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Electronic Banking; a New Strategy to Create Customers' Loyalty to Investment and Its Impact on Economic Initiatives

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Abstract

With technology development and the market conditions getting more competitive in different production and service sectors, loyal customer is considered as main capital of every organization. The expansion of internet global network has brought many benefits to all organizations including banks which along with considerable issues arise. Special equity of services including investment which became an important concept in marketing since 1980 is in fact the added value generated for the organization by using that service. The purpose of this research is to explain the loyalty of customers to investment through using electronic banking services in order to participate in advancing the economic projects, and also to empirically test whether this is related to trust in investment and investment special equity. Statistical population consists of customers of Saman bank in Mashhad city who have substantial account balance and are able to invest in economic projects suggested by bank. And their satisfaction with electronic banking services was investigated through random sampling. Needed information was collected using a questionnaire and correlations of variables were tested by means of Pearson correlation test and multiple regression. Analysis of the study findings using SPSS 16 shows that there is a positive correlation between trust in investment and investment special equity with customers' loyalty to investment in economic projects by bank through using electronic services. And trust in investment and investment special equity are significantly related to two types of loyalty (attitudinal loyalty and behavioral loyalty).

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Introduction

In today world internet has attracted the attention of many researchers, participants in business, governments and media commentators in recent years. In fact, internet has grown rapidly in most parts of our society. With using world web, its commercial applications have increased fast and undoubtedly internet applications in investment will increase too. Internet has brought great effectiveness to obtain, organize, and communicate information in commercial organizations (Rahmani, 2000)

Banking industry is changing fast. With Development of international economy and markets getting competitive, banks have been affected. The main force in this environment is technology which has broken legal, geographical, and industrial barriers and created new products and services (Kahzadi, 2010). With the development of communication and information technology and increasing growth of electronic trade and commerce in the world and the need for banks in order to transfer financial resources, electronic banking as an integral component of electronic commerce, has a fundamental role in its implementation. It can be said that electronic commerce will not be realized without electronic banking (Haghighat Khah, 2011).

With the development of electronic systems such as internet, financial institutions and banks were also affected. Web global network has essentially changed customers' expectations about speed, accuracy, price, and services. Geographical distance has lost its meaning and availability of services, ease, and speed of distribution of services; make competitive advantage for organizations including banks. Businesses have to offer customers the newest and most attractive services they want, in order to compete in this complicated environment (Vijayan, 2010).

Nowadays, with completion getting more intense in production and service sectors, the role of customer loyalty has become more significant. In current point of view marketing consists of considering satisfaction and quality perceived by customers and their loyalty and effective relationship with them. Therefore organizations try to have loyal customers (Heydarzade, 2008).considering that in service sector, there are extensive interpersonal relations between service provider and customer, the role of loyalty is especially important in this sector. Customers' loyalty to electronic banking services could increase market share the bank and market share has a close relationship with return on investment and profitability in organization (Meller and Hansan, 2009). In addition price sensitivity of loyal customers is lower compared to non-loyal customers.

While most researchers in the field of loyalty focus on repurchase of consumer goods, the concept of loyalty in the service sector is also important. The complex nature of

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service is because of its features i.e. intangibility, perishability, high customer involvement, simultaneity of production and consumption and heterogeneity (Arasli, 2002). These key differences between services and products could cause different approaches in marketing (Punniyamoorthy and Prasanna Mohan, 2007). Although these differences have been totally accepted by researches, the studies in the field of investing and role of investment have been partial toward the goods and no study has been done on investment in economic projects using other organizations' services (banks' electronic services in current study). In this section we describe theoretical the framework of research.

Definition of electronic banking

Electronic banking is a special kind of banking which uses an electronic environment like internet to provide service to its customers. In this kind of bank all banking operations including receiving or depositing money, signature verification, getting the balance and other banking operations are performed electronically. Internet banking is a special kind of electronic banking which uses internet as a delivery channel. Two common types of electronic banks are: e-banks and e-branches.

An electronic bank is in fact an institution which is only on the internet or other delivery networks and has no physical branch. This framework leads us to a bank which does not need paper works, is not restricted to special geographical areas and is never close to customers and offers 24-hour services to customers.

E-branch means that ordinary banks, offer electronic banking services to their users. This model is used because all of the internet users and bank customers do not use electronic banking services (Hosseini, 2009).

Types of electronic banking

Domestic banking

Domestic banking is defined as doing banking activities via personal computers at home. This can be done by personal computers, modem, and a telephone line.

Internet banking

In this type of banking, customers perform banking operations through a website created by the bank on the public network (internet). This type of banking has different levels:

Information

This level is the most basic level of internet banking. Bank locates its server information on a website and provides internet banking services.

Communication

At this level of internet banking, transactions between customer and the bank is possible. This works exactly like E-mail.

Transaction

At this level customers are allowed to transact with each other. These transactions include checking accounts, paying bills, transferring money or any other bank operations. This level requires high security

Mobile banking

With the development of the capacity of mobile phones to connect to the Internet, this possibility emerged for banks customers to access the information of their bank central computer and do bank operations.

Telephone banking

In this method, customers could connect to the bank central computer and do some banking activities using phones equipped with tone system.

Table 1: comparison of different levels of internet banking

Different levels of internet banking	Basic	Intermediate	Advanced
informational	Electronic manual, communication tools such as emailing exchange daily report	Search engine, downloading economic reports and information	Registering on the website, joining discussion groups, access to other websites
Communicational	Electronic post, suggestion and critique forms, feedback forms,	Using advise tools such as calculators applied in financial planning	Video conferencing, service development
transactional	Opening bank accounts, applying for cheque book, applying for bank cards	Checking and printing account balance, paying water, electricity and telephone bills, transferring money	Electronic money, Electronic signature, Electronic cheques

Infrastructures required for electronic banking

Security infrastructures

Security is one of the main obstacles to the implementation of electronic banking. Some believe that banks first of all should make customers trust that electronic banking and its operations are secure enough. Customers' distrust in security of electronic banking is considered as one of the main difficulties of using it.

Technology advancement and effort undertaken have not been able to stop this concern: "extensive technology advances, have helped to enhance security of transferred data in electronic banking. Despite this, security challenges still remain on the way of electronic banking" (Adam, 2008).

Security problem arises more in Internet banking. Generally, information of financial institutions such as financial information and customers' information are highly sensitive and confidential; therefore transacting through public network (internet) puts this information at the risk of other people's access. Every electronic bank system have to solve problems such as authentication (each of transaction parties should be able to recognize the other's identity), confidentiality (transferred information must not be made available to unauthorized persons), integrity (parties should be able to ensure that information has been fully transferred), undeniability (being able to prove that transaction took place at a certain time), trust (parties should trust in the system they use), anonymity (identities of transaction parties should remain secret unauthorized persons) and being untraceable (transactions should be untraceable for unauthorized persons). In other words it should be guaranteed that only authorized persons have access to confidential information and customers' accounts and transactions are untraceable.

Information and communication infrastructures

These infrastructures are actually the same technical infrastructures required for electronic commerce and banking which the most important are advanced telecommunication facilities, access to satellite systems, reliable electricity network, hardware and software facilities, internet service providers and public access to the internet. Telecommunication equipment is one of the most important infrastructures required for electronic banking as it will be impossible to implement electronic banking without providing and developing this type of infrastructure and that's why nowadays huge investments in equipping and developing advanced and efficient telecommunication lines are made by different countries.

In addition to the above, efficient transportation systems (ground, rail, air, maritime), advanced post and developed insurance institutions are also communication infrastructures which play roles in expanding electronic banking (Harris et al., 2011).

Educational, cultural, and social infrastructures

Undoubtedly electronic banking will not be accepted by customers without appropriate cultural contexts and public education for using electronic banking services, even if all security and technical contexts are provided. Studies on customers' attitude toward electronic banking and their orientation to it, shows that factors affecting electronic banking acceptance differ in various countries. For example in Finland where the literacy

rate of bank customers is high, penetration rate of electronic banking is much more and this technology is more easily accepted (Heikki, 2007). So applying modern technologies in banking should fit customers' level of knowledge and awareness and social and cultural conditions of the society. Before any action, the success of technology acceptance and public use of it should be guaranteed.

Internet and computer penetration rate in the society, the level of wages and per capita income, costs of internet access, economic security and business climate are social and cultural factors affecting electronic banking acceptance. Economic and social considerations such as workforce employment rather than using capital also affect use and acceptance of electronic banking. Social values are also affective in this area. For instance in some rural regions in Malaysia, customers prefer the interface between bank and customer to be a human rather than a machine.

A very important point to note here is that today advanced countries using information technology for solving their problems; consider the necessity of applying that special kind of technology. In other words, as long as existing procedures in an industry meet the customers' needs, willingness to innovation will be low. If banks neglect this, they may pay huge expenses to purchase an unpopular technology and then have to incur additional costs for marketing and encouraging customers.

Juridical and legal infrastructures

Economic security has been considered as an important prerequisite of economic activity from long ago; this security requires dynamic rules and regulations which fit the needs of each period of time. For efficient e-commerce to be realized numerous Juridical and penal laws which consider all legal requirements are needed. In an electronic commercial transaction the parties should determine their rights and duties including subject and purpose of agreement, definitions, field of activity, exchange standards, safety, how to send and receive messages, storage, auditing, commitments, insurance policy, interbank exchanges and so on. Some legal issues important for trade parties in e-commerce are: definition of legal relationship in contracts, privacy and data protection, consumer protection, civil and contractual liability, the role of electronic certificate authorities at national and international levels, issues related to code of civil procedure and proving arguments, electronic payments including electronic money and credit cards, misuse of card banks, access to others' bank accounts, data destruction, lawful marketing and advertising by companies, committing willful violations such as forging and data theft, tax issues, customs, transportation, insurance, international law in case of international dispute and so on.

Security of exchanging electronic data and commerce should consist of a process which protects all main elements of a commercial transaction completely. In other words receiver makes sure that sent information was sent by the person of interest and was not changed regarding unauthorized access after sending and sender is sure of the accuracy of message. In addition we should be able to save information without any changes so that we can submit the original version of it to supervising authorities any time (Hashemi, 2008).

Experience of the US in electronic banking

According to SCF out of ten American households, nine households have a bank account and nearly 93% of them use at least one of electronic banking services like direct deposit, card of ATMs or debit cards and banking through personal computers, with their bank account. Generally, following services are offered in the US electronic banking system:

a. Bank use internet as an information tool. For example, services such as electronic manual, advertising information, daily news about changes in bank interest rate and fees for different bank services and stock market, search engines, downloading different economic reports and articles, employment form, access to other websites, electronic forms related to registering on website, membership in discussion groups and so on.

b. Banks offer many services usually provided in branches, through their websites. For instance customers can give bank feedbacks via email. Advice tools such as electronic calculators which help customers in financial decision makings are also available at this level of internet banking. However advanced technologies like video conference are offered by American banks. At this level of internet banking, bank as a financial advisor, guides the customer for true investment decision makings (Heikki, 2007).

Loyalty

Loyalty is a kind of positive attitude toward a product created by repetitive purchase of it and mental processes could be considered as its reason. In other words, repurchase is not just an optional response, but a result of mental, emotional, and normative factors (Matzler and Grabner, 2010).

Oliver (1999) defines loyalty as a deep commitment to repurchase or advocate a product or service of interest, which despite situational effects and rivals' marketing efforts causes repetitive purchase of a brand or products of a brand in future).

Keller (1998) expresses that in the past, brand loyalty was often measured simply by repurchase behaviors only, while customer loyalty could be noticed widely instead of being defined as simple buying behaviors. Loyalty to brand is composed of two components: behavioral loyalty and attitudinal loyalty. Melnz et al (1996) define behavioral loyalty as loyalty to a brand through observable buying during a period of time. In fact behavioral loyalty is considered as number of times and amount of purchases. Attitudinal loyalty is defined based on preferences, commitment, or purchase intention.

Many researchers believe that behavioral loyalty cannot represent real reasons for purchase, so attitudinal aspects should be considered to (Baloglu, 2002).

Chaudhri and Holbrook (2001) developed a model of brand loyalty in which behavioral loyalty leads to larger market share, while attitudinal loyalty results in relatively higher pricing. According to Morgan (2000) the term "loyalty" could be

interpreted in various ways. It varies from emotional loyalty, how I feel, to behavioral loyalty, what I do. According to the studied done in this area; customer loyalty has been considered as a function of behavioral loyalty and attitudinal loyalty in this research.

Risk aversion and loyalty are in fact synonyms. In other words the concept of loyalty evokes the concept of risk aversion. Risk (danger) is a consequence of an action or event done by a person. People want to incur the lowest risk possible when using products and services. In other words they want to use a product or service which brings the lowest risk to them. People get loyal to a product or service when they see there is no risk in using them and this is an important reason for future purchases of that product or service (Bennett et al, 2005). Conceptual framework of this study was built based on the relationship of investment equity, trust in investment and customers' loyalty.

Research method

Regarding that the main purpose of this study is to find cause and effect relationships and we study the effect of an independent variable on a dependent variable, effect of trust in investment and investment equity on customers' behavioral and attitudinal loyalty to investment, research method is causal-comparative with a descriptive-analytical approach. It is descriptive because uses questionnaire tool and it's analytical because in addition to describe current situation, tests the hypotheses in terms of prediction-oriented relationships. This is also an applied research since its results can be used in dealing with investment proposals in different economic projects. Statistical population consists of Saman bank customers in Mashhad city with considerable bank account who can invest in different economic project proposed by the bank. Since it's an infinite population, 60 of these customers were selected to study through random sampling. We used field study method through questionnaire for collecting needed information. This questionnaire is a credible scientific one (keller, 2009) which measures trust in investment, investment equity and customers' loyalty to investment. Its reliability was assessed using Cronbach's Alfa and the calculated value was 0.893 which represents high reliability. Correlation of variables were also tested using Pearson correlation coefficient and multiple regression.

Research hypotheses

Based on affective factors in research literature and also questionnaire used, four hypotheses are proposed:

First hypothesis: there is positive significant relationship between trust in investment and behavioral loyalty.

Second hypothesis: there is a positive significant relationship between trust in investment and attitudinal loyalty.

Third hypothesis: there is positive significant relationship between investment equity and behavioral loyalty.

Forth hypothesis: there is positive significant relationship between investment equity and attitudinal loyalty.

Results

Statistical method of correlation was used to determine the impact of independent variable on dependent variable. Here we tested the impact of trust in investment and investment equity on customers' behavioral and attitudinal loyalty, the results are listed below:

1. Pearson correlation statistics show that trust in investment causes behavioral, attitudinal and overall loyalty with 99% of confidence (correlation between trust in investment and overall, behavioral and attitudinal loyalty are 0.709, 0.591 and 0.737 respectively) and regression analysis shows that trust in investment explains .0498 of changes in overall loyalty, 0.325 of changes in behavioral loyalty and 0.558 of changes in attitudinal loyalty.

So the first and the second hypotheses are supported. Hence trust in investment has a significant positive relationship with overall, behavioral and attitudinal loyalty.

2. Pearson correlation statistics show that investment equity causes overall, behavioral and attitudinal loyalty with 99% of confidence (correlation between investment equity and overall, behavioral and attitudinal loyalty are respectively 0.497, 0.596 and 0.683) and regression analysis shows that investment equity explains .0424 of changes in overall loyalty 0.305 of changes in behavioral loyalty and 0.432 of changes in attitudinal loyalty.

Table 2: Pearson correlation test

Variables studied		Results of Pearson correlation test		
Dependent variable	Independent variable	coefficient	Significant level	Result
Behavioral loyalty	Trust in investment	0.591	0.000	Positive correlation with 99% of confidence
	Investment equity	0.596	0.000	Positive correlation with 99% of confidence
Attitudinal loyalty	Trust in investment	0.737	0.000	Positive correlation with 99% of confidence
	Investment equity	0.683	0.000	Positive correlation with 99% of confidence
Overall loyalty	Trust in investment	0.709	0.000	Positive correlation with 99% of confidence
	Investment equity	0.497	0.000	Positive correlation with 99% of confidence

Therefore the third and the forth research hypotheses are also validated by the data. In other words investment equity has a significant positive relationship with overall, behavioral and attitudinal loyalty.

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In Pearson correlation method, relationship between dependent variable and independent variables are investigated separately, with the assumption that the effects of other variables are constant. But in practice, these factors affect the dependent variables (behavioral and attitudinal loyalty) all together and simultaneously and researches should study them simultaneously.

If the simultaneous effect of independent variables on dependent variable is investigated, different results may be concluded. Multiple regressions were used for predicting the effects of these factors simultaneously. The results are shown in Table 2.

Table 2 Correlation analysis

Dependent variable	Predictive variable	(B)	t	SE	Sig.	(R)	(R^2)	Adjusted R
Behavioral loyalty	Trust in investment	0.348	0.892	0.432	0.098	0.774	0.296	0.439
	Investment equity	0.233	2.421	0.192	0.108			
Attitudinal loyalty	Trust in investment	0.114	1.035	0.343	0.443	0.897	0.585	0.691
	Investment equity	0.089	2.879	0.021	0.039			
Overall loyalty	Trust in investment	0.496	1.601	0.329	0.124	0.679	0.604	0.598
	Investment equity	0.237	2.564	0.541	0.065			

As seen in the above table, the following results have been obtained at confidence level of 95% ($\alpha= 0.05$):

1) Trust in investment is significant for predicting overall, behavioral and attitudinal loyalty at 95% of confidence (overall loyalty= 0.496, behavioral loyalty=0.348, attitudinal loyalty= 0.114).

2) Investment equity is significant for predicting overall and behavioral loyalty at 95% of confidence, but it's not significant for predicting attitudinal loyalty (overall loyalty= 0.237, behavioral loyalty= 0.233, attitudinal loyalty= 0.089).

Conclusion

Electronic banking is a newfangled kind of providing services in banking industry which offers services using electronic environments. By means of these electronic payment systems, monetary and credit resources could be transferred electronically, without needing physical displacement.

Results of this study shows positive strong relationship between independent variables of trust in investment and investment equity and dependent variables of behavioral and attitudinal loyalty in electronic banking. As discussed in literature review, customers'

loyalty and investment special equity have reciprocal relationship; this means that if one of them increases or decreases, the other one will increase or decrease too. In this research the positive direct relationship between these two variables was confirmed as well. So one of the ways for increasing customers' loyalty is to create and maintain investment equity. By creating high value for their stocks, organizations providing electronic banking services such as Saman bank could obtain a kind of intangible capital, in addition to increase customers' loyalty. We suggest to study on value and credit of stocks and its role in creating loyalty in customers of different companies and firms to future researches. Of course, different variables have effects on generation of stock value and consequently stock credit for investment, which identifying them leads us to promote and expand them.

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