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Identify and Rank the Factors Affecting Customer Satisfaction of E-Banking Services Using Mixed Method

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Abstract

Due to the changing world of banking on traditional banking to e-banking Published in the last decade to institutionalize this type of service in this country need to make in order to create customer satisfaction and loyalty; it is unavoidable to electronic services. In this research we have tried to by a qualitative approach - little to identify the components of e-banking services should be customer satisfaction.

In the qualitative focus groups comprised of experts in the banking industry and academia with bank customers to identify the indicators used. And indicators extracted through cluster sampling among 708 bank customers in the form of questionnaires were distributed in Tehran, Using exploratory factor analysis of the five factors of usability, efficiency, security, and web site image is extracted. Also used the Friedman tests to rank the components are zero sums paid by the customer.

Key words: Electronic banking; Usability; Efficiency; Security; Image; Website

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INTRODUCTION

A customer satisfaction is an ambiguous and abstract concept. Actual manifestation of the state of satisfaction will vary from person to person, product to product and service to service. The state of satisfaction depends on a number of factors which consolidate as psychological, economic and physical factors. The quality of service is one of the major determinants of the customer satisfaction. Many researchers and experts mentioned that, service quality can be enhanced by using advanced information and communication technology (ICT). Today, almost all banks in are adopted ICT as a mean of enhance service quality of banking services. They are providing ICT based e-services to their customers which is called as e-banking, internet banking or online banking etc. It brings connivance, customer centricity, enhance service quality and cost effectiveness in the banking services and increasing customers' satisfaction in banking services (Kumbhar, 2011, p.13).

Internet technology has influenced everyday life during the past few decades because of its capability to assist and enhance operational and managerial performance in both non-business and business industries (Limwiriyakul, 2012, p.15).

Advanced developments in information technology and the Internet have changed how banks operate their business and the ways in which consumers conduct their banking activities (Yoon, 2013, p.22).

Awad (2000) explained that four electronic commerce activities Internet users perform which are: (a) shopping, (b) banking, (c) investing, and (d) online electronic payment for Internet services. All these activities require a banking relationship (Zafar, 2011, p.12).

Internet Banking is defined as the usage of Internet and telecommunication networks to deliver banking services to customers. Customers can inquire information and carry out most banking services such as account balance inquiry, inter-account transfers, and bill-payment via the Internet (Nguyen, 2004, p.9).

On the one hand, incremental innovations lead to the reinforcement of the position of the knowledge management, improving existing products. On the other hand, radical innovations may renew the role of the banks.

Today, in the knowledge age, corporations recognize that to be successful, they need to understand modern strategic management techniques. Internet banking attracts a special worldwide attention because of its benefits to both banks and customers (Apaka, 2012, p.14).

Banking sector at the beginning of the 21st century, the world has undergone a variety of structural and functional changes. Today equip customer's means that the digital network, customers can choose at any time the financial services throughout the world. Customers no longer have to wait for financial services, but they remain in their access to services. Variety of other New technological aids, including monitoring Online visitors operations are equivoque the data and the, for simplicity, self gain techniques Jupiter and classified according to their individual needs are available. In particular, the main reason for customer satisfaction and increase customer tendency to move or not to move on to other services because of the price. Therefore, special conditions for competitive Internet banking services and provides increased public interest (Sadeghi, 2011, p.27).

The key factor in accepting electronic banking is the reliability and satisfaction of customer towards the bank which indirectly affects electronic banking acceptance. On the other hand, the participation of the customer is highly important in electronic banking acceptance; since it will result in reduction or deletion of the interactions between the organization and the customer. Customer and bank participation is a factor which affects the quality of services, satisfaction and finally customer maintenance; meanwhile most people are conservative about using new technologies (Sarokolaei, 2012, p.18).

Statistics from the FDIC indicate that about 80% of Americans use Internet banking and only half of them make financial transactions through Internet banking; that is, many of them still hesitate to make financial transactions through Internet banking. Therefore, in order to understand why many Internet users are not using Internet banking, and some Internet banking users still hesitate to make financial transactions through Internet banking, it is critical to understand how individuals' personality and their perceptions toward Internet banking influence their actual use (Yoon, 2013, p.22).

In circumstances where the bank refuses to reimburse the customer for the loss claimed, the bank invariably claims that the customer was grossly negligent, by asserting that either the PIN was written on the card; or that when the car was stolen with other items, the PIN was recorded on one of the other items in such a way that the PIN was obvious to the thief. This tends to be a statement made by the bank that purports to prove a fact, but has no basis in actuality, and there is no evidence to support the claim (Mason, 2013, p.20).

There are two main approaches for ICT-based branchless banking, one of them related to mobile phone networks and the other one to points-of-service (POS) or personal computers (PC) terminals. The first one tends to be dominant where bank penetration is very low and client interaction with the network is driven by mobile phone operators. The second one tends to be bank-led, and client interactions with the network are made through technologies that are commonly used in the bank industry, such as plastic cards. The first approach tends to be more common in Africa and Asia, whereas the second one has been most successful in Latin America, although, in some countries, it is possible to find both of them (Jayo, 2012, p.19).

One of the most recent channels of distribution to be used in the financial services organizations is electronic banking; this method was established in the mid 1990s, thereafter steadily becoming more important. The term electronic banking refers to "the provision of information or services by a bank to its customers, via a computer or television". A more developed service is one that provides customers with the opportunity to gain access to their accounts and execute transactions or to buy product online via the internet. Compatible with the revolutionary components of the electronic marketplace, Jordan has actively developed e-banking services since 2004. Moving towards an industrialization nation with knowledge economy as the backdrop, the personal computer and online approach of life is growing in Jordan. Public awareness of e-banking among users has been increased and thus people are ready to migrate to technology applications. With the population of approximately 6 million in Jordan, it is vital for bankers to understand the current usage trend of e-banking system (Al-Zu'bi, 2011, p.1).

Kroszner et al. (2007), moreover, show that banking crises have a more strongly negative effect on growth in countries with more developed financial systems. This result extends for crisis periods the huge empirical literature showing that financial development promotes economic growth. The interpretation is that operating in an environment where financial markets are well developed is an advantage for more financially dependent industries in good times, but a disadvantage in times of banking crises. The negative real effect of banking crises has been associated with a reduction in funds provided by banks (the finance effect).The finance effect determines the resources available for investment and thus affects firm growth. Another way banking crises might affect growth negatively is by modifying the allocation of investments (the asset allocation effect). Matsuyama (2007) theoretically shows that both effects are not independent because a reduction in the bank credit supply may change the composition of credit and originate an allocation effect. Wurgler (2000), Claessens and Laeven (2003), and Pang and Wu (2009) have shown the relevance of the

asset allocation effect in normal periods, but there is no empirical evidence on the changes in firms' asset structure during banking crisis periods or on how it may contribute to the negative real effect of a banking crisis (Fernández, 2013, p.26).

Pikkarainen, Karjaluoto and Pahnila (2004) define Internet banking as an 'Internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments'. With the exception of cash withdrawals, Internet banking gives customers access to almost any type of banking transactions at the click of a mouse. The use of the Internet as a new alternative channel for the distribution of financial services has become a competitive necessity instead of just a way to achieve competitive advantage with the advent of globalization and fierce competition. Defined Customer's satisfaction as the company's ability to fulfill the business, emotional, and psychological needs of its customers. However, customers have different levels of satisfaction as they have different attitudes and experiences as perceived from the company. Customer's satisfaction is affected by the importance placed by the customers on each of the attitudes of the product/ service. Customer satisfaction measurement allows an organization to understand the key drivers that create satisfaction or dissatisfaction; and what is really driving their satisfaction during a service experience (Ankit, 2011, p.7).

Customer satisfaction is likely to be even more important online, since it is harder to keep online customers loyal. In banking, which has traditionally been a high contact service, the lack of direct human interaction in internet banking entails the need to examine the role of technology, shopping, and product factors to construct e-CS. Banks must have the knowledge on how to get their customer satisfied, especially in relation to the e-SQ, and in internet banking, it shall be prioritized (Zavareha, 2012, p.8).

Many researchers used different technology approaches or theories to test the determinant factors that affect consumers' acceptance of information technology systems. TAM was used as the basis of the theoretical framework to build a model to determine the internet banking intention. TAM was introduced by Davis, which stressed on adoption degree of a person in using a technology and aspects that affect his or her acceptance or intention to use the technology (Md Ariffa, 2012, p.16).

A digital signature is a kind of public key infrastructure (PKI) which is formed using a private key and a public key. PKI enables people to use public key certificates issued by a reliable third-party institution together with public or private keys to transfer data and money safely through identification and blocking denial of the principal. As such, PKI is a series of systems which provide the functions required for managing public keys as a form of service. The services that these systems provide include issuance, discarding, and suspension of certificates for public keys and every function needed for managing public keys (Lee, 2013, p.24).

ATM is one of the aspects of the development of Internet banking. ATM is the abbreviation of automated teller machine which acts as a teller in a bank who takes and gives money over the counter and it was the first well known machines to provide electronic access to customers. With the appearance of automated teller machine, banks are able to serve customers outside the banking hall because ATMs are placed inside or near the banks and also outside the banks such as shopping malls, restaurant, airports or any places that people may gather (Kadir, 2011, p.10).

Another aspect of internet banking is mobile banking. Mobile banking (m-banking) (Internet banking using mobile devices, also known as m-banking, m-banking, SMS banking, etc.)Can perform account balances and transaction history inquiries, funds transfers, and bill payments via mobile devices such as cell phones, smart phones, and PDAs (personal digital assistants) (Lin, 2013, p.25).

1. RESEARCH METHODOLOGY

This study is a combination of research. Which in terms of qualitative and quantitative methods will be implemented? So that people can experience in normal circumstances, be used. The implementation will focus on the quality ways. Group's research focused on a group of people — often shared experiences or characteristics — which by the researcher (or a coordinator) to extract ideas, thoughts and perceptions about the subject or about one particular area of interest that is relevant to the interview. During the focus group interviews, the following assumptions should be taken into account: the existence of a homogeneous group led voluntarily and freely express thoughts, feelings and behaviors of individuals. People are important source of information. People are able to report and express thoughts and feelings. Group dynamics can produce the right information. Individual interviews, group interviews are overcome. During the interviews, focus group facilitator can detect people forgot my info helps. And using targeted interviews (in order to identify the components of customer satisfaction with internet banking service) will be used. And a small portion (after the compilation of indicators and data collection questionnaire) and the procedure described in terms of a development objective. Electronic banking customer satisfaction in this study, variable as latent variables (or hidden) component: usability, efficiency, security, and Web Image Bank as manifest variables are considered.

1.1 Research Tools

An initial questionnaire with 51 items used in this study comes from the study (Sadeghi, 2011) is an exploratory factor analysis to test the questionnaire with 32 items in seven dimensions: a) easy, b) availability, c) health, d) the usefulness, e) security, f) image, g) became the bank's

website. Then the questionnaire was distributed in the population studied and collected 232 questionnaires and conducting exploratory and confirmatory factor analysis to test a number of factors to five the researchers found. These include: a) usability (ease of access), b) efficiency (accuracy and usefulness), c) Security, d) image, e) Bank website.

1.2 Community Sample

The population consisted of experts in the banking industry, faculty members, through purposive sampling and electronic banking services to clients of all banks in the metropolis of Tehran. Given the breadth and diversity of the research community banks and widespread users of e-banking services through cluster sampling method, the cluster heads (cluster heads are two cluster heads of public and private banks) is selected, then the method a simple random sampling procedure was to identify a sample of each cluster separately. Due to the extent of taking the sample size based on case studies and Morgan, for more the 100/000 a high society people, 384 samples are needed Because of the magnitude of the first 384 samples for the cluster heads (state banks) and 384 for the second cluster heads (private banks) were selected as samples .

2. TESTS

i) What are the main components of customer satisfaction in the field of electronic banking services in Iran?

After identifying the main elements of customer satisfaction in the field of electronic banking services in the next seven the next step and through interviews with experts and some of the questions adaptable components of the original items 51 (septets dimensions of the original Special) after the distribution of the population studied and the number of agents to perform exploratory factor analysis, five factors were reduced. Clearer terms (according to the statistical results presented in Chapter III), the main component of customer satisfaction in the field of electronic banking services in Iran including: a) usability, b) efficient, c) security, d) image, e) is the bank's website.

ii) What is the amount the rating of each main component of customer satisfaction with internet banking service in IRAN?

Table 1

Means	Components	Ranke
4.44	Efficiency	1
4.43	usability	2
2.83	Website	3
1.70	Security	4
1.60	image	5
708		N
2.27453		Chi-Square
4		df
.000		Asymp. Sig.

2.1 Interpretation

The results of the implementation of Friedman test at a confidence level of 99%, degrees of freedom 4 and significance level (sig = 0.000) indicates that, of the five components are rated differently. Within the effective component in the first place (4.44) and the second component of the functional (4.43) holds, and image component with the lowest average (1.60) is in fifth place.

Pattern recognition is a credit to what extent?

To test whether the parameters of each component is designed to fit the different processes and suitable whether Confirmatory factor analysis and LISREL software was used. the confirmatory factor analysis and indicators (with the appropriate amount smaller than and equal to 3) and root mean square error of approximation RMSEA (less than 1 / 0) were identified in the five components of the proposed indicators to measure customer satisfaction with the fit of electronic banking services is relatively been good and they all are good indicators for the components.

2.2 Confirmatory Factor Analysis Models of Ultimate Satisfaction in E-Banking Services

The final model of satisfaction with e-banking services in significant numbers is shown in the diagram below. According to the analysis of this chart, we can get the coefficients of the model are significant.

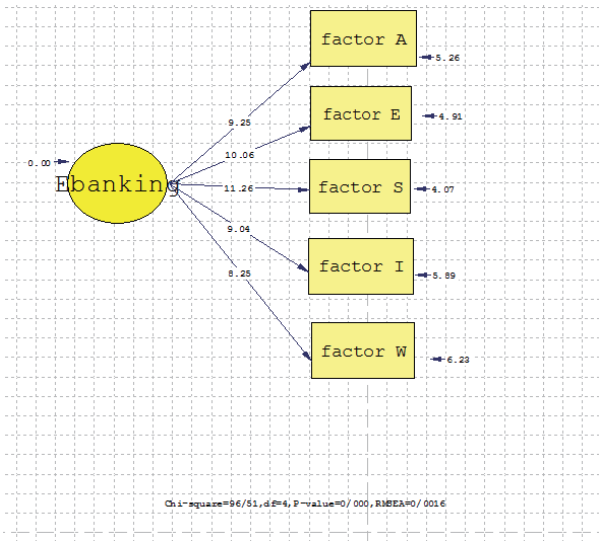

Figure 1
The Satisfaction of E-Banking Services Using Confirmatory Factor Analysis in Significant Numbers

According to the above chart, the RMSEA value smaller than 08 /. It is. We can therefore conclude, the model is a good fit.

Table 2
Table indices based on structural equation model

Values calculated by the model	The expected values	Model goodness	n
98/.	0.9 and more	GFIA	1
95/.	0.9 and more	IFI	2
92/.	0.9 and more	CFI	3
0016/.	And less 08/0	RMSEA	4
Significant sample size		2X	5

The model's parameters according to the table above shows satisfaction with e-banking services, The research model is based on confirmatory factor analysis of goodness of fit, Therefore, the model databases of customer satisfaction with e-banking services can be used.

CONCLUSIONS AND RECOMMENDATIONS

After reviewing the literature on the subject in the form of research and focus groups among customers in the areas of banking and banking industry experts, this paper collects 51 indicators to measure customer satisfaction of their e-banking services.

During the field survey among users of such services as clustering occurred among the 51 indicators identified in the qualitative analysis of the impact on the customer satisfaction index of 32 confirmed cases of electronic banking services were used. Then, according to the factor loadings and factor matrix rotated among the 32 indicators divided into five components, these components are: Usability, efficiency, security, image and website.

See also functional elements of the research subjects have the same ease of access to electronic banking services is the highest rank earned with a difference of efficacy insignificancy next ranked.

The research usually the barriers, problems and limitations that the researcher could overcome them with more accurate results can be obtained. This study is no exception to this. Total limitation of this study is as follows:

-Lack of co-operation and a large number of bank customers withdraw and negative opinions public and private, has been overshadowed by answering questions correctly.

-Unwillingness to fill out the questionnaire by the bulk of the customers of banks.

-The population of limited government and private bank customers in metropolitan Tehran to generalize findings to other customers in cities makes it difficult.

Due to the limitations of the research, implementation research proposals are as follows:

a) The results of performance test show less satisfaction after being applied to the non-presence is the option to do all banking services. Therefore it is essential for managers and planners working in the banking sector to expand more in the realm of virtual e-banking activities to try and Possible to reduce the physical presence of the customer.

b) One of the main objectives of the development of electronic banking access, use or handle complaints means of our clients e-banking 24 hours a day's Access to some of the major drawbacks is. Therefore it is necessary for the private banks and public measures are required to improve the facilities.

c) Customer satisfaction and safety devices and payment processors to their location and provide uninterrupted service to customers has been moderate. The show at the experience of weekends holidays withdrawals ability to the religion and nationality feasts Central Bank. , but overall it is necessary to improve the current status of corrective action was taken. Including by increasing the number of mobile ATM services to enhance customer satisfaction during the holidays.

d) The results of performance test show less satisfaction after being applied to the non-presence is the option to do all banking services. Therefore it is essential for managers and planners working in the banking sector to expand more in the realm of virtual e-banking activities to try and as far as possible to reduce the physical presence of the customer.

e) After the change in the efficiency of services, including a variety of services and there is no way for users. And the results of this study showed that customer satisfaction is very low in this area. Therefore it is necessary to improve the diversity of technology experts and the procedures for users to try.

Electronic banking, electronic banking, which will enhance customer satisfaction when their services are provided in accordance with customers' expectations. Clearer expression is necessary to provide services in line with customer needs assessment done.

f) Another possible correction factors affecting customer satisfaction of all electronic banking transactions and services with minimal time are required. This study shows the responses given by the clients of their satisfaction was low. One of the main reasons for this disconnect in the banking , financial operations, results are usually will be maintained. For example, moving a

certain sum of money will remain inconclusive and return that amount to 72 hours (less, sometimes more) requires the same problem that creates customer dissatisfaction. In fact, it is necessary to properly perform all customer electronic interactions that usually are not the case.

g) In all the studies that were reviewed in this paper show Security is one of the most important factors that influence the development of Internet banking services and improve customer satisfaction with these services. Unfortunately, the results of this study show that the rate of customer satisfaction in public and private banks in this area has been very low. Therefore it is essential for banks (and central bank) in the context of Internet banking to provide more stringent conditions.

h) One way of increasing the security of e-banking user name and password are required to be allowed to enter the complex and stringent banking system electronics. Unfortunately, the credit cards are usually much Complex codes are not permitted (in four or five digits without leading marks). Therefore, it is essential to have security in this area over the beds to be provided.

i) In general, the bulk of the Internet banking service orientation is based on the mentality of people. It is necessary to clarify the expression of E-banking changed banking services to the citizens in mind. This shift can be done through advertising and training, formal and informal. It is also essential for banks, public awareness about the right to provide electronic banking. This awareness can be provided with regard to demographic characteristics of citizens.

j) On the website it is essential to increase customer satisfaction and basic measures to take place. Including layout and design, web page mail service provider to be interesting, Web design tastes and interests of banks taking Users are provided, the screen is clear and easy Site, In most cases, associated with the site is maintained without difficulty, All material provided on the site is classified and clearly identified for each sector. Finally, all the news and banking instructions contained in the website is up to date and functional.

k) The study shows the results of the final model, the greatest impact is related to security. And in the second place and in third place after the effectiveness of the application is to be. On the brighter the dimensions are responsible for the greatest impact on customer satisfaction. Therefore it is essential for banks to increase customer satisfaction with regard to the priorities apply.

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