



Measurement Of Customer Satisfaction Of Internet Banking Services; An Analytical Study With Special Reference To Selected Customers And Banks In Gujarat

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ABSTRACT

Banking plays an important and vital role in the Indian Economy not only in Independent India but since the Vedic period. Remarkable performance has been noticed during the Pre Independence, Post Independence, Post Nationalized period and in the recent times too. The Success and failure of banking sector like any other service sector organization fully depends on the customer satisfaction of the service provided by that sector.

The purpose of this study is to find out the satisfaction level of customers with the uses of internet banking services facilities provided by the banks across the state which leads to make more loyal customer and hence loyalty leads to the attracting more customer, expansion of business and increase in net profit.

Data were collected with the help of open ended questionnaire in and around Vadodara city. The Snow ball sampling has been used to identify the respondents. The data have been analyzed with the use of Statistical Package for Social Science [SPSS].

The finding of the study shows that there is a significant variation in the level of satisfaction among internet banking users across the state. The overall satisfaction of an Internet banking users totally depends upon Reliability, Responsiveness, Security, Ease of use, Access and Tangible. Study also suggests some necessary steps need to be taken to improve the satisfaction level of customers with the use of Internet banking across the state.

Keywords : Internet, Banking, Customer Satisfaction, Customer Loyalty, Banking Services, Gujarat

Introduction: Internet Banking in India

Internet Banking can provide speedier, faster and reliable services to the customers for which they are relatively happy. Internet Banking Services not only can create new competitive advantages, it can improve its relationships with customers.

At present, the total Internet users in the country are estimated at 9 lakh. However, this is expected to grow exponentially to 900 lakh by 2012. Only about 1% of Internet users did banking online in 1998. This increased to 16.7% in March 2000. The growth potential is, therefore, immense. Further incentives provided by banks would dissuade customers from visiting physical branches, and thus get 'hooked' to the convenience of arm-chair banking. The facility of accessing their accounts from anywhere in the world by using a home computer with Internet connection, is particularly fascinating to Non-Resident Indians and High Net worth Individuals having multiple bank accounts.

Costs of banking service through the Internet form a fraction of costs through conventional methods. Rough estimates assume teller cost at Re.1 per transaction, ATM transaction cost at 45 paise, phone banking at 35 paise, debit cards at 20 paise and Internet banking at 10 paise per transaction. The cost-conscious banks in the country have therefore actively considered use of the Internet as a channel for providing services. Fully computerized banks, with better management of their customer base are in a stronger position to cross-sell their products through this channel.

The Future Scenario: Internet Banking in India:

Compared to banks abroad, Indian banks offering online services still have a long way to go. For online banking to reach a critical mass, there has to be sufficient number of users and the sufficient infrastructure in place. The 'Infinity' product of ICICI Bank Ltd. gets only about 30,000 hits per month, with around 3,000 transactions taking place on the Net per month through this service.

Though various security options like line encryption, branch connection encryption, firewalls, digital certificates, automatic signoffs, random pop-ups and disaster recovery sites are in place or are being looked at, there is as yet no Certification Authority in India offering Public Key Infrastructure which is absolutely necessary for online banking. The customer can only be assured of a secured conduit for its online activities if an authority certifying digital signatures is in place. The communication bandwidth available today in India is also not enough to meet the needs of high priority services like online banking and trading.

Banks offering online facilities need to have an effective disaster recovery plan along with comprehensive risk management measures. Banks offering online facilities also need to calculate their downtime losses, because even a few minutes of downtime in a week could mean substantial losses.

Some banks even today do not have uninterrupted power supply unit or systems to take care of prolonged power breakdown. Proper encryption of data and effective use of passwords are also matters that leave a lot to be desired. Systems and processes have to be put in place to ensure that errors do not take place.

Users of Internet Banking Services are required to fill up the application forms online and send a copy of the same by mail or fax to the bank. A contractual agreement is entered into by the customer with the bank for using the Internet banking services. In this way, personal data in the applications forms is being held by the bank providing the service. The contract details are often one-sided, with the bank having the absolute discretion to amend or supplement any of the terms at any time.

For these reasons domestic customers for whom other access points such as ATMs, tele-banking, personal contact, etc. are available, are often hesitant to use the Internet banking services offered by Indian banks. Internet Banking, as an additional delivery channel, may, therefore, be attractive / appealing as a value added service to domestic customers. Non-resident Indians for whom it is expensive and time consuming to access their bank accounts maintained in India find net banking very convenient and useful.

The purpose of this study is to find out the Customer satisfaction of internet banking users which leads to make more loyal customer and hence loyalty leads to the attracting more customer, expansion of business and increase in net profit.

Review of Related Literature:

Wise and Ali (2009) argued that many banks want to invest in ATMs to reduce branch cost since customers prefer to use them instead of a branch to transact business. The financial impact of ATMs is a marginal increase in fee income substantially offset by the cost of significant increases in the number of customer transactions. The value proposition however, is a significant increase in the intangible item "customer satisfaction". The increase translates into improved customer loyalty that in result in higher customer retention and growing organization value. Internet banking is a lower-cost delivery channel and a way to increase sales. Internet banking services has become one of the most important factors in the business economy today.

Hua (2009) conducted an experiment to investigate how users "perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. In this study, it also investigates the relative importance of perceived ease of use, privacy, and security. Perceived ease of use is of less importance than privacy and security. Security is the most important factor influencing user's adoption.

Wise and Ali (2009) argued that many banks in Vadodara want to invest in ATMs to reduce branch cost since customers prefer to use them instead of a branch to transact business. The financial impact of ATMs is a marginal increase in fee income substantially offset by the cost of significant increases in the number of customer transactions. The value proposition however, is a significant increase in the intangible item "customer satisfaction".

Oghenerukeve, (December 2008), internet banking provides alternatives for faster delivery of banking services to a wider range of customers. The increasing popularity of internet banking, have attracted the attention of both legitimate and illegitimate online banking practices. Criminals focus on stealing user's online banking credentials because the username and password combination is relatively easy to acquire and then relatively easy to use to fraudulently access an internet banking account and commit financial fraud. To alert users, many banking sites are now including Security Indicators (SI) to their sites.

Routray (April 2008) mobile and wireless communication devices are becoming enablers for organizations to conduct

business more effectively and efficiently. One of the most effective applications is mobile banking (m-banking). The increased flexibility and mobility feature of wireless ATM and its bandwidth on demand function is motivating a large number of carriers towards deployment of the WATM networks.

A relatively organized list of dimensions provided by Howell (2006) includes (a) availability, (b) responsiveness, (c) timeliness, (d) completeness, (e) tangibility, (f) empathy, (g) reliability, and (h) professionalism. However, these are some general dimensions suggested and used by several studies to analyze the customer satisfaction experiences.

Pikkarainen et al (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 transaction at the click of a mouse (De Young, 2001). Indeed 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 fiercer competition (Flavián et al, 2004; Gan and Clemes, 2006).

Deemas (2002) studied the satisfaction levels of a sample of customers of the Sharjah Co-operative Society (SCS). The primary part asked the respondents to provide universal background information (e.g., gender, age category, nationality and so on). The next part listed the 21 attributes and asked respondents to specify their satisfactions with each attribute using a 5-point Likert-type scale. The outcomes indicate that UAE nationals and Arabs are the most predominant in their contributions to overall satisfaction whereas non-Arabs are the lowest. In addition, the outcomes show no difference in the levels of customer satisfaction between men and women respondents.

The concept of electronic banking has been defined in many ways. Daniel (1999) defines electronic banking as the delivery of banks' information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as a personal computer and a mobile phone with browser or desktop software, telephone or digital television.

Parasuraman, et al., (1985) identified ten dimensions of service quality, including, Reliability, Responsiveness, Competence, Access, Courtesy, Communication, Credibility, Security, Understanding/Knowing the customer, and Tangibles. The detail of this chapter covered in the thesis part.

Research Methodology:

Objectives of the Study: The main purposes of this study are-

- i) To know the performance of e-banking activities of commercial banks in India.
- ii) To analyze the customer satisfaction level in e-banking in India with special reference to Vadodara city.
- iii) To find out the problems in e-banking activities to satisfy the customers in Vadodara city
- iv) To identify the e-banking benefits from customers point of view.
- v) To provide some recommendations to policy maker and bankers.
- vi) To identify the area which is to be needed more focus i.e. area of Big Push.

Rationale of the study:

The study will show how the e-banking services satisfy the customers. The study will also explore that to enjoy the e-banking services a lot of service characteristics should be ensured first by the service provider. Then customer will adopt the systems properly. This research study has done to provide some service quality variables that are liable to satisfy the customers by rendering right services.

Data Source:

The study is mainly based on the primary data source and the secondary also. For general concept development about the short survey in primary sources and questionnaire used for collecting data about the customer satisfaction in e-banking of commercial banks in Vadodara city.

Sampling Plan:

This study tries to focus on 31 "Quality Characteristics" which were previously found significant by various studies with few uniquely appropriate characteristics. The respondents who are using e-banking 0-3 years are considered as sample. This using period is planned because if the consumers enjoy the services for the long time from any bank they may be biased to their banks. This period is enough for experiencing the e-banking services. Calculation of Sample size for this study is very difficult due to the ill defined target population (Numerically). But still with the consultation of experts across Gujarat (IIMA, IMNU and MSU) in this area, I have just tried to find out the reasonable number which is considered as true representative of that particular city in given state. As per the direction of Dr. Uma Sekaran in his book "Research Methodology" published by Wiley India, total respondent has been decided to 250 internet users in Vadodara city.

Hypothesis:

Ho (Null hypothesis):

There is a relation between customer satisfaction in e-banking and reliability, responsiveness, assurance, empathy, and tangibles. $H_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$

Ha (Alternative Hypothesis):

There is no relation between customer satisfaction in e-banking and reliability, responsiveness, assurance, empathy, and tangibles. $H_a = \text{At least one } \beta \text{ is not zero.}$

Questionnaire Design and Pretest:

The respondents responded to questions under each variable on five point Likert Scale with "Strongly Agree" dictating the highest level of satisfaction, "Strongly Disagree" as the highest level of dissatisfaction. Some demographic questions were also asked for more interpretation of responses. The developed questionnaire has been pre-tested with a few customers to ensure the quality of the questions.

Model:

The author has used the customer satisfaction as the dependent variable and the five dimensions of service quality are namely reliability, responsiveness, assurance, empathy, and tangibles as the independent variables. The author has run the OLS Regression model to determine the significance level of the variables for the customer satisfaction in e-banking. The basic model was as follows: Customer satisfaction in e-banking = f (reliability, responsiveness, assurance, empathy, and tangibles). Basically, $CSEB = \alpha + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + e$ Where, CSEB= Customer Satisfaction in E-Banking, X1= reliability X2= responsiveness X3= assurance X4= empathy X5= tangibles There α is constant and β s are coefficients to estimate, and e is the error term. Customer satisfaction in e-banking is dependent variable and reliability, responsiveness, assurance, empathy, and tangibles are independent variable.

Analysis and Findings:

A total of 400 questionnaires were distributed to the respondents. The author discarded incomplete questionnaires and considered 250 questionnaires containing all information. Finally sample size was 250 in suitable form which was 62.5% of the total respondents. Out of the total respondents 27% are in between 20-30yrs and 25% are 30-40yrs. The male was 75% and the female was 25%, 30% are graduate clients, 26% are business people, 25% are service holders, 31% customers" monthly income is 10,000-20,000tk and 21% are within 20,000-30,000tk. After analyzing the online banking services in all private

commercial banks in Vadodara city several questions were asked to the different respondents related to the online service & their expectation about it. The following information was gathered which is helpful to observe the customer satisfaction about online banking services. 250 respondents are valuable customers of online banking services. Few demographic & variable questions were asked for taking swift concept about customer satisfaction.

Table 01: Descriptive Statistics

Variable	N	Mean	Std. Deviation
Reliability	250	3.7731	.44376
Responsiveness	250	3.8708	.38469
Assurance	250	3.9625	.50176
Empathy	250	3.9063	.44824
Tangible	250	2.8375	.46323
Overall Customers' Satisfaction	250	3.9333	.55058
Valid N (List Wise)	250		

Source: SPSS regression output of data Analysis

Table 01 shows the mean value depicting the overall customers "satisfaction". As far as this descriptive statistics is concerned, customers "satisfaction" on E Banking is above satisfactory level (with a mean value of 3.93 on a 5 point Likert scale). The table also suggests that the main factors on which the customers of E-Banking are generally satisfied. As far as the mean values are concerned, customers are fairly satisfied on RELIABILITY, RESPONSIVNESS, ASSURANCE and EMPATHY. This satisfaction comes from quick services, affordable service charge, easiness of depositing and withdrawing money, discontinuous function of server, ATM booths, account statement over SMS/e-mail services, error free records. The customers are less satisfied on equipment, physical facilities, appealing materials etc. However a regression analysis is to run to identify those means are above the neutral level of satisfaction and to explain the variables affecting the level of satisfaction in e-banking in Vadodara city. The overall regression model and its ANOVA are summarized as follows:

Table 02: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.626	0.392	0.385	0.59705

a. Predictors: (Constant), TANGIBLES, EMPATHY, RELIABILITY, ASSURANCE, RESPONSIVENESS. Source: SPSS regression output of data Analysis

Table 03: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	90.299	6	15.050	42.219	.000
Residual	140.094	393	.356		
Total	230.392	399			

a. Predictors: (Constant), TANGIBLES, EMPATHY, RELIABILITY, ASSURANCE, RESPONSIVENESS.

b. Dependent Variable: CSEB [Source: SPSS regression output of data Analysis]

From the ANOVA Test it shows the table Sig. value 0.05 is greater than the calculated Sig. value 0.000. It reflects the null hypothesis at 5% level of significance. It means there was a significant correlation between dependent variable and independent variables. Therefore customer satisfaction level depends on quality dimension in different private commercial banks in Vadodara city. But it does not mean that all factors of service quality have significant correlation with customer satisfaction level. The overall predictability of the model is shown in the table 02 above. The adjusted R square value of .385 indicates that the model explains roughly about 38% of the factors responsible for quality in E-Banking.

The ANOVA table shown under table 03 depicting significant F values implies that the model and data are well fit in explaining customer satisfaction in E-Banking. Based on the data found in the table 04 below, it can be interpreted that the independent variables such as reliability, responsiveness and assurance have strong impact on customer satisfaction;

hence, the other two variables empathy and tangibles were dropped from the final analysis based on (99% level of significance).

Table 04: Regression Coefficients Analysis of the model

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
Constant)	-.185	.263			-.703	.482
RELIABILITY	.254	.060	.186		4.259	.002
RESPONSIVENESS	.402	.071	.280		5.684	.000
ASSURANCE	.266	.056	.248		4.735	.000
EMPATHY	-.325	.197	-.264		-1.651	.108
TANGIBILITY	.064	.193	.054		.332	.742

a. Dependent Variable: CSEB [Source: SPSS regression output of data Analysis] From the above findings we can develop the following regression model:

$$CSEB = -0.185 + .254 X1 + .402 X2 + .266 X3$$

$$S.E. \quad (.263) \quad (.060) \quad (.071) \quad (.056)$$

$$T \text{ values} \quad (4.259)** \quad (5.684)** \quad (4.735)**$$

$$R \text{ square (Adj.)} = .385, F = 42.219** \text{ Significant at 99\% level}$$

Where,

CSEB= customer satisfaction on E-Banking

X1 = Reliability

X2= Responsiveness

X3 = Assurance

Coefficient analysis shows the relationship between dependent variable and each independent variable. According to Sig. value reliability, responsiveness and assurance has significant correlation with customer satisfaction level. Here, table Sig. value is 0.05 which is greater than calculated Sig. value 0.000, 0.002 respectively. But the calculated Sig. value of responsibility, reliability and assurance are greater than the table Sig. value. So, these factors have some impact on service quality but it is not significant. Here, X1 (Reliability) = 0.186 i.e, 100% change in reliability leads to 18.6% change in customer satisfaction level. X2 (Responsiveness) = 0.280 i.e, 100% change in responsiveness leads to 28% change in customer satisfaction level. X3 (Assurance) = 0.248 i.e, 100% change in assurance leads to 24.8% change in customer satisfaction level.

Concluding Remarks:

From the statistical analysis it is observed that there is a relation between customer satisfaction in e-banking and reliability, responsiveness, assurance, empathy, and tangibles as such null hypothesis is accepted and alternative hypothesis is rejected. A number of private commercial banks are operating their activities in Vadodara city. Many banks can perform their activities by e-banking system. Robinson (2000) comments are supported by the research as supply of internet banking services enables banks to establish and extend their relationship with the customers.

The study further indicates Easingwood & Storey's (1993) comment that the relationship between banks and corporate customers is the most important factor in the success of new financial services. Many enthusiastic merchants started e-commerce activities in Vadodara City but due to lack of support from the banking industries. E-bank fund transfer in Vadodara city is allowed only through clearing house which requires at least two working days to be settled the transaction. E-banking payment will also facilitate the customers to pay their utility bills through ATM, Online banking or SMS banking systems from anywhere anytime even from office / residence at mid-night or holidays.

E-banking environment observation is supported by the study. Wise and Ali's (2009) observation regarding customer relationship management through automated banking system should be considered by the policy makers. By stepping into new and aggressive strategy of e-banking, it can make a difference in Vadodara banking sector. By constantly reviewing its e-banking systems, policies, process, and prices of its products and services, ensuring various facilities, use of modern technology and establishing a bond with the customers, it could reach in leading position. On the basis of the literature review we go for quantitative test. Empirical results and analysis of the findings proves that the null hypothesis is accepted and the alternative hypothesis is rejected which was stated earlier.

Recommendations:

Some recommendations are given below:

- E-Banking services should try to mobilize more deposit schemes through better marketing and incentive measures.
- E-Banking system should be more flexible.
- E-Banking should develop their communication among branches.
- ATM booths should be increased.
- The decision making process should be faster.
- SME section of e-banking should be more flexible.
- E-Banking service should be according to the customer expectation and satisfaction.
- E-Banking services have to resolve the entire problem very quickly that customer face in the online transaction.
- The bank should arrange the demonstration programs for the clients to enjoy the services properly.
- Government should be pioneer to develop the IT infrastructure in Vadodara city.

In future, research may be done through doing survey on larger number of customers of the banks and try to understand their satisfaction level on the basis of proxy determinants as level of satisfaction is a cardinal approach.

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