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E-Service Quality Dimensions: Striving for Customer Satisfaction in Online Banking Industry

Abstract

The present study empirically assessed the impact of e-banking service quality dimensions on Customer Satisfaction (CS). This study attempted to examine the effective factors and its impact on service quality. The construct of e-Service Quality factors for online banking services was developed to determine dimensions of e-SERVQUAL. This study is a cross-sectional survey that employed the use of pre-structured questionnaire to collect primary data from a sample of 120 internet banking users through personal contact, field survey and email. Collected data have been analyzed through SPSS 21 software by different statistical tools like Reliability test for judgment of internal consistency of collected data and KMO & Bartlett's test for factor analysis. Analysis of collected data reveals that there are three dimensions of service quality, namely, Technical dimension, Trustworthiness dimension and Strategic dimension which impact customer satisfaction. This paper depicts the overall impact of various service quality dimensions on internet banking service quality (I-SQ) for better customer satisfaction through statistical and analytical measures.

Introduction

Usage of internet banking has enlarged its significance during the last decades and its value is on a rise. Banking is a service industry which spans across almost all demography. With the changing times and fragile loyalties, banks are trying hard to keep their customers happy with innovative technological applications integrated with old-age brick-and-mortar banking. Being an industry catering to the millions, banks are constantly offering new products to satisfy their diverse customer bases with varied tastes and preferences. In recent years, internet banking is one of the products which the banks are offering to their customers to ensure customer satisfaction along with improved business.

The internet banking or online banking is a win-win solution for both the banks and their customers. The customers are advantaged because of the convenience, flexibility and literally 24-hour banking solutions in their hands and the banks get benefitted because of lower operating costs, wider geographical reach and reduced customer pressure on their branches. Sampson (2005) found that e-banking services have been able to cut costs, save time and offer services at the expense of man-hour to the satisfaction of customers.

In the virtual space customers communicate with the company through an information system. By using the Internet as a service delivery channel, companies should be aware of the fact that some aspects of the human interaction of traditional service settings cannot be replaced by technology (Cox & Dale, 2001). According to them, such aspects include courtesy, friendliness, helpfulness, care, commitment, flexibility and cleanliness.

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Table 1: Transactions through Internet/Electronic Banking Delivery Channels

	Years*						
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Internet users	90,421,849	122,970,441	155,575,944	213,339,324	233,152,478	354114747	462,124,989
New users	29,486,779	32,548,593	32,605,503	57,763,380	19,813,154	120,962,269	108,010,242
Growth	0	36%	72%	136%	168%	52%	31%

Source: Internet Live Stats (www.InternetLiveStats.com).

Review of Literature

Ahmad and Ali (2011) research showed that adoption of e-banking (accessibility, convenience, security, privacy, content, design, speed, fees and charges) had a positive effect on Jordanian Commercial Bank customers' satisfaction, loyalty, and positive WOM. Nuseir and Akroush (2010) studied the relationship between the e-service quality dimensions and customer satisfaction of banks in Jordan. The data were collected from 457 customers who had e-banking transactions with banks in Jordan. The paper indicated that e-service quality dimensions such as website attributes, reliability, perceived risk, responsiveness and customization have a positive and significant effect on the banks overall customers' satisfaction. The study also indicated that the strongest predictors, based on beta values, of e-service quality dimensions on the banks overall customers' satisfaction and its individual elements are responsiveness, website attributes and customization respectively.

Sultan (2009) in his study found that there exist an indirect relationship between the fee charged in e-banking and customer satisfaction and there is a direct relationship between the problems faced in e-banking and customer satisfaction. Salman and Kashif (2013) study result showed that the awareness of customers in e-banking was poor that is more number of customers do not know what e-banking meant, e-banking has totally reduced interaction with bank employees and it enabled customers to control their accounts movements more than ordinary banking.

Philipos (2013) in his study of customer satisfaction and e-banking service in some selected banks of Ethiopia found out that customer satisfaction in e-banking has a significant relationship with convenience, reasonable and fair fees (charges) during the transaction, efficient service of e-banking, privacy, security, reliability and responsiveness of employees to solve e-banking service failure and these variable determined 84% customer satisfaction in e-banking.

Balachandher (2001) stressed that empirical evidence implies that customers 'patronage for and reaction to a particular product depends on their level of understanding of what the product can do and what they stand to benefit there from. Hamidizadeh et al. (2007) tried to identify and rank the preliminary and stimulant factors in electronic banking development and also identification and ranking of the challenges and external environmental limitations of electronic banking systems in our country.

Feizi et al. (2005) first posed the concepts and services of electronic banking and then tried to identify and rank efficient factors and obstacles in creation and development of electronic banking in Iran. Amadehn et al. (2009) tried to study and identify the main obstacles in developing electronic banking in our country's private banks in their research work. Alemi (2004) studied the designing and implementation of a broad software terminal in banks. Poormirza et al. (2008) studied and assessed CRM administration in Samaan Bank in a paper in which the subject was communication with customers' management in electronic banking industry in Iran.

Bogdan (2003) presented a paper about obstacles and problems in implementing electronic banking. Classifying the obstacles of developing electronic banking was the main idea in this article. Ming et al. (2005) studied the factors such as bank size, external pressures, perceived profits and maturation of information technology in electronic banking development. Klayous et al. (2007) classified electronic banking development into two groups of soft and hard and measured their effects. Laukkanen (2007) suggested that efficiency, easiness and security are the most important demands which increase the perceived value by the customer of mobile bank and internet bank and he identified security as the main concern.

Hasan et al. (2013) in their survey on relationship between customers„ satisfaction and electronic banking features found that easy access, design, transaction speed, security, information content and customer support of electronic banking have meaningful and positive relationship with electronic banking. Finger (2010) in his study on effect of electronic payment on customer satisfaction in Nigerian banks has also deduced that electronic payments have affected an average increased in the customer service delivery and customer satisfaction. Phutela and Dasgupta (2013) highlighted that online banking is more popular amongst young professionals or educated population. But still, there is a huge percentage of untapped market that can use online banking services. The customer base can be strengthened more by making the services more secure while maintaining its privacy.

Faizan (2011) revealed that customer satisfaction was positively correlated with customer loyalty and negatively correlated with customer intentions to switch. Belay and Ebisa (2012) in their study of evaluation of customer satisfaction with bank services with the Jimma Commercial bank of Ethiopia found that 25% of their sample responded that there

was no any change the benefits they got from e-banking in comparison to ordinary banking and 17% of their sample respondents replied that they got better benefits at best level through e-banking banking service than ordinary banking.

Bello and Dogarawa (2005) examined and assessed the impact of e-banking services for customer satisfaction in the Nigerian banking industry. Their study showed that many banks' customers in Nigeria are fully aware of the positive developments in information technology and telecommunications which led to the introduction of new delivery channels for Nigerian commercial banks' products and services. The aim was to satisfy and get customer delighted.

Most customers, however, still patronize the bank branches and find interaction with human tellers as very important. Secondly, the study found that customers enjoying electronic banking services are still not satisfied with the quality and efficiency of the services. This is expressed in the number of times customers physically visit banks and length of time spent before such services are received. Customers' perception of and reaction to these developments are issues of concern to both Government and banking industry. Sohail and Shanmugham (2003) pointed out that a bank's promotional effort indeed facilitates awareness of internet banking adoption and its benefits.

Rotchanakitumnuai and Speece (2003) reported that many Thai banks are currently implementing Internet banking. Banks that offer service via this channel claim that it reduces costs and makes them more competitive. However, many corporate customers are not highly enthusiastic about Internet banking. An understanding of why corporate customers do not accept Internet banking can assist banks to implement this self-service technology more efficiently. In-depth qualitative interviews with Thai firms the researchers suggest that the security of the Internet is a major factor inhibiting wider adoption.

Those already using Internet banking seem to have more confidence that the system is reliable, whereas non-users are much more service conscious, and do not trust financial transactions made via Internet channels. They also stated that though banks are very interested in internet banking they are concerned with the risks connected with procedures for transactions over the Internet.

Gardachew (2010) showed that resistance to changes in technology among customers and staff due to lack of awareness on the benefits of new technologies, fear of risk, lack of trained personnel in key areas, tend to be content with the existing structures and people may be resistance to new payment systems.

Research Questions

The objectives of this study can be ascertained by the following research questions:

1. Which service quality dimensions give better satisfaction when evaluating the quality of online banking services?

2. How these service quality dimensions of online banking services can be used to measure the quality of online banking services?

Research Methodology

Data for the study undertaken has been collected from the primary source, collected through pre-structured questionnaire. The questionnaire includes demographic information like name, gender, age, country and occupation. Based on the objectives, 20 questions were set up and to make the analysis more transparent the sample size was restricted to 120 respondents. This study is representative in nature so far as the banks are concerned and focuses on customer satisfaction of internet banking services and not on a particular bank's internet banking services. As per the survey results, the numbers of respondents from different banks and geographical locations are as follows: State Bank of India (55), Bank of Baroda (15),Central Bank of India (03), Bank of India (20), Allahabad Bank (27).

Data collection and Analysis

Survey method was used to get the information regarding expected and perceived banking services. This method is quick, inexpensive and also accurate. Primary data was collected using a predetermined personally administered questionnaire. The questionnaire was designed to capture sample characteristics and the objectives. It has a mix of quantitative and qualitative feedbacks. For the quantitative feedbacks, a five point Likert scale from 1 to 5 was used, where 1 was for the lowest satisfaction level and 5 was for the highest satisfaction level. Collected data has been analyzed by SPSS 21 using KMO and Bartlett's Test to identify which factor is more effective amongst different factors of internet banking. On the basis of factor analysis, researchers identified 3 Dimensions of service quality.

To test the internal consistency and reliability, researchers applied Cronbach Alfa. Here, Cronbach Alfa is 0.975 (Table 3). This value is above the recommended 0.70. Therefore, the items on the measurement scale are considered to possess high-internal consistency and reliability.

Table: 3 Reliability Statistics		
Cronbach 's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.975	.975	20

Exploratory Factor Analysis followed by Principal Component Analysis and Varimax with Kaiser Normalization processes were performed to reduce data and to observe whether the different items were properly loaded under several components or not. Close observation did take place on Rotated Component Matrix where factor loading has taken place in order to take a decision about whether regrouping of several items was possible or not.

The eigenvalues, the percentage of variance, cumulative percentages, Cronbach's test, Kaiser-Meyer-Olkin (KMO) measure for sampling adequacy and Bartlett's test of sphericity were also conducted for the purpose of this study. According to Kaiser and

Cerny (1979), the high shared variance and relatively low uniqueness in variance are indicated by the KMO measure for sampling adequacy (0.816). The Bartlett's Sphericity Test where Chi-square value is 4120.672 (p<0.0001) established that distribution is ellipsoid and amenable to data reduction *(See Table 4)*

Table: 4 KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.896
Bartlett's Test of Sphericity	Approx. Chi-Square	922.048
	df	190
	Sig.	.000

Table:5 Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.099	65.496	65.496	13.099	65.496	65.496	5.703	28.515	28.515
2	1.267	6.337	71.832	1.267	6.337	71.832	5.500	27.502	56.017
3	1.049	5.245	77.077	1.049	5.245	77.077	4.212	21.060	77.077
4	.776	3.879	80.956						
5	.603	3.017	83.973						
6	.538	2.691	86.664						
7	.395	1.973	88.636						
8	.377	1.884	90.520						
9	.311	1.553	92.073						
10	.278	1.392	93.465						
11	.262	1.308	94.773						
12	.251	1.257	96.030						
13	.187	.935	96.965						
14	.149	.746	97.711						
15	.148	.738	98.450						
16	.102	.510	98.959						
17	.066	.330	99.290						
18	.055	.276	99.566						
19	.045	.227	99.793						
20	.041	.207	100.000						
Extraction Method: Principal Component Analysis.									

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Table: 6 Rotated Component Matrix[a]			
VARIABLES	Component		
	1	2	3
VAR00001	.776		
VAR00002	.725		
VAR00003	.731		
VAR00004		.691	
VAR00005			.883
VAR00006			.787
VAR00007			.760
VAR00008		.755	
VAR00009		.626	
VAR00010		.823	
VAR00011		.830	
VAR00012	.794		
VAR00013	.649		
VAR00014	.694		
VAR00015			.752
VAR00016	.761		
VAR00017	.642		
VAR00018			.668
VAR00019	.650		
VAR00020			.793
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 20 iterations.			

The Rotated Component Matrix shows that the values of all the 20 items are greater than 0.5 which strongly support the recommendation of Nunnally and Bernstein (1994) about the factor loading and cross-loading *(See Table 6)*. So, Table 6 established that all the factors are properly loaded under three components.

Table: 7 Variable Names	Dimension Name
VAR00001- Proper Network for smooth functioning of Online Transaction	Technical Dimension
VAR00002- Broad and strong software facilities	
VAR00003-IT specialist person	
VAR00012- Speed of accessing and using the website	
VAR00013- Site's promises about order delivery and item availability are fulfilled	
VAR00014- The Web site projects an image consistent with the organization's image.	
VAR00016- Web site there is very little waiting time between my actions and the Web site's response	
VAR00017- Functioning of 24X7X365 basis service, Online assistance, Account Access when aboard,	
VAR00019- Continuous improvement on online systems	
VAR00004- Legal regulations for online transactions can effectively protect my information privacy	Trustworthiness
VAR00008- Privacy of customer's transaction	
VAR00009- Safe transactions	
VAR00010- Clear information, Degree of customer's belief that the organization's site is safe	
VAR00011- Web site to keep customer personal information	
VAR00005- Transparency	Strategic Factor
VAR00006- Multiple / Single decision making centre	
VAR00007- Intangible and indirect nature of electronic shopping	
VAR00015- Quality of CRM	
VAR00018- Follow-up	
VAR00020- Secured login process	

Findings of the Study

The results of the study revealed that amongst the three factors extracted, the first factor comprises of nine items which are related to the website of the banks. Hence, it is named as **'Technical Dimension'** of internet banking. It was analyzed that the consumers were satisfied from these services in terms of smooth functioning of the website, site's speed, quick confirmation of the payments, instant replies, round the year online support, etc. The second factor included five items that were related to safety and privacy elements of the service. Hence, the second factor was renamed as

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'Trustworthiness Factor'.

The study indicates that the banks need to pay personalized attention to its customers. Problem solving attitude should also prevail in banks, as this factor has an impact on assured service dimension. Again, managers should support service recovery process if any service failure occurs on the part of the bank itself. Empathetic attitude will bring the real difference. Customer satisfaction and trustworthy banking relationship, according to the study, suggests high customer satisfaction in banking services and higher loyalty of the customers towards their banks.

The third factor extracted from the factor analysis comprises of six items related to overall strategy. Hence the factor is renamed as **'Strategic Factor'**. One of the most critical factors of survival and gaining strategic advantage is that of customer retention. Moreover, banks need to develop strategies that enhance loyalty of their customers. Therefore, banking organizations should always attempt to ensure that their customers remain extremely satisfied. Since the average customer satisfaction does not differ between different banks, it reveals that the difference in web services across different banks from different countries, in terms of quality, is not statistically significant.

On the basis of above discussions and as per the researchers' observations, it was found that apart from, above three dimensions, other vital seven dimensions may impact the customers' satisfaction level. These seven dimensions for measuring Internet-Service Quality (I-SQ) are as follows: Trustworthiness, Awareness, Accessibility, No rigidity, Navigation, Communication, Website customization /Personalization.

Table8: I-SQ Dimensions

Internet Service Quality (I-SQ) Dimensions	Descriptions
Trustworthiness	Privacy, Safe transactions, Secured login, Clear information, Degree of customer's belief that the bank's site is safe, Billing accuracy
Awareness	Online education, Promotional offers
Accessibility	24X7X365 basis service, Online assistance, Account Access when aboard, ATM Access, Mobile Banking
No Rigidity	Flexibility of timings, Easy fund transfer
Navigation	Continuous up-gradation of online system, user-friendly interface
Communication	Updated status, Availability, emails, sms
Web Customization/ Personalization	Accurate online transaction, easy login, functions that customers needed, pattern of online shopping

According to our research respondents, it is very important that their transactions and personal information must be fully secured. Trustworthy and secured online system would make the decision easy for a customer moving to internet banking from traditional modes of banking. Again, customers of some banks, offering internet and mobile banking services through ATMs in countries like India and Bhutan, found that it was inconvenient to access ATM when they are abroad.

A simple navigable website would be encouraging for customers and they would desire to use online services. The banks should also ensure that there is no communication gap between a bank and its customer and during any need or query, a customer can easily access the management or the bank's staff. If banks work on these dimensions (See table 6 and 7) then it would surely ensure the increase of customer-flow towards internet banking.

Conclusion

Although, India's banking system is strong and well-managed, more emphasis should be laid on better services provision to the customers. Technological advancements have helped the banks in reducing the costs along with good services provision and providing a better service experience. However, the banks need to focus more on the needs of customers in the highly changing economic environment. For mobile banking, nowadays, customers are expecting mobile applications to come with the more personalized system beyond the normal mobile-friendly version of a bank's present website.

M-banking should include a biometric authentication process, voice recognition and GPS tracking system, etc. for more secured, customized offers that a traditional website cannot provide. According to the ICSI Report, the Indian banking industry is lagging behind its global equivalents in developed and developing economies in the issue of customer satisfaction. The average customer satisfaction score of banks in India is 69, which is lesser than that of its peers in Colombia (80), the US (76), the UK (76), South Africa (76) and South Korea (74). The high growth in internet banking is constantly creating different areas for service and banks will require initializing major improvements in internet service quality (I-SQ) to maintain minimum customer satisfaction.

The quality of service can be evaluated through constant feedback mechanism for different service dimensions and this can help the banks to perform more effectively and efficiently. Customers are the soul of any service industry and banks being in the service sector are also customer-centric and are always upgrading their operations to ensure better customer satisfaction. However, increasing norms, regulations, innovations, competition and presence of tech-savvy customers make a bank more vulnerable to different aspects of service quality. This calls for an in-depth scrutiny of present banking operations to accommodate new service quality dimensions in both traditional and internet banking operations.

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