Efficiency of Electronic Banking Services and Evaluation of Effective Factors in Increasing Use of Customers of Them
(Case Study: Use of ATM systems in Guilan Province)

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ABSTRACT

This study has been done with aim of to identify factors affecting the willingness of customers to use electronic banking services and using the technology acceptance model of Davis. According to this model, the behavior use of information technology has been willingness to using of a specific system and also tend to use is determined by perceptions of Individuals from ease of use and usefulness use of its system. In this study was studied the influence of external variables entitled self-effectiveness of individuals in use of automatic teller machine (ATM) on individual perceptions about ease of use and usefulness of these services. By using of method of descriptive - analytical of type of the survey were studied sample consisted of 384 customers of ATMs. First and second hypothesis that were expressed respectively relationship between individual self-effectiveness in use of ATM machines with individual perceptions about ease of use and individual perceptions about the usefulness of use, was examined and confirmed through Spearman correlation coefficient test. third and fourth hypothesis that were expressed the relationship between individual perceptions about ease of use with a willingness to use ATM machines services and also individual perceptions about the usefulness of use with willingness to use ATM machines services, was examined and confirmed through Chi-square test and Cramer's v. The findings of this study showed that technology acceptance model is an appropriate model for describing the behavior of use from electronic banking services and in fact individual perception about the ease of use of ATM machines and Self-Effectiveness of the individual in use of ATM machines has the direct relationship with willingness to use this service.

Keywords: Technology Acceptance Model, Individual Perceptions about Ease of Use, Individual Perceptions about the Usefulness of Use, the Individual Self-Effectiveness in Use of ATM Machines.

1. INTRODUCTION

Now today services industry is changing in the world. New technologies have changed offer ways service to the customers in many service organizations. The most powerful force for creating change in competitive environment of today is information and telecommunications technology. Basic technology of this era is called information technology and the latest interpretation, information and communication technology (ICT) (Taheri & et al, 2012). ICT development, in light of the evolution of computer science in the business world is changing dramatically (Gilaninia & et al, 2011). Also with development of electronic systems such as the internet has affected in financial institutions and banks. Basically World Wide Web has changed customer's expectations about the speed, accuracy, price and service. Geographical distance has lost their meaning and service availability, ease and speed of service delivery creates competitive advantage for organizations such as banks. For compete in this complex environment, businesses are forced to offer the newest and most attractive services that customers want them. In this regard, many banks have paid electronic service delivery in worldwide. Because they know that principle of their survival is in provide speed and informed from customer demand. The customer is central to all marketing activities of banks the world over (Taleghani & et al, 2011).Nowadays customers are willing to do its banking operations by using electronic systems without referring to the branch. Bank customers by using electronic banking services can carry their banking operations in favorite time and place and banks to make a profit as well as lower operating costs due to reduced staff numbers and reducing the number of branches. Now, use of instruments online payment in the world now has a thriving and the growing use of ATM, telephone and internet banking are 26, 25 and 35 percent respectively (Fattahi & et al, 2011). In fact we can say use of electronic banking isn't component Dos and Don'ts but It is inevitable. On the other hand given role of international communication, ignoring this sweeping wave in management of financial- credit system will cause country penetration in a global isolation (Lotfinia Aliabadi, 2008).

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2. LITERATURE REVIEW

Today banking industry is changing rapidly (Gilaninia & et al, 2011).With development of international economic and competitiveness of markets, banks are also affected. The current business environment is very different from the past and the competition has a special role (Ziakhosoosi & et al, 2011). The main force in this environment is technology that is caused to break barriers of legal and geographical and has developed new products and services (Lioz, 2002, P285). The term electronic banking can be defined as e-banking services. Based on this definition, electronic banking offers electronic service. In fact in electronic banking change infrastructure banks completely and hence, how to communicate with customers will also a huge transformation (Kimiaei, 2002, P94). Much research has been done so far in the field of information systems (Banikhedmat, 2011). Through the deployment of telecommunications systems and technologies, a bank can easily access to their customers and not only offers general information about the services to them, but also provides the opportunity to perform banking. Bank customers by use this service can to do banking operations without leaving your home or work (Sanaei, 2001, p199). In fact, electronic banking includes electronic channels that customers to access their accounts and transfer funds among accounts or pay their bills use them. These channels include Internet, mobile, phone, digital TV and ATM's. In this study is the emphasis on electronic banking through ATM. Today, many banks in the world offer their services electronically and considered membership of Iran in the world trade organization and with enter of foreign competitors to the financial markets, Iranian banks also need to develop their services in line with technological changes. In developing countries, banks usually check the services provided by the banking systems of developed countries to emulate them and their provide services and because lack of perform required research and studies, this kind services offer as partial to customers (Sarmadi, 2004, p18). While banks should considered the country's economic and social conditions before provide any new services. Because existence of high inflation, low income, low awareness, lack of understanding of different groups of people and their demands, the people distrust towards new services and non-appropriate advertising are caused that new service can't develop between people easily (Sheikhani, 1999, p229).

ATM is one of the electronic banking services that too much faced welcomed by the people in the country, so that in some days referred to amount of these devices is much higher of their specific capacity. As can be seen in Iran, other services not received or the amount of attention to them is very low and obviously, if not welcomed by customers from electronic banking systems, providing these kind services will fails. However Identify factors that cause excessive use from ATM will have key importance because identification of these factors will help bankers that use their marketing strategies to promote new forms of electronic banking systems. This issue why people are accepting a technology or conversely it cannot use it is the most important issues of Information systems. In this study used Davis's technology acceptance model that was presented for review of the use of computers in 1989.
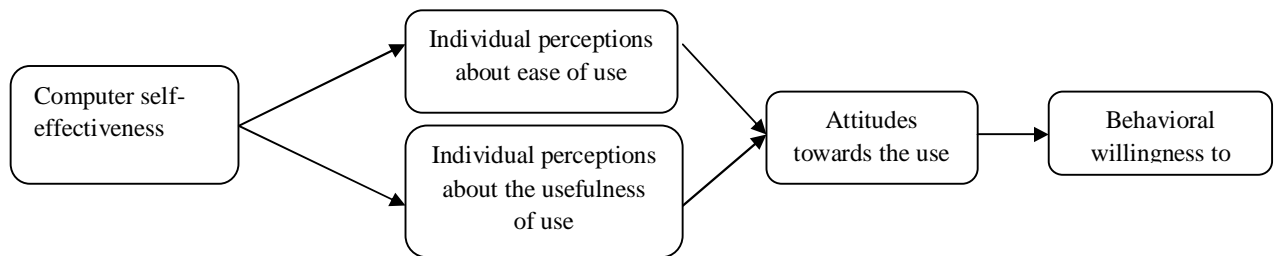

Fig 1) Technology acceptance model of Davis (Davis et al, 1989, p986)

It seems that this model can provide factors that may cause excessive use of ATM because so far has been used in more than 100 researches and in various fields of technology (Joseph et al, 2003, p192). This research has shown that technology acceptance model offers appropriate Theoretical framework for understanding the behavior of use and acceptance types of information systems. (Lotfinia Aliabadi, 2008).

3. Research Hypotheses

1- There is relationship between self-Effectiveness of the use of ATM with customers' perceptions about ease of use of electronic banking services.

2- There is relationship between self-Effectiveness of the use of ATM with customers' perceptions about Usefulness of use of electronic banking services.

3 - There is relationship between customer perceptions about ease of use of electronic banking services with their willingness to use of this service.

4- There is relationship between customer perceptions about usefulness of use of electronic banking services with their willingness to use of this service.

4. RESEARCH METHOD

In this study statistical society is all customers of public banks in Guilan province that they have used ATM services of these banks. Given the very large number of these people, in this study society size is unlimited. Sampling method is a non-probability of available. Sample size was calculated 384 by using sampling formula. This study in term of the aim is among applied research and in term of data collection is descriptive - analytical of the survey. Method of collection of statistics and information is field method. Questionnaire is a tool to gather information. In setting questions of questionnaire in present study inspired also previous research that has been done abroad and according to research objectives have been applied very small changes in it. Of course validity of this questionnaire also has been approved by using faculty members, advisers and few other respected professors and experts in banking. For the questionnaire reliability is used Cronbach's alpha coefficient that the amount of it is obtained more than 75% and because alpha coefficient is obtained more than 70% thus the questionnaire has good reliability. For data analysis was used Spearman test.

5. Data analysis

Table 1) result of Spearman correlation coefficient

Hypotheses	N	Correlation coefficient	sig	result
First Hypothesis	384	.719	0.000	Confirmed
Second Hypothesis	384	.678	0.000	Confirmed

First hypothesis: According to spearman correlation table is observed that there is relationship between self-effectiveness of the use of ATM with customers' perceptions about ease of use of electronic banking services and its intensity is equal to 71.9 percent that according to sig is less than 0.05, this amount is significant.

Second hypothesis: According to spearman correlation table is observed that there is relationship between self-effectiveness of the use of ATM with customers' perceptions about usefulness of use of electronic banking services and its intensity is equal to 67.8 percent that according to sig is less than 0.05, this amount is significant.

Table2) Chi-square tests

	Value	Df	Asymp.sig(2sided)
Pearson chi-square	106.054	2	**.000**
Likelihood ratio	60.551	2	**.000**
Linear- by- linear Association	66.670	1	**.000**
N of valid cases	384		

Table3) Symmetric measures

		value	Approx.sig
Nominal by	phi	.548	**0.000**
Nominal	Cramer's v	.548	**0.000**
N of valid cases		384	

Third hypothesis: According to obtained results 20% results have the expected frequency less than 5. Therefore we are forced to merge. Also Chi-square test observed that there is relationship between two variables and according to sig value is less than 0.05, thus this relationship is significant. The amount of Cramer's v (it is represents the intensity this relationship) is equal to 52.4 percent that according to sig amount is significant. Therefore third hypothesis is confirmed.

Table4) Chi-square tests

	Value	Df	Asymp.sig(2sided)
Pearson chi-square	115.021	2	**.000**
Likelihood ratio	64.128	2	**.000**
Linear- by- linear Association	67.660	1	**.000**
N of valid cases	384		

Table5) Symmetric measures

		value	Approx.sig
Nominal by	phi	.548	**0.000**
Nominal	Cramer's v	.548	**0.000**
N of valid cases		384	

Fourth hypothesis: According to obtained results 20% results have the expected frequency less than 5. Therefore we are forced to merge. Also Chi-square test observed that there is relationship between two variables

And According to sig value is less than 0.05, thus this relationship is significant. The amount of Cramer's v (it is represents the intensity this relationship) is equal to 54.8 percent that according to sig amount is significant. Therefore fourth hypothesis is confirmed.

5. Conclusions and Suggestions

Overall, the results can be summarized as follows:

1- Data analysis showed that there is relationship between self-effectiveness uses of ATM with perceptions of customers about ease of use of electronic banking services (ATM). Calculated Spearman correlation coefficients confirm this relationship. Other words whatever person have been additional ability to use ATM to do bank service, in result the use of ATM services is easier. Thus the first hypothesis of this research has been accepted.

2- On the other hand to examine the relationship between self-effectiveness use of the ATM and customer perceptions about the usefulness of using electronic banking services (ATM) was used Spearman correlation coefficient due to ranking for two variables. Data analysis confirmed a significant relationship between these two variables. Other words whatever individual self-effectiveness in use of ATM for banking service is more, in terms of the use of ATM is more useful. Thus second hypothesis of this study are also accepted.

3- For the third hypothesis saying that there is significant relationship between Individual perceptions about ease of use of ATM services and willingness to use of this service was used Chi-square test and Cramer's V. Data analysis showed that these two variables have a significant relationship with each other. In other words, whatever person have been positive perceptions towards the ease of use of ATM services, willingness and intention to use this service will be more. Thus the third hypothesis of this study also confirmed.

4- There is significant relationship between individual perceptions about the usefulness the use of ATM services and willingness to use of this service. Chi-Square and Phi and Cramer's V is also confirmed this relationship. Thus the fourth hypothesis of this study also confirmed. In other words, if in terms of bank customer the use of electronic banking services and ATM particularly be useful, a person has more behavioral willingness to use of this service.

5- Data analysis didn't show between age and willingness to use ATM devices. Means tend to use these services that in accordance with model of Davis affected by Self-Effectiveness, perceived ease of use and perceived usefulness, age hasn't little role.

6- Data analysis also showed that there isn't significant relationship between genders and tend to use ATM. Means to be man or woman of people is not affected in their willingness to use the service.

7- Data analysis also showed that there is significant relationship between education levels and tend to use ATM. It means that the respondent had a higher education were more willing to use services of ATMs. The reason may be that people with higher education have a greater ability to use computers and ATM And therefore show more willing to use this service.

8- Overall findings showed that technology acceptance model is functional model for understanding the willingness of customers to use ATM and electronic banking services. The findings had been confirmed previous research that is done about various technologies.

9- The findings of this study can be used for the development of electronic banking systems. Considering that a lot costs to be spent for the development of electronic banking systems, ensuring that people are using these systems is very important. In order to increase the willingness of customers to use electronic banking services must design systems that their application has been easy and In addition, it is useful for customers and their use is associated with benefits.

Due to perceived usefulness and ease of perceived use will effect on the willingness of users to use new technologies. Therefore, banks responsible should be affect to customer perceptions by using appropriate advertising and correct marketing as increase the willingness of customers to use this service. Because one of the most important services electronic banking is internet banking, responsible of banks can increase individuals self-effectiveness in use of computers and electronic banking systems by hold their training course. Because as noted, people with higher self-effectiveness in use of systems have more readiness to use electronic banking services

Research suggestions based on the results:

It should be noted that in this research was used primary technology acceptance model and Davis improved this model in 2000 and with the addition of model variables introduced secondary TAM. Also technology acceptance model is often used in America and its applications in non- America industrialized countries such as Switzerland and Japan has been rare and is rarer in developing countries. Because this model seems completely based on rational analysis, will need reforms for use in eastern countries that in this regard the efforts being made in Iran and technology acceptance models have provided and introduced with Iran situation. Thus because secondary technology acceptance models and also proposed model with regard to Iran's conditions, it contains more variables towards primary tam.it are recommended: Other research is done with theoretical framework of this new model to influence new variables of these models are also determine on behavior of customers and

consumers. Perhaps these new variables that according to our country requirements in the new models are included have influences far more than the previous variables on customer how to use of electronic banking services.

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