Impact of Internet Banking Services on Customer Satisfaction: A Case Study of Bank Refah’s Customers, Northern Branches of Tehran

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Abstract

This research has been conducted with the aim of investigating the effect of internet banking services on customer satisfaction, a case study of the northern branches of Tehran using the research model presented by Heba Khalil Asfour and Shafiq Haddad (2014), a model for admitting factors affecting mobile banking acceptance and its impact on increasing customer satisfaction. Based on this model, mobile bank components such as reliability, efficiency, accessibility, privacy, flexibility, ease of use and trust lead to customer satisfaction with mobile banking services. Therefore, given the same platform for mobile banking and internet bank as well as the same variables affecting both cases, and finally the optimal model used in this paper, this model was selected to measure the impact of the above mentioned variables on the satisfaction of internet bank customers. In this research, a sample of 384 clients of the Northern Branches of Tehran, Refah bank who used Internet Banking services was investigated using a descriptive-survey research method. Most samples were selected from the statistical population using a two-stage cluster method and according to the information obtained from the researcher-made questionnaire. Research findings indicated that all of the Internet banking components mentioned above has a significant impact on satisfaction of service users, but according to the results of the regression test, privacy has been identified as the most important factor.

Keywords: E-banking, Customer satisfaction, Internet banking, E-commerce, Customer satisfaction.

Introduction

E-banking refers to any banking service that does not create a physical presence restriction at a specific location for the customer by means of electronic means [1]. The emergence of Internet banking has led many banks to develop their IT strategy to compete in the markets [2] while banks are increasingly competing for banking services and are struggling to reach higher levels of e-banking acceptance among their customers [3-12]. It should be noted that Internet banking has also been profitable for both financial institutions and banks, and one of the important issues in this area is saving customer's time and reducing the amount of inland and abroad transportation. From the point of view of customers, Internet banking allows them to have more access to financial services as well as save their financial management time [13-17]. So today, if a bank fails to provide remote services and electronic banking services to its customers, it is condemned to bankruptcy; therefore, the transition from traditional banking to electronic banking is a requirement, not a choice [18]. On the other hand, with the establishment and expansion of private banks and raising awareness and the right to choose for customers, the competitive conditions of banks to retain their customers have become more difficult than before. Furthermore, extensive privatization increased competition to retain customers. Despite a rapid increase in the number of electronic users of banks, many users still prefer to go to the bank to do some business, which means that there are some factors that prevent the use of e-banking [19-22]. The
most obvious issues to consider are: how much bank customers are willing to use this technology to advance their banking operations? Is it easy for customers to use this system? Has the infrastructure been properly provided for this purpose? According to the importance of internet banking in the modern banking as well as the need to use it, there is one question that as highest internet banking usage percentage is considered to be beneficial to banks and increases their profitability and decreases costs, does the use of banking services mainly electronic banking bring an advantage for customers and principally increases their satisfaction and ultimately leads to their loyalty? In this research, factors affecting the acceptance of the Internet Bank including reliability, efficiency, accessibility, privacy, flexibility, and trust in the various groups of clients of Refah bank will be investigated.

Research Literature

Electronic Banking

Technology advances have transformed the world fundamentally and have changed the way people behave and act in their commercial and personal affairs. Specifically, during the past two decades, the banking industry has invested a significant amount of resources in using the information technologies. In response to the privatization, development of the global networks and the increase of the level of incomes, the banking industry have made use of novel technologies in terms of service provision which is known as electronic banking and the aim of it is to achieve and maintain strategic advantages [23]. The technology of electronic banking refers to those financial activities which are performed with the use of electronic technology. From the viewpoint of customers, e-banking provides many benefits for individuals, such as quick access to their accounts and inventories, the ability to remotely transfer their bank funds, and to invest and complete electronic applications. In opinion of customers, online banking can provide many benefits to people, such as quick access to their accounts and inventory, ability to transfer their savings remotely and investments and the completion of electronic applications. With online banking, time and place lose their concepts and these services are available at any time, regardless of where people are located. [24]. From a financial perspective, electronic banking can have a significant impact on the discount rate of banking. In particular, electronic banking reduces operational and administrative costs and provides significant cost advantages (savings) for the banking industry [25]. From a competitive point of view, banking advantages especially through electronic banking provide an opportunity for banks to compete with large financial institutions. In spite of the emergence of these innovative electronic banking technology systems which have been designed for increasing our welfare and facilitating our daily activities, customers show a kind of time delay in accepting them and the number of the customers who are using these services hasn’t increased as expected [26] and still millions of people are not using electronic banking and are not expected to use it in a near future also. Despite the limited use of e-banking, researchers are still looking for reasons to refuse to adopt such services for individuals. In the past decade, IT has had a dramatic effect on the banking industry. This has enabled banks to provide distinct products and services to their customers. For over 200 years, banks have been working to provide customer service through their branches, but the advent of new technologies has revolutionized the nature of providing financial services to customers. For example, ATMs have been replaced by bank teller and credit cards and electronic cash dispensers with banking transactions. Banks gain various and enormous benefits from providing electronic banking services, including less transaction costs, 24-hour services, increased efficiency in the banking process, and…. The provision of electronic Services via Internet have resulted in many advantages both for banks and customers; therefore, the investigation of the factors affecting the use of Internet banking services in Iran requires research and investigation. Banking is a rapidly changing industry. With the development of international economics and creating the competitive space of markets, banks have been also influenced by modern technology that has been broken the legal, geographic and industrial barriers and has created new products and services [27].

Dimensions of Internet Bank Services Trust

Trust refers to the timely consideration in the use of environmental or time conditions,
and product or service which requires standardization. Trust is recognized as producing a product or survives which is normal in life cycle and influences of trust and satisfaction on the quality of good or service [28].

**Flexibility**

Users of mobile devices should be able to engage in activates such as: receiving information and conducting transaction with ease [29].

**Privacy**

E-service interactions between customers and companies give opportunities for companies to get information about customers, such as purchasing habits, needs and details and information on their account and the size of transactions and movements of the accounts, and many of these data that reflect customer privacy bank should keep this Privacy Policy in some cases [30].

**Accessibility**

Service accessibility as reflected in the number of banking offices per unit of market, represents an important component of the overall level of service provided to financial consumers; the technology of internet has produced the internet banking that serves bank's customers to do banking transaction anywhere as long as they can access to the internet[31].

**Efficiency**

Most of the customers using mobile banking found it quiet efficient. They are able to access to a huge number of mobile banking services, they can check their account information as a mini statement and account transaction history. Customers had to visit branches to check their transactions but by using mobile banking services they can check the status of their fixed deposits or checking account information [32].

**Reliability**

Up to date technology accepts high-reliability models, as well as other variables such as: efficiency, and security form. There are many different types of reliability which should be carefully analyzed for Internet banking and Internet payments. [33]

**Customer Satisfaction**

Some aspects and dimensions of the Servqual model in customer satisfaction are:

- **Tangibles:** appearance of physical facilities, equipment, equipment, personnel and communication materials.
- **Reliability:** ability to perform the promised service dependably and accurately.
- **Responsiveness:** willingness to help customers and provide prompt service.
- **Assurance:** knowledge and courtesy of employees and their ability to convey trust and confidence.
- **Empathy:** caring, individualized attention the firm provides to its customers. Service recovery: the ability of the organization to resolve potential problems. The Servqual model consists of two parts: the first one measures customer' expectations consisting of 22 questions and is used to identify customer expectations associated with a service. The second one assesses the customer perceptions on the service actually delivered containing 22 questions as the same first part questions and are used to measure customer evaluation in services received by an organization [34]. The American Customer Satisfaction Index (ACSI) is a cause – and effect model in the middle c of a chain of relationships. The inputs or main causes of customer satisfaction in this model are customer expectations, perceived quality and perceived value. Outputs or outcomes are associated with the core implications of customer satisfaction include customer complaints and customer loyalty.
  - **Perceived quality:** includes a general customer judgment of the quality of the product or service provided by the organization in the recent consumption experience of products. This factor has a direct and positive effect on customer satisfaction.
  - **Perceived value:** The perceived level of product quality relative to the price paid to buy that product.
  - **Customer Expectations:** This variable consists of two parts. The first part is customer expectations prior to using a product or receiving a service that is generated from non-empirical sources and in ways such as advertisements or verbal promotions of other customers. The second
part is the customer's prediction about the capability of the manufacturer or the provider of service regarding the quality of goods or service in the future.

Then the outputs are represented after checking the inputs of the model. According to a well-known theory in marketing science, the immediate consequence of increased customer satisfaction are decreased customer complaints and increased customer loyalty. That is, increased customer satisfaction, in addition to reducing customer complaints, increases its loyalty and trust in the organization [35]. In a study by [36] on 350 important commercial bank customers in Orissa using a survey method, the results showed the role and importance of quality services on customer satisfaction and, finally, their loyalty to the bank. It was also found that enhancement of the quality of banking services played a significant role in satisfaction and increasing sense of loyalty of bank customers. Erif et al. in a study entitled as Impact of Service Quality and Customer Satisfaction on Customer Loyalty to Electronic Banking came to the conclusion that service quality and customer satisfaction had a direct impact on customer loyalty to e-banking.

Figure 1: Conceptual Model of Research

Research Hypotheses

The Main Hypothesis

There is significant impact between Internet banking services and customer satisfaction.

Sub-hypotheses:

- There is significant impact between trust in Internet Bank and customer satisfaction
- There is significant impact between the flexibility of Internet banking and customer satisfaction.
- There is significant impact between privacy on the Internet and satisfaction of customers.
- There is significant impact between the accessibility of internet banking and customer satisfaction.
- There is significant impact between the efficiency of Internet banking and customer satisfaction.
- There is significant impact between security on the Internet and customer satisfaction.

Method

This research has an applied purpose and data collection was performed through a descriptive-correlation method and. In addition, this is a case-study research which was conducted through a field study. In order to test the hypotheses, Pearson correlation coefficient, Chi-square test, and t-test have been used. The statistical population consisted of all customers of the Northern Branches of Refah Bank who use Internet banking services. In this research, a two-stage clustering method was used for sampling and the sample size was estimated 384 customers. To collect data, a questionnaire composing of 32 questions with Cronbach’s alpha (0.86), was utilized.
Data Analysis

Table 1: Pearson correlation test between trust and satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Satisfaction</th>
<th>R Pearson correlation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in Internet Banking</td>
<td></td>
<td>0.691</td>
<td>0.00</td>
</tr>
</tbody>
</table>

According to Pearson test (0.691), at a significant level of 1% and with 1% error and 99% confidence, it can be said that this relationship is significant. Based on the first hypothesis and the results of this test, it can be said that there is a significant correlation between the amount of trust in the Internet Banking of Refah bank and its use and satisfaction among customers.

Table 2: Pearson correlation test between privacy and satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Satisfaction</th>
<th>R Pearson correlation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy</td>
<td></td>
<td>0.665</td>
<td>0.00</td>
</tr>
</tbody>
</table>

According to Pearson test (0.665), at a significant level of 1% and with 1% error and 99% confidence, it can be said that this relationship is significant. Based on the second hypothesis and the results of this test, there is a significant correlation between the privacy of the Internet Banking and its use and satisfaction.

Table 3: Pearson correlation test between accessibility and satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Satisfaction</th>
<th>R Pearson correlation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td></td>
<td>0.306</td>
<td>0.00</td>
</tr>
</tbody>
</table>

According to Pearson test (0.306), at a significant level of 1% and with 1% error and 99% confidence, it can be said that this relationship is significant. Based on the third hypothesis and the results of this test, there is a significant relationship between the amount of accessibility of Refah bank and its use and satisfaction rate among its customers.

Table 4: Pearson correlation test between facility and satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Satisfaction</th>
<th>R Pearson correlation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td></td>
<td>0.510</td>
<td>0.00</td>
</tr>
</tbody>
</table>

According to Pearson test (0.510), at a significant level of 1% and with 1% error and 99% confidence, it can be said that this relationship is significant. Based on the fourth hypothesis and the results of this test, there is a significant relationship between the efficiency of Internet Banking of Refah bank and the use and satisfaction of its customers.

Table 5: Pearson correlation test between flexibility and satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Satisfaction</th>
<th>R Pearson correlation</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility</td>
<td></td>
<td>0.356</td>
<td>0.00</td>
</tr>
</tbody>
</table>

According to Pearson test (0.356) at a significant level of 1% and with 1% error and 99% confidence, it can be said that this relationship is significant. Based on the fifth hypothesis and the results of this test, there is a significant relationship between the flexibility of Internet Banking of Refah bank and the use and satisfaction rate of its customers.
Table 6: Pearson correlation test between reliability and satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>R Pearson correlation</th>
<th>significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>0.607</td>
<td>0.00</td>
</tr>
</tbody>
</table>

According to Pearson test (0.306), at a significant level of 1% and with 1% error and 99% confidence, it can be said that this relationship is significant. Based on the third hypothesis and the results of this test, there is a significant relationship between the reliability of Internet Banking of Refah bank and the use and satisfaction rate of its customers.

Table 7: Gamma test to determine the relationship between the duration of Internet Banking usage and satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of Internet Banking usage</td>
<td>0.144</td>
</tr>
<tr>
<td></td>
<td>0.13</td>
</tr>
</tbody>
</table>

According to Gamma test (0.144), at a significant level of 5% and with 5% error and 95% confidence, it can be said that this relationship is not significant. Based on the results of this test, there is no significant relationship between the duration of Internet Banking usage in Refah bank and customer satisfaction.

Table 8: Regression method used

<table>
<thead>
<tr>
<th>Method</th>
<th>Variables Removed</th>
<th>Variables Entered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter</td>
<td>Trust</td>
<td>Dimension</td>
</tr>
<tr>
<td></td>
<td>Privacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accessibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Efficiency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reliability</td>
<td></td>
</tr>
</tbody>
</table>

This table shows that the six main variables of the Enter regression model are used to predict the dependent variable, the results of which have been presented in the following tables:

Table 9: Summary of Regression Model

<table>
<thead>
<tr>
<th></th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.716a</td>
<td>.618</td>
<td>.543</td>
<td>2.53290</td>
</tr>
</tbody>
</table>

The table above shows a summary of the model. The correlation coefficient (R) between the variables (0.716) indicates that there is a relatively strong correlation between the set of independent variables and the dependent variable of research (satisfaction). But the adjusted determination coefficient (0.543) indicates that 54.3 percent of the total customer satisfaction changes are dependent on the 6 independent variables. In other words, the set of independent variables has been able to predict more than half the variance of the customer satisfaction variable.
According to the above table, since the significance of the F-test value (59.539) is at an error level less than 0.01, it can be concluded that the research regression model consisting of 6 independent variables and one dependent variable (satisfaction) is a good model and a set of independent variables are able to predict changes in the satisfaction rate of Refah bank customers. This table shows the coefficients of the regression impact of each independent variable on the dependent variable.

Here regression coefficients are interpreted based on the beta coefficient (Beta), because this statistic represents the standardized regression coefficient of each of the independent variables on the dependent variable and the relative contribution of each independent variable in the model. Comparison of variables shows that: first of all, the impact of all six internet Banking variables including trust, privacy, accessibility, efficiency, flexibility and reliability have a significant impact on customer satisfaction. Secondly, variables of privacy with regression coefficient of (0.399), trust (0.392), accessibility (0.387), security (0.357), efficiency (0.208) and flexibility (0.169) had the highest impact of regression on the dependent variable of research, i.e. customer satisfaction, respectively. Now we plot a graph of regression coefficients according to Table (12), which is special for the Beta coefficient, mainly the regression coefficients for each independent variable. Based on this model, the most effective variable is the privacy that has the highest regression coefficient as it is shown above.

According to the same Table (12), by increasing a standard deviation in the privacy variable with a beta of 0.399, the satisfaction of customers is found to increase to 0.399 standard deviation. Conversely, by reducing a standard deviation in the privacy variable, the standard deviation in the customer satisfaction variable will be decreased as well.

**Conclusion**

**The First Hypothesis**

Regarding the first hypothesis, the results of Pearson test (0.691) at a significant level of 1% indicate that there is a meaningful relationship between the amount of trust in Refah bank and its use and satisfaction among customers; it can be said that there is a direct and positive relationship between these two variables: in other words, the more
The amount of trust in the Internet banking service of Refah bank, the more the customers use and gain satisfaction from it.

Figure 2: Impact of each variable on the customer satisfaction

The research findings regarding the trust component are consistent with the findings by Asford et al. 2014, Scot; 2000, Bardley and Stewart; 2002, Jacquin et al., 2008.

The Second Hypothesis

Based on Pearson's test (0.665) at a significant level of 1%, this hypothesis is confirmed. Therefore, it can be said that there is a significant relationship between the level of privacy of the Internet Bank and the use and satisfaction of it; therefore there is a direct and positive relationship between these two variables. In other words, the greater the privacy of Internet banking service of Refah bank, the greater the customers use and gain satisfaction from it. The findings related to the impact of privacy on customer satisfaction are consistent with the findings of the study by Asford et al. (2014); Zilly Young, 2001; TM Whimaau; 2006, Jacquin et al., 2008.

The Third Hypothesis

In connection with the third hypothesis, Pearson test results (0.677) at a significant level of 1% indicate that the relationship is significant. As with the two previous hypotheses, there is a direct and positive relationship between these two variables; in other words, the more the Internet bank's ability to access Refah bank services, the more the customers use and gain satisfaction from it. Findings from this hypothesis are in agreement with research findings by Asford et al., Scott; Zilly Young; Wang; Dee Lon and McLane, Jamal Nasser.

The Fourth Hypothesis

The fourth hypothesis examines the impact of internet banking facilities on customers' satisfaction and use. The results of Pearson test (0.510) at a significant level of 1% indicate that as with previous assumptions, there is a meaningful relationship between internet facilities of Refah Bank and the use and satisfaction of its customers. There is a direct and positive relationship between these two variables; in other words, the more the Internet bank's efficiency of Refah bank services, the more the customers use and gain satisfaction from it. In addition, the research findings of this study are consistent with the findings of the study by Asford et al. (2014), Scott 2000, Zilly Young, 2001; Wang, 2003; Dee Lon and McLane; 2003, Jamal Nasser; 2003.

The Fifth Hypothesis

In the fifth hypothesis, the aim was to investigate the flexibility of Internet Banking services of Refah bank in the use and satisfaction of its customers. The results of Pearson test (0.356) at a significant level of 1% indicate that there is a significant relationship between the flexibility of internet banking of Refah Bank and the use and satisfaction of its customers. Contrary to previous assumptions, here the intensity of the relationship is average. there is a direct and positive relationship between these two variables; in other words, the more the Internet bank's flexibility of Refah bank services is, the more the customers use and gain satisfaction from it. In addition, the research findings of this study are consistent
with the findings of the study by Asford et al.; Jacquin et al., Lio Chung.

The Sixth Hypothesis

Regarding the impact of security component on the satisfaction of customers of Internet Banking services of Refah, the results of Pearson test (0.306) at a significant level of 1% indicate that there is a significant relationship between the security of internet banking of Refah Bank and the use and satisfaction of its customers. As with the previous hypothesis, here the intensity of the relationship is at average level. There is a direct and positive relationship between these two variables; in other words, the greater the Internet bank's security of Refah bank services is, the greater the customers use and gain satisfaction from it. In addition, the research findings of this study are consistent with the findings of the study by Asford et al.; Wang, De Lon and McLean, Jamal Nasser, Abdullah, M. Al-Mughbal, Tim Wima, Jacquin et al., Chil Ho Yun..

The Seventh Hypothesis

The results of the chi-square test (17.357) at a significant level of 1%, showed a significant difference between the level of education and the satisfaction of the customers. Findings indicated that 48% of the respondents who disagreed had a lower-diploma education and only 6.9% of the participants with master's degree or higher were disagreed. Furthermore, while 50% of undergraduate students have chosen the option to agree, only 21% of the participants with diplomas (and less than the diploma) have chosen the option. Additionally, regarding the difference between the educational level of and customer satisfaction with internet banking services, the findings of this research are in line with the findings of the research by Mutaz Ibavoo; 2005, Abdullah M. Al-Moqbal; 2005, Seddiq Soheil and Naser M. Sheikh , 2007.

The Eighth Hypothesis

Contrary to previous assumptions, the results of gamma test (0.144) at a significant level above 5% revealed that there is no significant relationship between the duration of Internet usage and customer’s satisfaction.

The Main Hypothesis

Since the correlation coefficient (R) between the variables was calculated 0.716, we can say that there is a relatively strong correlation between the set of independent variables and the dependent variable of the research (satisfaction). But the adjusted determination coefficient was calculated 0.543 indicating that 54.3% of the total customer satisfaction changes are dependent on the 6 independent variables mentioned. In other words, the set of independent variables has predicted more than half the variance of the customer satisfaction variable.

Suggestions

- Strengthening and increasing the security of the Internet Bank system to maintain the login credentials
- Improving the quality of mobile banking information in accordance with international standards
- Providing Internet banking capabilities in all browsers
- Ability to create and define a strong and secure password on the Internet Bank
- Identifying diverse and varied customer needs and delineating services tailored to their needs
- Using simple guides to enhance the ability of all users and customers to use with ability and educational level. [36-38]

References

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