

TECHNOLOGY ACCEPTANCE MODEL FOR E-BANKING ACCOUNT AT TEJARAT BANK OF COMMERCE WEST MAZANDARAN

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ABSTRACT

Progress of technology has changed the face of the world. Over the past two decades, the banking industry for the use of information technology (IT) the following are funding the race is done. In response to the new law, the growth of global networks and increase income levels of technology banking industry as serious as the banker for one of the target electrons, and maintain water the strategic advantage of the work of the served. One of the functionality of electronic banking Financial said, given that the use of electronic technology to perform a well-served. Of electrons through a banker to the banks of this opportunity based on the particular needs of different customer to be in different places at the same time to be responsive. Despite the emergence of these technologies in the banking system, in Tktvlvzh of the acceptance of this type of disability suffered by the customer and the amount of people using the growth of the These services are not expected is. In these Researchers to explain Factors for the acceptance of electronic technology in the banking industry in particular one of Been done. In this study, the perceived usefulness and attitudes about internet banking is done in the form of a hypothesis given the amount subhypotheses, and six of the effect of and acceptance banker One of them studied the tapes of the show. The following results show the impact of these variables on the adoption of Internet banking has finally realized the conclusions related to the subject and the results of the proposed deal and expression of the present study, can Medicare Ran to identify the effect of the transition on the banker's acceptance and use of electrons through a The behavior of the path of the research to provide the future.

KEYWORDS: Acceptance model, Commerce Bank, Electronic Banking, Personnel banking.

INTRODUCTION

Today, the service industry in the world is changing. The method of service delivery to clients has changed, in many service organizations by new technologies. It can be said that the most powerful force for change in today's competitive environment is remote information technology. One of the biggest opportunities and challenges that organizations face today are using web-based technologies (Fraser and Mcdonald, 2000). Expansion of electronic communication between different organizational members, through virtual worlds is provided suitable opportunity to establish trade and economic relations of the virtual world (Seyyed Javadin and Seghtchi, 2006). Increasing access to the Internet have created revolution in the field of communication "one by one" and "one to many" in all parts of the world (Seyyed Javadin and Seghtchi, 2006). Internet as a new channel for financial transactions, has provided new sources of income and opportunities for organizations. Rates of exchange over the Internet are increasing day by day and companies that do not use these technologies will disappear from the market within a short time (Fraser and Mcdonald, 2000).

Among the major achievements of information technology, in the fields of economics, electronic commerce is growing day by day worldwide (Seyyed Javadin and Seghtchi, 2006). The important thing is that they require their own e-commerce platforms. One of the most important requirements economic contexts for possibility of e-commerce is e-banking situation that facilitates operations and activities related to e-commerce consistent with the global financial and monetary systems. In fact, we can say that for the implementation of e-commerce, e-banking is needed (Behmand and Hilatno, 2007).

World Wide Web has changed our customers' expectations in terms of speed, accuracy, cost of services, fundamentally. Geographical distance has lost its meaning and service availability, ease and speed of distribution, creating a competitive advantage for organizations, including the banks. To compete in this complex environment, businesses have to provide the newest and most attractive services that customers are demanding them. In this regard, many banks have provide electronic services around the world because they know that their survival is by the speed of service and

information on customer demand (Ernest and Yang, 1999). It can be said without e-banking, e-commerce also will not be achieved (Venous, 2002). In general, we can say that e-banking is to provide opportunities for employees to increase their speed and efficiency in the provision of banking services in the branch location, as well as inter-branch and inter-bank processes all over the world, providing hardware and software to customers that do their own banking by use them, without no physical presence in the bank, at any time, day or night, through communication channels safely and confidently (Kohi and Sanizadeh, 2008). Increasing attention of large banks in developed countries, developing countries in providing banking services through electronic channels and development of virtual banks and financial institutions, thereby increasing competition in the banking industry, so that the other banks are also trying to develop different approaches of Electronic Banking such as "Internet banking" and Iranian banks also require to develop its services in order to technological changes because of the introduction of Iran for membership in the WTO and the entry of foreign competitors into financial markets. According to the above, important question is that what are the factors in the adoption of Internet banking services by customers of Commerce bank in west of Mazandaran province? And how is the level of customer acceptance and actual use of these services? The purpose of this research is identifying factors that effects on acceptance and adoption of internet banking by customers of Commerce banks in the west of Mazandaran province.

Literature Review

Muller (2008), defined electronic banking, as using of the Internet to provide banking services to clients by banks and using of the Internet to organize, manage and conduct transactions on bank accounts by customers. However, some experts have suggested a more general definition and use of tools and other electronic channels such as mobile phone and digital television to inform, communicate and carry out banking transactions are also subject to the proposed definition of electronic banking (Gholipour & Soleimani, 2010).

The electronic banking channels including:

- PCs
- Kiosk
- The network management
- Landline and Mobile
- ATMs
- Sale terminals

E-banking is a banking service, which was first used in 1995 in the United States and then rapidly spread among developed countries (Wend, 2005).

In e-banking, tools such as electronic money, electronic check, electronic purse, card types including debit card, credit card, charge card, the device is used. Note that (POS) terminals and sales systems, (ATM) E-banking, are e-wider areas of banking through the Internet. Electronic banking can define compose of different areas such as Internet banking, phone banking, TV banking, mobile banking, and PC banking which customer receive service through a smart device such as a personal computer and sales terminals (Alakhband, 2006).

Lee (2002) considers three aspects of electronic banking services and believes that customers, on three levels, are able to receive e-banking services.

The three levels are:

1. Inform: This is the basic level of electronic banking services. At this level, bank information and banking services are introduced through public or private networks.
2. Communications: This level of e-banking services, provides enabling transactions between the banking system and the level of risk in e-banking services is more than traditional methods and needs to the proper tools to control user access to the network database.
3. Transaction: At this level, the client is able to use a Controlled security system for the activities such as the Czech issuance, money transfer and take account opening. The level of e-banking services, have the highest level of risk (Gholipour and Soleimani, 2010). Benefits of e-banking can be considered from two perspectives of customers and financial institutions. From the customer's perspective can be save money, save time and access to multiple channels for banking operations. From the perspective of financial institutions, can be as such features to create and enhance the reputation of banks in providing innovative, retain customers despite spatial variations of banks, creating opportunity to

search for new customers in target markets, geographic expansion of activities and the establishment of full competition (Moghadasi, 2010).

Previous Research

Yaghoobi *et al.* (2008), is with the aim of analytical comparison of three models of the theory of reasoned action, the theory of planned behavior and technology acceptance model with emphasis on the adoption of internet banking. These models were compared with each other based on three criteria: the ability to predict intention to use, explaining the variance in intention to use and overall fit of the models. Results of LISREL structural equation modeling and regression analysis in this study showed that for each criterion, the theory of planned behavior compared to the other two models have better performance.

Ferchian sahm (2006), by examining the associated factors with customers' intention to use internet banking (Case Study: Mellat Bank), Found that there is a significant relationship between attitudes, subjective norms, perceived behavioral control and customers' intention to use internet banking service however, customer perceptions of security systems on their attitude to the use of Internet banking services, has no influence.

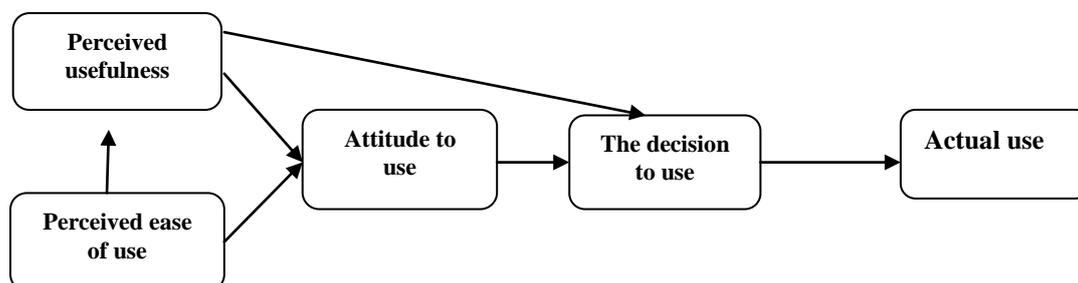
Salavati (2008), with investigate the factors influencing the adoption of electronic banking technology in Melli bank found that subjective norms, image, perceived ease of use, perceived usefulness, intention to use, professional communication, quality of output, the proof of the results of using the system are effective and only the factor of optional does not affect in the use of the system. Another study in 2008 as "The acceptance of online banking" has done by El – Somalia, Gholami, Clegg, by using the Technology Acceptance Model and some external variable, in Saudi Arabia. This research suggests that quality connecting to the Internet, awareness of online banking and its benefits, social influence and self-efficacy, influence on perceived usefulness and perceived ease of use and adoption of online banking, Education, reliability and resistance to change has a significant effect on attitude towards the possibility of acceptance of online banking.

Click (2008), Study titled "What are determinants of customers' acceptance of Internet banking in Turkey?" has done using the Technology Acceptance Model, by Click. This research reflects and poses the effects of risk perception, perception of satisfaction and perceived behavioral control on the technology acceptance model structures. The results showed that perceived usefulness and perceived ease of use have major contribution in determining their willingness to use internet banking, as direct determinant. Perceived usefulness, perceived risk and attitudes have major contribution in determining willingness to use Internet banking. Although the perception of happiness is positively influenced the perception of ease of use. Perceived behavioral control, has direct and positive relationship between the perceived ease of use and perception of usefulness and an indirect relationship with the attitude and perception of its usefulness.

Amin (2007) did a study titled "An experimental study of customer acceptance of Internet banking in Islamic Banks" in Lebanon. In this study, the structures of perception of acceptable levels of information about online banking, perception of happiness and subjective norms, were added to the structures of technology acceptance model. Results of the analysis showed that perceptions of acceptability and subjective norms are significant determinants of Internet banking acceptance among Muslims and perceived usefulness, perceived ease of use, perceived happiness, and social norms, are significant determinants of Internet banking acceptance among non-Muslims. Overall, the results showed that perceptions of acceptability and subjective norms are significant determinants of adoption of Internet banking among banks' customers.

4. The conceptual model

According to the study, Technology acceptance model for understanding factors influencing the adoption of Internet banking by customers in this study, acceptance of Internet banking is measured with the influence of technology acceptance model of Davis. The basic variables of this study are "Ease of use" and "usefulness" as independent variables and "Acceptance of Internet Banking" as the dependent variable. In this study, the external factors of model have been removed because spread of research and increase the time of it. Given the constructor factors "technology acceptance model", relations between them and the overall structure of the model, this research is as follows:



MATERIALS AND METHODS

Research hypotheses

The main hypothesis: There is a relationship between the TAM model factors and use internet banking, among Commerce bank customers.

Research sub-hypotheses:

- 1- There is a significant relationship between customers' perception of the usefulness of Internet banking, and customers' attitude to the use of it.
- 2- There is a significant relationship between customers' perception of the usefulness of Internet banking, and customers' decision to use it.
- 3- There is a significant relationship between customers' perception of ease of use of Internet banking, and customers' attitude to the use of it.
- 4- There is a significant relationship between customers' perception of ease of use of Internet banking, and customers' perception of the usefulness of it.
- 5- There is a significant relationship between customers' attitude to the use of Internet banking, and customers' decision to use it.
- 6- There is a significant relationship between customers' decision to use of Internet banking, and Actual use of it.

Research Methodology

Research methodology and data collection methods

This research is a descriptive study, and the correlation method performed and since it is seeking to obtain information about attitudes, beliefs, opinions, behavior, view a sample of members of a target population of the survey and the questioning is done, is a survey research. Data collection tools will include: Refer to the documents, observation and in particular, interview and questionnaires. Should be noted that, in management research in Iran, questionnaires is likely better to meet the information needs (Azar, 1994). In the present study, the researcher used the questionnaire.

Population and sample

The study population included of internet banking customers of 17 branches of Commerce Bank; the branches of West Mazandaran, that included branches in the city of Ramsar, Tonekabon, Abbasabad, Chalous, Noshahr and Nour, that these units used of internet banking service during the first six months of 1393.

Using cluster sampling, the five branches will be selected of the all branches; then the study subjects (clients) were randomly selected from the mentioned branches for the questionnaire.

The method used for data analysis

In this study, SPSS 20 software and different methods of descriptive and inferential statistics were used to analyze data and test hypotheses.

Statistical analysis and hypothesis testing

Descriptive analysis of research data

Descriptive statistics characteristics of the study variables are presented in Table 1.

Table1. Descriptive statistics characteristics of the study variables

	Perception of usefulness	Customer's attitudes	Customers' decision to usage	The perception of easily	The real usage of customer
Number of samples	160	160	160	160	160
Distribution parameters	Mean	3.8183	3.7448	3.8412	3.6917
	Standard deviation	0.61741	0.83698	0.88994	1.00077
The maximum deviation	Absolute value	0.113	0.145	0.172	0.186
	Positive	0.113	0.096	0.115	0.120
	Negative	-0.096	-0.145	-0.172	-0.193
The test statistic Z	1.428	1.831	2.181	2.437	2.351
The significance level	0.554	0.562	0.534	0.844	0.765

since the significance level of 5 factors (greater than 0.05), as a result,, assuming H_0 (non-normality of the main factors in the present study) reject and the hypothesis H_1 (normally the major factors in the study) confirmed the result.

Deductive analysis of research data

In investigations, usually used of two types Spearman and Pearson correlation test. Spearman test is used for abnormal data analysis and Pearson's test is used for analyze the normalized data. Since the test was taken after it (by Kolmogorov-Smirnov test (KS)) was found that the survey data is abnormal, to determine the correlation coefficient between variables, the Spearman test was used.

Table 2. Spearman correlation coefficients

Factors	Perception of usefulness	Customer's attitudes	Customers' decision to usage	The perception of easily	The real usage of customer
Perception of usefulness	The correlation coefficient	1.000	0.817	0.559	0.551
	The significance level		0.000	0.000	0.000
	Number	160	160	160	160
Customer's attitudes	The correlation coefficient	0.817	1.000	0.754	0.714
	The significance level	0.000		0.000	0.000
	Number	160	160	160	160
Customers' decision to usage	The correlation coefficient	0.559	0.754	1.000	0.899
	The significance level	0.000	0.000		0.000
	Number	160	160	160	160
The perception of easily	The correlation coefficient	0.551	0.714	0.899	1.000
	The significance level	0.000	0.000	0.000	
	Number	160	160	160	160
The real usage of customer	The correlation coefficient	0.592	0.680	0.867	0.970
	The significance level	0.000	0.000	0.000	0.000
	Number	160	160	160	160

H_0 : There is no significant correlation between the two variables.

H_1 : There is a significant correlation between the two variables.

In Table 2, the level of significance in all measures between the two factors together, is less than 0.05. So the result will be that H_0 (there is no significant correlation between the two variables) is rejected and hypothesis H_1 (there was a significant correlation between the two variables) is confirmed. Based on these assumptions and the results of this test indicate that all six hypotheses is confirmed.

In this part of the study, regression testing is used to ensure that there is a relationship between each of the main factors of the research (the two cases are discussed). Although the relationship between the variables is confirmed by the Spearman correlation test. The first hypothesis: There is a significant relationship between customers' perception of the usefulness of Internet banking, and customers' attitude to the use of it.

Table 3. First hypothesis regression coefficient of determination

The research model	Chi-square	d.f	The mean square	F	The significance level
Regression	72.155	1	72.155	290.608	0.000

Given the significant level in this area and is expressed by table, it is shown that these two factors are significantly associated with each other and the first hypothesis is Confirmed and against the hypothesis that the absence of a significant relationship between the two factors was found to be rejected.

The second hypothesis: There is a significant relationship between customers' perception of the usefulness of Internet banking, and customers' decision to use it.

Table4. Second hypothesis regression coefficient of determination

The research model	Chi-square	d.f	The mean square	F	The significance level
Regression	33.136	1	33.136	56.423	0.000

Given the significant level in this area and is expressed by table, it is shown that these two factors are significantly associated with each other and the second hypothesis is Confirmed and against the hypothesis that the absence of a significant relationship between the two factors was found to be rejected.

The third hypothesis: There is a significant relationship between customers' perception of ease of use of Internet banking, and customers' attitude to the use of it.

Table5. Third hypothesis regression coefficient of determination

The research model	Chi-square	d.f	The mean square	F	The significance level
Regression	51.568	1	51.568	136.214	0.000

Given the significant level in this area and is expressed by table, it is shown that these two factors are significantly associated with each other and the third hypothesis is Confirmed and against the hypothesis that the absence of a significant relationship between the two factors was found to be rejected. The fourth hypothesis: There is a significant relationship between customers' perception of ease of use of Internet banking, and customers' perception of the usefulness of it.

Table 6. Fourth hypothesis regression coefficient of determination

The research model	Chi-square	d.f	The mean square	F	The significance level
Regression	18.449	1	18.449	62.142	0.000

Given the significant level in this area and is expressed by table, it is shown that these two factors are significantly associated with each other and the fourth hypothesis is Confirmed and against the hypothesis that the absence of a significant relationship between the two factors was found to be rejected.

The fifth hypothesis: There is a significant relationship between customers' attitude to the use of Internet banking, and customers' decision to use it.

Table 7. Fifth hypothesis regression coefficient of determination

The research model	Chi-square	d.f	The mean square	F	The significance level
Regression	62.273	1	62.273	154.572	0.000

Given the significant level in this area and is expressed by table, it is shown that these two factors are significantly associated with each other and the fifth hypothesis is Confirmed and against the hypothesis that the absence of a significant relationship between the two factors was found to be rejected.

The sixth hypothesis: There is a significant relationship between customers' decision to use of Internet banking, and Actual use of it.

Table 7. Sixth hypothesis regression coefficient of determination

The research model	Chi-square	d.f	The mean square	F	The significance level
Regression	91.399	1	91.399	418.229	0.000

Given the significant level in this area and is expressed by table, it is shown that these two factors are significantly associated with each other and the sixth hypothesis is Confirmed and against the hypothesis that the absence of a significant relationship between the two factors was found to be rejected.

RESULTS AND DISCUSSION

FINDINGS

The results of regression analysis indicate that:

- ATM model has 0.73 contributions of attitudes toward the use of banking.
- Customers' perceived has 0.69 from the contribution of the usefulness of e-banking.
- Ease of use of Internet banking has 0.40 from the contribution of customers' decision to use it.
- Customers' attitudes have 0.58 contributions of the making changes to use Internet banking.
- Customers' decision to use internet banking has 0.69 contribution of changes in customers' perception to use Internet banking
- Regression test results show that the customers' actual use of internet banking has 0.55 contributions of changes in customers' perceptions in the use of internet banking.

These results are consistent with the results of AGruel and colleagues in this post and the present results are consistent with the results of Davis. The computer self-efficacy have significant effect on the usefulness and ease of use.

Recommendations based on research findings

1. Recommended advertising agencies provide the right context for the use of e-banking because the customers' attitude towards the usefulness and effectiveness of this type of banking, has influence on use it.
2. It is suggested to provide various incentives for internet banking users, including granting the discount, providing daily and monthly cash flow
3. Inform customers of the benefits of internet banking services, such as reduce money printing costs and reduce fuel bills and provide 24-hour service.

4. Increasing the capacity and diversity of Internet banking services so that customers are able to conduct all financial transactions through this service.
5. The system should be designed such that it is easy for the public to use.
6. Use of experts and efficiently personnel, in parts of supported sites and other electronic services sectors

Suggestions for Future Research

1. Barriers to Internet banking in branches of Commerce banks
2. The role of regulators of clients' age and sex, in using Internet Banking

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