

Research Article

Impact of internet banking service quality on customer satisfaction: A Study with reference to Commercial Banks at Bangalore City

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Abstract

Aims of the study are to examine how service quality of internet banking influence on customer satisfaction of SBI, Indian Overseas bank, Canara bank, ICICI & HDFC banks. An exploratory survey with help of Likert based questionnaire was conducted to investigate the impact of internet banking services quality on customer satisfaction in Bangalore city. Convenience sampling was used and various kinds of internet banking customers were approached various parts of Bangalore. Data were collected from a sample of 212 internet banking customers in Bangalore city. The results implicated that the internet banking service quality on all the dimensions have significant impact on the customer satisfaction of internet banking customers. Each of the dimensions namely efficiency, system availability, fulfillment, privacy, contact, responsiveness and contact are contribute 82% to the overall customer satisfaction in internet banking in commercial banks.

Key Words: Internet banking service quality, Bangalore city, customer satisfaction, efficiency, responsiveness.

Introduction:

Banks play a vital role in economy of the country with technical advancement and up gradation of new innovation services to customers. The technological innovation of electronic channel mode of service delivery has brought in a level playing field for competitive business environment by removing geographical, regulation policies and industrial barriers (Sadaf Firdous 2017, Nadarajah R 2020). There are five electronic commercial activities internet users in India. These are required banking relationship with internet users to perform day to day transactions. These includes: Investment, Banking services, Shopping, Mobile banking and internet banking. Banking sector has transformed to technological oriented sector with the use tele commutation network to supply variety of value addition to customers which is known as internet banking under the main concept of paperless banking (Dhanya Mathai & Gloria Mary Raju 2020).

Internet banking is an electronic payment system that enables customers of commercial banks to conduct financial transaction on a website operated by banks and it includes retail banking, virtual banking and credit union services. Online banking is also called as internet banking, e-banking etc. by some other terms (Khattab et al 2019). Internet banking is new channel has added into new concept of customer satisfaction. All commercial banks exist and strive to become an integrated system of the lives of their customers and therefore always strive harder to keep satisfying their customers through updated and technical channels of delivering by banks. There are many factors which have an impact on customer satisfaction and one of the most important being service quality of internet banking (Moghavvemi, S., Lee, S. T., and Lee, S. P. 2018). Customer satisfaction varies from industry to industry based on service quality. In present era, with the new emergence of internet as a major channel of service delivery, the need of scale to measure the high level of service quality in electronic media of services was very strong (Deraz et al 2019). Hence, service quality was taken up the study purpose specifically in terms of the e-services which lead to the development of different models that helped in measuring e-services in service sector and other allied services sectors.

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Various models of e-service quality have brought up as a result of this. The important and major models that have been used to measure the e-service quality are: e-SQ & e-SERVQUAL (Zafar M, et al, 2011), WebQual (Lociacono E, et al 2000), E-S- Qual & E-Rec-SQUAL (Wolfinbarger MF, et al 2003) and many more models.

Review of Literature:

Internet Banking

According to Amit Shankar (2016) examined banking services have shifted from single branch banking to virtual banking because of technology and tele communication development in country and M-banking services diffusion is major concern of Indian banking sector. Observed that eight factors has been identified which affects internet banking adoption behavior in Indian banking sector. Study found that social influence is least factor among the other variables.

Internet banking provides that large number of bank's customer to use day to day transactions. Five factors which can influence customer satisfaction towards internet banking which includes service quality, web design, security and privacy, convenience and speed of the services. Study observed that web design and content, convenience and speed were the top three factors that influence towards customer satisfaction in internet banking Goh Mei Ling et al (2016).

Pakurar M et al (2019) analyzed service quality dimensions by using SERVQUAL model for customer satisfaction in Jordanian banking sector. Study observed that instead of eight subscale factors only four subscale factors used for analysis. The four subscales have order of importance of the subscales' effects on customer satisfaction. Concluded that First subscale (assurance, reliability, access, and employee competences in banking services), second subscale (responsiveness and empathy), third subscale (financial aspect), and fourth subscale (tangibility and).

Jagadeesan, D., & Chinnadurai, P.(2017). examined quality of internet banking services rendered by banks in India. It observed that reliability, empathy, responsiveness, tangible and assurance are internet banking service quality dimensions are major indicators to measure bank account holders satisfaction towards internet banking in private and nationalized banks in India. Study found that the significant relationship between responsiveness and account holders. Average account holders satisfaction does not differentiate between responsiveness of different banks can be the result of different banks in our country.

Ariff et al (2013) examined the impact of e-service quality and e-satisfaction on e-Loyalty in internet banking and used latest version of E-S-QUAL-RecS-QUAL tool to determine e-SQ for internet banking service of commercial banks in Malaysia. Study found that fulfillment, efficiency system, privacy, assurance, contact, responsiveness and website design are the e-SQ factors/dimensions for the internet banking in Malaysia. Study concluded that the website, guide, efficiency, system availability and contact responsiveness were having a positive impact on E-satisfaction in internet banking.

Sakhaei SF et al (2014), analyzed the service quality indexes in internet banking. They investigated the impact of service quality factors in internet banking on customer satisfaction in commercial banks in Iran. This study found that six service quality dimensions namely responsiveness, reliability, efficiency, fulfillment, security and website design have positive relationship with customer satisfaction in internet banking in commercial banks in Iran.

Theoretical Framework

Present study used the E-S Qual and E-RecS-Qual model developed by Parasuraman et al (2005) as a reference to study the relationship of these e-service quality dimensions and customer satisfaction in the internet banking and this model was refined according to the needs and demands of the internet banking sector to suit usage in the study (Figure 1).

SERVQUAL

A 22-item instrument for measuring customers' expectations and perceptions from a service along five quality dimensions: tangibles, reliability, responsiveness, assurance and empathy. (Parasuraman et. Al., 2003)

E-SQ (E-S-Qual and E-RecS-Qual) Instrument

An instrument similar to the SERVQUAL scale, developed specifically for measuring online services (e-services) quality. It includes two scales: the E-S-QUAL scale consists of 4 dimensions with 22 attributes, including efficiency,

fulfillment, system availability and privacy and the E-RecS-QUAL scale which consists of 3 dimensions with 11 attributes, including responsiveness, website design and contact (Parasuraman, Zeithaml & Malhotra, 2005)

This model used for the present study consists of the following terms.

- Efficiency
- system availability
- fulfillment
- Privacy
- Contact
- responsiveness
- Website design

Based on the above model and its dimensions, a framework was developed for the present study to develop the relationship between E-service quality in internet banking in commercial banks and customer satisfaction.

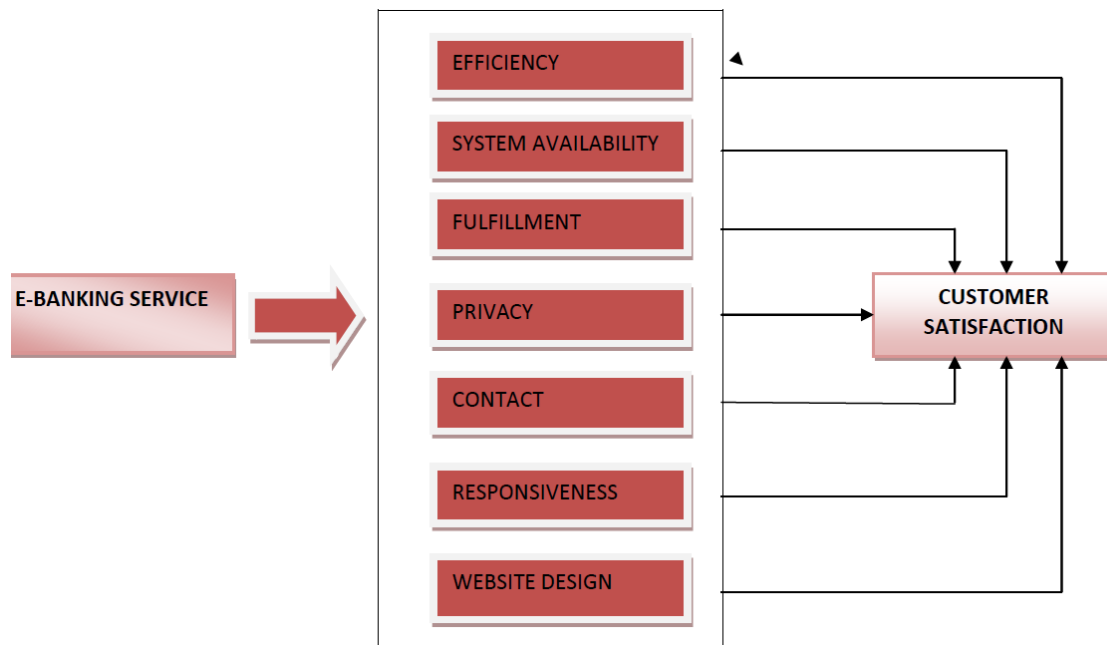


Figure1: E-service quality - Customer satisfaction in internet banking.

Objectives:

1. To examine the relationship between the customer satisfaction and the various internet banking services quality dimensions in commercial banks
2. To study the impact of the internet banking service quality dimensions on the customer satisfactions in commercial banks.

Hypothesis:

- H₁: There is no significant positive association between efficiency and customer satisfaction
- H₂: There is no significant positive association between system availability and customer satisfaction
- H₃: There is no significant positive association between fulfillment and customer satisfaction
- H₄: There is no significant positive association between privacy and customer satisfaction
- H₅: There is no significant positive association between Responsiveness and customer satisfaction
- H₆: There is no significant positive association between contact and customer satisfaction
- H₇: There is no significant positive association between web design and customer satisfaction

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Research Methodology:

Present research study was conducted using a structured questionnaire adopted from Parasuraman et al. (2005) and Vasya Kenova and Patrik Johansson (2006) it includes dimensions of E-S Qual & E-RecS-Qual and questionnaire comprised with four sections (Liu C & Arnett KP 2000).

- Customer demographics: questions were included to gender, age and education
- E-S-QUAL scale: Respondents in this section rated the website performance of each scale item used 5 - point Likert scale.
- E-RecS-QUAL scale: Respondents in this section rated the website performance of each scale item used 5 -point Likert scale.
- Customer satisfaction: Respondents were asked to rate their satisfaction level with E-service quality of the banks using a 5 –point scale.

Sampling:

The samples of the survey were respondents from Bangalore city that have been users of internet banking system of SBI, Indian Overseas bank, Canara bank, ICICI & HDFC banks for at least two years (Musiiime A & Malinga R (2011). This gives that all the respondents had sufficient knowledge and experience in internet banking. The resulting sample comprised of 192 valid questions out of 250 respondents that were asked to survey.

Data Analysis

The data collected through structured questionnaire was analysis by testing it through correlation and regression analysis (Sadaf Firdous et al 2017). Before conducting correlation and regression analysis on the data collected, conducted descriptive analysis to reveal the demographic characteristics of the respondents. Table 1 shown social – demographical analysis

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Public	30	15.6	15.6	15.6
Privat	34	17.7	17.7	33.3
Business	50	26.0	26.0	59.4
Student	78	40.6	40.6	100.0
Total	192	100.0	100.0	

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid <20	20	10.4	10.4	10.4
20-29	60	31.3	31.3	41.7
30-39	72	37.5	37.5	79.2
40 and above	40	20.8	20.8	100.0
Total	192	100.0	100.0	

GENDER

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	138	71.9	71.9	71.9
Female	54	28.1	28.1	100.0
Total	192	100.0	100.0	

Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 10th	11	5.7	5.7	5.7
12th	18	9.4	9.4	15.1
Graduation	78	40.6	40.6	55.7
Post-Graduation	85	44.3	44.3	100.0
Total	192	100.0	100.0	

Income

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid <200000	27	14.1	14.1	14.1
200000-400000	51	26.6	26.6	40.6
400000-600000	75	39.1	39.1	79.7
>600000	39	20.3	20.3	100.0
Total	192	100.0	100.0	

USE of Internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid < 3	32	16.7	16.7	16.7
More than 3 months	44	22.9	22.9	39.6
12 months	55	28.6	28.6	68.2
More than 12 months	61	31.8	31.8	100.0
Total	192	100.0	100.0	

NAME OF THE BANK

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid SBI	68	35.4	35.4	35.4
Canara Bank	44	22.9	22.9	58.3
IOB	26	13.5	13.5	71.9
ICICI	32	16.7	16.7	88.5
HDFC	22	11.5	11.5	100.0
Total	192	100.0	100.0	

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From the table 1 social demographical characteristic shown respondents indicate the majority of the respondents who used internet banking is less than 25 years of age representing 40.6% and the users of internet banking were mostly students, business people and followed by private employees. The majority of the users were males 138 representing 71.9% while only 54 representing 28.1% were females in the study. In education criteria, majority of them post-graduation 85 respondents representing 44.3% and while only 40.6% were under graduates. These finding shows that internet banking users are mostly young males and are mostly individuals with post-graduation in business.

Dimension	Cronbach's Alpha – (α score)
Efficiency	.726
System Availability	.720
Fulfillment	.940
Privacy	.702
Responsiveness	.832
Contact	.783
Website Design	.732

From Table 2 calculated Cronbach's alpha reliable test which measure the internal consistency of questionnaire. Where the all variable posted more than 0.70. This means that variables are reliable of internal consistency of the dimensions (Garson 2002).

The correlation analysis showed the various relationships that exist between various different variables and customer satisfaction in internet banking in commercial banks. The detailed analysis of the correlations matrix is given Table 3

Correlations

		EFF	FUL	SA	PRI	WD	RES	CON	CS
EFF	Pearson Correlation	1	.691**	.403**	.526**	.266**	.260**	.351**	.691**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	192	192	192	192	192	192	192	192
FUL	Pearson Correlation	.691**	1	.547**	.790**	.440**	.427**	.545**	1.000**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	192	192	192	192	192	192	192	192
SA	Pearson Correlation	.403**	.547**	1	.536**	.173*	.171*	.253**	.547**
	Sig. (2-tailed)	.000	.000		.000	.016	.017	.000	.000
	N	192	192	192	192	192	192	192	192
PRI	Pearson Correlation	.526**	.790**	.536**	1	.324**	.316**	.415**	.790**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	192	192	192	192	192	192	192	192
WD	Pearson Correlation	.266**	.440**	.173*	.324**	1	.517**	.210**	.440**
	Sig. (2-tailed)	.000	.000	.016	.000		.000	.003	.000
	N	192	192	192	192	192	192	192	192
RES	Pearson Correlation	.260**	.427**	.171*	.316**	.517**	1	.205**	.427**
	Sig. (2-tailed)	.000	.000	.017	.000	.000		.004	.000
	N	192	192	192	192	192	192	192	192
CON	Pearson Correlation	.351**	.545**	.253**	.415**	.210**	.205**	1	.545**
	Sig. (2-tailed)	.000	.000	.000	.000	.003	.004		.000
	N	192	192	192	192	192	192	192	192
CS	Pearson Correlation	.691**	1.000**	.547**	.790**	.440**	.427**	.545**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	192	192	192	192	192	192	192	192

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Efficiency and Customer Satisfaction

The first variable according to frame efficiency of internet banking in commercial banks, which refers to the ease of getting into the website of the banks and findings their requirements of products and services within it. The analysis of correlation between efficiency and customer satisfaction is 0.691. This value indicates that there is a very positive correlation between the variables at 69%. Then null hypothesis (H₁) rejected and proposed positive association between efficiency and customer satisfaction in commercial banks.

System availability and customer satisfaction

System availability refers to correct technical functioning of the banks. Analysis of correlation table showed that the value of correlation between system availability and customer satisfaction is 0.547. This value indicates that there significant and positive relationship between the two variables. Then null hypothesis (H₂) rejected and it exists positive correlations

Fulfillment and customer satisfaction

Fulfillment is the extent to which the site's promises about order delivery and item availability are fulfilled in commercial banks. Analysis has shown that the value of correlation is 1.00 is perfect positive significant relationship between fulfillment and customer satisfaction. This confirms that null hypothesis (H₃) rejected and has positive correction among the two variables.

Privacy and customer satisfaction

Privacy includes providing security regarding data, credit card information and personal information regarding to customers. All the information should be keep securely. This study shows that privacy and customer satisfaction are positively correlated each other with the value of 0.790. Hence, it confirms the null hypothesis (H₄) rejected and proposed positive association between privacy and customer satisfaction.

Responsiveness and customer satisfaction

Responsiveness refers to the customer reprehensive services offered to fulfill their requirement, handling customer queries and solve grievances of customers etc. Analysis shows that the value of correlation is 0.427 indicating that there is significant positive relationship between the two variables. Confirming null hypothesis (H₅) rejected and the relationship between the responsiveness and customer satisfaction exists.

Contact and customer satisfaction

The availability of assistance through telephone, email or online banking transaction to customers. This dimension has the strongest correlation between the two variables is 0.545, which means that the customers are highly satisfied with banking assistance services. Null hypothesis (H₆) rejected and has the positive correlation between contact and customer satisfaction.

Website design and customer satisfaction

The website design is user friendly and ease of navigate to online customers etc will be taken in website design. According to correlation matrix there is significant and strong positive relationship between website design and customer satisfaction in internet banking. Website design has a correlation of 0.440 with customer satisfaction in commercial banks. Hence null hypothesis (H₇) rejected and proposed positive association between website design and customer satisfaction.

Regression:

The data was also analyzed through regression analysis and it helps to understand the impact of the e-service and quality dimension on customer satisfaction. The regression analysis shows in table 4.

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Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.772	.143		5.390	.000
EFF	.207	.027	.292	7.768	.000
PRI	.319	.034	.398	9.333	.000
WD	.053	.017	.116	3.148	.002
RES	.045	.016	.100	2.728	.007
SA	.061	.021	.106	2.847	.005
CON	.104	.019	.187	5.403	.000
FUL	.069	.014	.162	5.131	.000

a. Dependent Variable: CS

The values of the coefficients in the above table 4 reveals that the variables which have high and least impact on the customer satisfaction through the p value that exist of each variable. Coefficient analysis reveals that the efficiency, privacy website design, responsiveness, system availability, contact and fulfillment have the highest level impact on customer satisfaction as the p value is less than 0.05 for all the variables in the study. Hence, it's concluded that these all the dimensions contribute highly towards customer satisfaction in commercial banks.

Table 5: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.908 ^a	.825	.818	.09708

a. Predictors: (Constant), FUL, WD, SA, CON, EFF, RES, PRI

The value of R square at 0.825 shows that the 82% of the variation in the customer satisfaction can be attributed to the e-service quality dimensions while as the other 18% of the customer satisfaction is due to other factors than the e-service quality of the commercial banks. Hence, it is clearly indicates the above results that internet banking service quality does not have an impact on the customer satisfaction in internet banking in commercial banks.

Conclusion:

This empirical paper aims to make contribution to the existing (Liu C, Arnett KP 2000, Zafa et al 2011, Katri K 2003, Parasuraman et al 2005) knowledge by investigating the impact of internet banking service quality on customer satisfaction in commercial banks at Bangalore city. There are seven dimensions (Efficiency, System Availability, Fulfillment, Responsiveness, Privacy, contact and website design) of the internet banking service quality were took for the study. The empirical results show that there is direct relationship between internet banking service quality variables and customer satisfaction in commercial banks. The study revealed that efficiency, system availability, fulfillment, responsiveness, privacy, contact and website design are the determinants of the internet banking service quality in customer satisfaction. Hence, it's concluded that these all the dimensions contribute highly towards customer satisfaction in commercial banks.

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