in the model in which all paths are assumed to be the same between two groups of users (with previous experience consistency and experience consistency inconsistency) and the free model (a model in which all paths except the path potentially affected by the moderator variable are assumed to be the same between the two groups of customers). If the  $\chi^2$  of the free model is significantly less than the restricted model, and the mode of adjustment is in line with our prediction, then the hypothesis is confirmed.

**Table 6. Single-sample Model Fit Indices for User Experience Consistency (Source: Authors)**

	N	X <sup>2</sup>	df	p	GFI	AGFI	TLI	NFI	CFI	RMSEA	X <sup>2</sup> /df
Total sample	502	950.994	204	0.000	0.959	0.909	0.954	0.959	0.971	0.073	4.662
Adaptability with former experience	350	730.43	204	0.000	0.946	0.893	0.955	0.949	0.968	0.079	3.58
Inadaptability with former experience	152	699	207	0.000	0.913	0.826	0.926	0.912	0.954	0.075	3.428

Source: Authors

**Table 7. Differences in Values of  $\chi^2$  (Path Coefficient Uniformity Test) for Users with previous Experience Consistency and Inconsistency (Source: Authors)**

Hypothesis	Hypothesized Path	Model	X <sup>2</sup>	df	X <sup>2</sup> Δ	P
H9	Personalization→ Performance Expectations	Limited model	915.26	248	-	-
		Unlimited model	908.23	247	7.03	-
H10	Personalization→ Effort Expectations	Limited model	915.26	248	-	-
		Unlimited model	900.63	247	14.63	-
H11	Personalization→ Relation Quality	Limited model	915.26	248	-	-
		Unlimited model	915.26	247	0	-

Source: Authors

According to the results provided in Table 7, Hypotheses (9) and (10) are confirmed. Personalization has a positive and direct impact on performance expectancy and effort expectancy, and there is a significant difference in the groups of the user's previous experience consistency and inconsistency (performance expectancy:  $p < 0.05$ ,

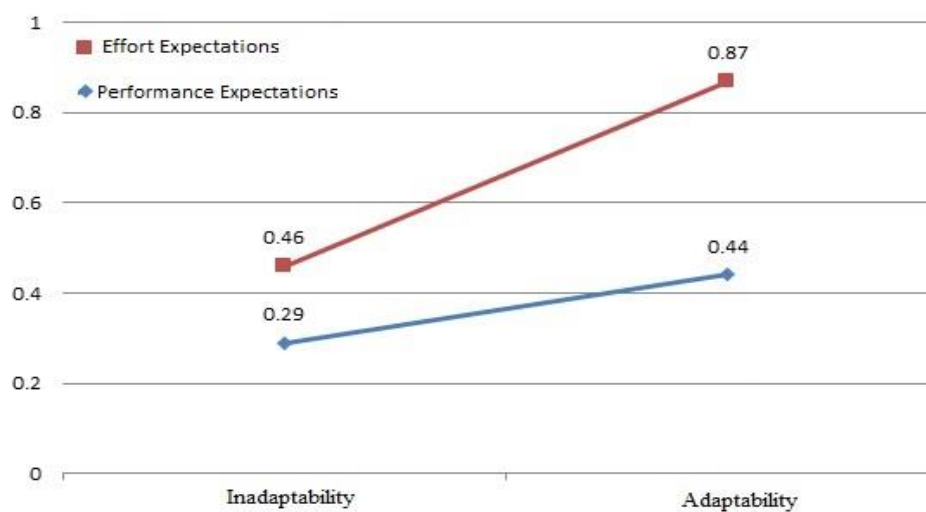
$\Delta\chi^2 = 7.03$  and effort expectancy:  $p < 0.05$ ,  $\Delta\chi^2 = 14.63$ ). In other words, personalization has a more positive effect on performance expectancy for users have consistent experience (performance expectancy:  $\beta = 0.01$ ,  $p < 0.01$  and effort expectancy,  $p = 0.01$ ,  $= \beta$ ) compared to users who did not have consistent previous experience

(performance expectancy:  $p < 0.01$ ,  $\beta = 0.29$  and effort expectancy:  $0.46$ ,  $p < 0.01$ ) (Figure 4).

**Table 8. Estimation of Path Coefficients in Multi-group Structural Equation Modeling of Experience Consistency (Source: Authors)**

Hypothesis	Hypothesized Path	Adaptability with Former Experience			Inadaptability with Former Experience		
		Standardized Coefficients	T-Value	P	Standardized Coefficients	T-Value	P
H9	Personalization → Performance Expectations	0.441	5.311	0.000	0.298	4.203	0.000
H10	Personalization → Effort Expectations	0.872	11.999	0.000	0.463	6.630	0.000
H11	Personalization → Relation Quality	0.509	6.444	0.000	0.504	0.949	0.342

Source: Authors



**Figure 4. The Moderating Effect of Personalization of Performance Expectancy and Effort Expectancy by the User Experience Consistency**

Source: Authors

Additionally, the results related to modulating the relationship between personalization and relationship quality through the user's previous experience consistency variable show that consistency does not significantly increase the positive effect of personalization on relationship quality ( $p > 0.05$ ,  $\Delta\chi^2=0$ ). Therefore, it can be stated that the 11<sup>th</sup> research hypothesis is rejected. Although personalization, as one of the relationship marketing strategies, has a positive and direct effect on the quality of perceived customer relationships (3H), this positive effect in both groups of users is consistent with previous experience ( $p < 0.05$ ,  $\beta = 0.509$ ). Inconsistent previous experiences ( $p > 0.05$ ,  $\beta = 0.504$ ) are the same and do not show significant differences.

Based on the hypothesis testing results, personalization has a positive effect on users'

performance expectancy and effort expectancy of e-banking services, and therefore, the first and second hypotheses are confirmed. As can be seen from the results, increasing the level of customer perception of receiving different services to meet their specific individual needs leads to an increase in customer confidence in the realization of their job performance. Customers' belief that using e-banking increases the performance of their banking duties has also a role. Based on the customer's perception of receiving different services according to their needs, the customer thinks that less effort is needed to use the e-banking system. When using the service, the user expects to see how easily the system can be used. Accordingly, online banking is expected to be managed through personalization and effort expectancy. The results obtained from the present study on the effect of

personalization on performance expectancy and effort expectancy are completely consistent with previous research (Wang et al., 2017; Martins, et al., 2014; Riffai et al., 2012).

Also, according to the research results, personalization has a positive effect on the relationship quality and the users' intention to use e-banking services, hence, the third and sixth hypotheses are confirmed. The effect of personalization on the relationship quality reflects the customer's driver to motivate in order to use e-banking services and to establish a relationship between the customer and the bank using personalization. Personalizing the service in different ways can improve the quality of customer relationships and customer loyalty. A personalized product or service causes improving customer satisfaction and trust, which is a prerequisite for improving relationship quality. Naturally, when services are matched to the customers' needs, they are more satisfying than when a service of a certain size is provided to all customers. Personalized services reinforce the belief in customers that the company cares about them, which in turn improves satisfaction and, consequently, increases the relationship quality between the customer and the seller. Finally, the direct effect of personalization on relationship quality and loyalty from sources such as customer orientation refers to the view that they consider personalized services as services that cannot be easily replaced by other service providers. These results are consistent with previous studies (Chen, et al., 2011; Wu & Lin, 2014; Kim et al., 2016; Jain, et al., 2014; Venkatesh et al., 2012; Nadaf et al., 2017).

The relationship quality had a positive effect on the e-banking users' loyalty, and thus, the fourth hypothesis is confirmed. Based on the results, increasing customer trust and commitment to e-banking and customer satisfaction with the relationship with this banking and generally, proper evaluation of the relationship quality by the customer, causes the customer to advertise the bank and banking website for free and spontaneously and to continue the relationship with e-banking. By receiving most of his/her required services from the same bank, consumers show their loyalty to that e-banking in the long term.

Also, based on the research results, the effort expectancy has a positive effect on the performance of users of e-banking services, and

therefore, the fifth hypothesis is confirmed. Accordingly, making e-banking services easy for users or reducing the effort expectancy improves customer performance, which is one of the tasks related to e-banking or performance anticipation. Finally, customers' intention to continue will increase the use of e-banking. Using e-banking services, bank users can receive personal emails or short messages (SMS) to meet the needs and requirements of financial services. Online agents help customers and users to effectively do their e-banking affairs, thus minimizing the expected problems of using e-banking services.

Since the test results confirm the positive effect of performance expectancy and effort expectancy on the users' intention in e-banking services, the seventh and eighth hypotheses are confirmed. When the system is easy to use, customers will increase their performance for higher perception (Venkatesh & Bala, 2008). In other words, customers do more activities to save effort when the system is not difficult to use (Venkatesh & Davis, 2000). With the advent of e-banking in some countries, it is expected that as e-banking tasks become easier, customers will be encouraged to accept it. Therefore, acceptance of e-banking services will be easier by trying to simplify e-banking operations, (Chaouali et al., 2016). The results are supported by the conducted studies (Wang et al., 2017; Martins et al., 2014; Riffai et al., 2012; Legzian, et al., 2012).

The ninth and tenth hypotheses, which suggest the consistency with previous experiences increases the positive effect of personalization on the performance expectancy and expectation of the users of e-banking services, are confirmed. Accordingly, users who understand current e-banking services with a higher level of consistency with their past experience can temporarily follow their previous routines and complete the relevant banking tasks. Users with a lower level of personalization perception may be comfortable using e-banking services. Users who perceive current e-banking services to be less consistent with their past experience may need more personal advice and guidance when interacting with online services. Such users feel comfortable when using e-banking services at a higher level of personalization. For instance, an online agent can be a good platform for e-banking customers to effectively achieve their goals (Wang et al., 2017).

Also, users who perceive more consistency between current e-banking services with their past experience can do their previous banking tasks with less effort. For instance, due to the ease of access to electronic financial services, it is preferable to use such e-services or to make the least effort in using online banking services. Online agents can also help customers save time and effort on difficult tasks. These results are consistent with previous research (Wang et al., 2017; Kim et al., 2016).

Finally, as the findings from the present study show, previous experience consistency does not enhance the positive effect of personalization on the relationship quality of e-banking users, and therefore, hypothesis 11 is not confirmed because the existing values have not affected customers' trust and commitment attitudes.

**6. Conclusion** According to collected data in the 1<sup>st</sup>, 2<sup>nd</sup>, 7<sup>th</sup>, and 8<sup>th</sup> theories, it is concluded that while there is strong competition between banks for the usage of information technology in order to improve quality levels of electronic banking services, more and better identification of cultural elements for quantity and quality improvement of cellphone and computer usage in banking is of great importance. Significance of connection between personalization and function anticipation is an indicator of electronic banking customer belief in beneficiary and effectiveness of this technology usage in quality of work improvement. Also, the connection between personalization and effort means providing options and facilities for easier usage of information technology in electronic banking and its support could be effective in the acceptance and usage of related technology. Providing easy electronic banking services for users and/or expectation reduction to the effort will improve customer performance. Bank users can receive personal email or SMS, a way which can provide for needs and demands related to financial services. Online agents help customers and users effectively finish their electronic banking errands. As a result, expected problems in using electronic banking services reduce to a minimum. Customers can also do their errands that are related to their bank accounts by adding new credit, bank card configuration, and configuration of their own personal banking services on their homepage with less effort. In Iran, the general knowledge of users is low in the field

of electronic banking services. Today, more advertisement doesn't mean more chances for a company and it is a serious warning for service providers.

According to confirmation of 3<sup>rd</sup> and 4<sup>th</sup> theories, it is suggested that customer complaining service should be kept dynamic and continued service providing for banking customer should be at the center of attention. For example, a company can call unsatisfied customers and ask the reason for their dissatisfaction and ideas to solve the problem. So, customers feel that the bank provides its services compatible with customer needs and feels safe in interacting with the bank and trusts them. In all the branches, members are being trained to treat customers friendly and appropriately. In other words, the skill of connecting with customers either in a verbal manner or behind the telephone, especially, good and friendly interaction with customers could lead to the point that if some needs of customers are not fulfilled, he will still remain loyal to his connection with companies/banks and feels committed to them. For example, websites try to send fast feedback to customers. Or the possibility of chatting with sellers during online shopping can enhance customers' trust.

For improvement of website quality, websites should include features such as a permanent access option, correct loading and performance, non-disconnection and no system damage while online shopping, and few mistakes in the process of electronic services. Also, internet services should provide given promises and if a customer faces a problem during using online services, they should solve that fast.

According to neutralizing the role of adaptability with users' previous experiences on function anticipation and effort anticipation, it is suggested that we consider users' personal and personality features in the behavior of information finding. In other words, the provided facilities, training methods, and behavioral models should be adaptable to their needs and banking services users' ballgame.

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