

Customers' Perception Towards Internet Banking Services

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Abstract

The key players of the banking industry are its customers and all the efforts made by banks are to satisfy the needs of the customers. The entry of internet affected our daily lives and most dimensions of our lives such as education, communication, business, etc. are overshadowed by this novel phenomenon. The main objectives of the present study were to evaluate the level of awareness of internet banking services among customers of commercial banks, to identify various factors influencing the usage of internet banking services, and to measure the level of satisfaction with internet banking services among the customers of commercial banks. This study concluded that awareness about and satisfaction of customers for e-banking services leads to improvement of smart banking operations and applications of technological advancements. The levels of satisfaction with internet banking services are viewing account balance, online bill payment, and RTGS in internet banking services.

Keywords: Customer satisfaction , E-banking, Internet banking

I. INTRODUCTION

The key players of banking industry are its customers and efforts are made by banks to satisfy the desirable needs of customers. The entry of internet affected our daily lives and most dimensions of our lives such as education, communication, business, etc., are overshadowed by this novel phenomenon. One of these dimensions is to handle banking affairs through the internet. In India, ICICI bank was the first bank which offered this delivery channel by kicking off its online services in 1996. Following this, some other private sector banks such as Citibank, IndusInd Bank, HDFC, and Times bank (now part of HDFC bank) started offering internet services in 1999. In July 2001, State Bank of India launched its internet services. Other public sector banks like Bank of Baroda, Allahabad Bank, Syndicate Bank, and Bank of India also rolled out their internet services during the same time. Recently, banks in India offer full transactional websites to their customers. One can conduct a variety of transactions through internet banking facility which include: account summary, statement of banking transactions, funds transfer between accounts, status of loan applications, balance enquiry, utility bill payments, mini statement

facilities, SMS alerts, cheque book request, cheque status enquiry, stop cheque request, credit card payments and statements, facility to contact account managers, etc.

II. INTERNET BANKING SERVICES

- ❖ View account balance
- ❖ Download account statement
- ❖ Request for stop cheque payment
- ❖ Request for cheque book
- ❖ Create fixed deposit
- ❖ View credit card details
- ❖ Pay credit card bills
- ❖ View D-Mat account details
- ❖ Viewing portfolio summary
- ❖ View your loan account details
- ❖ Mail facility
- ❖ Edit personal profile details
- ❖ Register for e-statement
- ❖ Register for SMS banking
- ❖ Transfer fund to own bank account
- ❖ Transfer fund to other own bank account
- ❖ Transfer fund to other bank account
- ❖ Transfer fund to visa credit card
- ❖ Recharge mobile

Manuscript received May 2, 2017; revised May 24, 2017; accepted May 28, 2017. Date of publication June 6, 2017;

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Digital Object Identifier 10.17010/ijcs/2017/v2/i3/115040

- ❖ Request for demand draft
- ❖ Payment of utility bills shop online and pay using internet banking

III. STATEMENT OF THE PROBLEM

Internet banking is completely technology oriented. Proper awareness, experience, and expertise in operating computer, and electronic devices are needed for it. In India, customers of banks are highly heterogeneous in nature. These include illiterate, semi-literate, and highly literate people. In this circumstance it is essential to know the awareness and satisfaction level of customers of internet banking. In order to analyze the above stated problem, the following questions were raised:

- ❖ What is the level of awareness of customers about internet banking facilities provided by commercial banks in Tamil Nadu?
- ❖ What are the factors that motivate customers to use internet banking facilities?
- ❖ What are the levels of satisfaction of customers with internet banking facilities provided by commercial banks in Tamil Nadu?

IV. OBJECTIVES OF THE STUDY

The main objectives of the present study are:

- ❖ To evaluate the level of awareness of internet banking services among the customers of commercial banks.
- ❖ To identify the various factors influencing the usage of internet banking services.
- ❖ To measure the level of satisfaction with internet banking services among the customers of commercial banks.

V. HYPOTHESES OF THE STUDY

In order to reach the above objectives the following general hypothesis was framed:

- ❖ There is no association between usage of e-banking channels and the level of satisfaction with internet banking services.

VI. SAMPLING TECHNIQUE

At the time of data collection, there were 10 corporations in Tamil Nadu. Therefore, the researcher collected data from all the 10 corporations. I had taken a sample of 750 persons (75 in each corporation) who maintain savings and current account in commercial

banks. The sample drawn is based on convenience sampling approach given the fact that this population is infinite.

VII. FACTORS INFLUENCING INTERNET BANKING SERVICES

The researcher ascertained the response for factors influencing internet banking services through facilities : 1) e-ticket booking; 2) Account opening and Cheque book request; 3) Fund Transfer; 4) Transaction History and Bank Statement; and 5) Demand Draft and D-mat statement. The customers expressed their opinion on Likert's five point scale which ranges from strongly agree to strongly disagree. At this juncture, a parametric one sample t-test was applied to know the opinion of customers about internet banking services and the following results were obtained.

TABLE I.
ONE SAMPLE T-TEST FOR FACTORS INFLUENCING INTERNET BANKING SERVICES

Particulars	Test value = 3					
	t	Df	Sig. (2-tailed)	Mean difference	95 % confidence interval of the difference	
					Lower	Upper
E-ticket booking	9.910	749	0.000	0.595	0.48	0.71
Account opening and cheque book request	3.207	749	0.001	0.199	0.08	0.32
Fund transfer	2.688	749	0.007	0.165	0.04	0.29
Transaction history/ Bank statement	6.544	749	0.000	0.395	0.28	0.51
Demand draft/ D-mat account statement	-3.998	749	0.000	-.237	-0.35	-.12

Source: Author's calculation

It can be seen from table I that t values of e-ticket booking ($t=9.910$, $p=0.000$), account opening and cheque book request ($t=3.207$, $p=0.001$), fund transfer ($t=2.688$, $p=0.007$), transaction history and bank statement ($t=6.544$, $p=0.000$), and demand draft and D-mat account statement ($t=-3.998$, $p=0.000$) are statistically significant at 5% level. Therefore, it can be concluded that the customers of banks are moderately satisfied with e-ticket booking, account opening, cheque book request, fund transfer, transaction history, and bank statement and are not satisfied with demand draft and D-Mat account statement.

VIII. FACTORS OF CUSTOMERS' SATISFACTION WITH INTERNET BANKING SERVICES

I thought-out fifteen variables related to internet banking services and customer level of satisfaction was identified through Likert's five point scale which ranges from highly satisfied to highly dissatisfied. Factor analysis by principal components method was applied and the following results were obtained.

TABLE II.
KMO AND BARTLETT'S TEST FOR INTERNET BANKING SERVICES

Kaiser-Meyer-Olkin measure of sampling Adequacy.			0.972
Bartlett's Test of Sphericity	Approx.Chi- square	8384.124	
	Df	105.000	
	Sig	0.000	

Source: Author's calculation

It was found from table II that the KMO value is point 0.972, Bartlett's test of Sphericity is significant at 5% level. The result showed that the sample is adequate to segment the variables into predominant factors.

TABLE III.
COMMUNALITIES FOR INTERNET BANKING SERVICES

S. No	Component	Initial	Extraction
1	Easy customer access	1	0.783
2	More privacy	1	0.769
3	Online bill payment	1	0.749
4	Balance enquiry	1	0.725
5	Application for accounting opening, loan and credit card	1	0.713
6	Viewing account balance	1	0.663
7	Download personal bank transactions	1	0.713
8	Open or create fixed deposit	1	0.733
9	Transfer of funds	1	0.642
10	Enquire about cheque status	1	0.680
11	Real Time Gross Settlement	1	0.609
12	Request for cheque book/ Demand Draft	1	0.640
13	National Electronic Fund Transfer	1	0.709
14	Service charges	1	0.799
15	Sending and receiving secure messages from the bank	1	0.712

(Extraction Method: Principal Component Analysis)

Source: Author's calculation

Table III displays fifteen variables having the variances which ranges from 0.609 to 0.799. The result shows that the variance ranges from 60.9% to 79.9%, which is statistically significant and qualifies the variables for the formation of main factors.

TABLE IV.
TOTAL VARIANCE APPLIED FOR INTERNET BANKING SERVICES

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.386	62.572	62.572	4.231	28.206	28.206
2	0.678	4.517	67.089	3.951	26.342	54.548
3	0.577	3.843	70.932	2.458	16.384	70.932
4	0.516	3.441	74.373			
5	0.492	3.282	77.655			
6	0.453	3.020	80.675			
7	0.424	2.825	83.501			
8	0.395	2.633	86.134			
9	0.369	2.462	88.596			
10	0.352	2.347	90.943			
11	0.329	2.192	93.135			
12	0.305	2.037	95.172			
13	0.28	1.869	97.041			
14	0.245	1.634	98.675			
15	0.199	1.325	100.000			

(Extraction Method: Principal Component Analysis)

Source: Author's calculation

It was found from table IV that fifteen variables are reduced into major factors with total variance 70.932. The individual variances are statistically significant at 5% level. This leads to formation of three predominant factors with suitable variable loadings.

The rotated component matrix explains the variables loadings for each predominant factor of internet banking service. The factor consists of six variables with the following mean variable loadings i.e. more privacy (0.770), easy customer access (0.741), sending and receiving secure messages from the bank (0.689), online bill payment (0.671), balance enquiry (0.640), and viewing account balance (0.549). Hence, it can be named **"Easy Usage and Security"**. The second factor is generated by the variables of five variables i.e. download personal bank transactions (0.694), enquire about cheque status (0.659), request for cheque book/ demand draft (0.641), application for account opening, loan and credit

card (0.623) and open or create fixed deposits (0.542). Hence, this factor is justified as “*Flexible Transactions*”. The third factor consists of four variables and their respective loadings i.e. service charges (0.791), National Electronic Fund Transfer (0.628), Transfer of funds (0.604) and Real Time Gross Settlement (0.561). Therefore, this factor is suitably named “*Fund Transfer*”.

IX. ASSOCIATION BETWEEN INTERNET BANKING DETAILS AND THE CLUSTER OF SATISFACTION

The researcher collected the response from commercial bank customers on years of usage and frequency of usage in the optional type questions. Besides these, the researcher also classified customers' perception through K-means cluster analysis and each cluster is labeled appropriately. The association between years of usage of internet banking and frequency of usage of internet banking and level of satisfaction with internet facility were examined.

X. YEARS OF USAGE AND LEVEL OF SATISFACTION WITH INTERNET BANKING

Table V shows that the information about customers regarding the usage of internet banking facility with commercial banks. The years of usage is classified into

Table V.

DISTRIBUTION OF CUSTOMERS BY YEARS OF USAGE OF INTERNET BANKING AND LEVEL OF SATISFACTION

Satisfaction	Particulars	Years of Usage Internet Banking				
		Not used	Upto 2 years	3 to 5 years	Above 5 years	Total
More than	Respondents	21	192	129	29	371
Moderately Satisfied	% within Mobile	5.7%	51.8%	34.8%	7.8%	100.0%
Moderately	Respondents	16	132	99	31	278
Satisfied Group	% within Mobile	5.8%	47.5%	35.6%	11.2%	100.0%
Not	Respondents	75	19	7	0	101
Satisfied Group	% within Mobile	74.3%	18.8%	6.9%	.0%	100.0%
Total	Respondents	112	343	235	60	750
	% within Mobile	14.9%	45.7%	31.3%	8.0%	100.0%

Source: Author's calculation

the groups viz. (a) Not used (b) Upto 2 years (c) Between 3 to 5 years, and (d) Above 5 years.

Ho: There is no an association between years of usage and level of satisfaction on internet banking services.

It can be seen from table V that 51.8% of customers belong to more than moderately satisfied group with upto 2 years of internet usage, 47.5% of customers belong to moderately satisfied group with upto 2 years of internet usage, and 18.8% of customers belong to not satisfied group with upto 2 years of internet usage. Table VI enumerates the association between cluster of years of usage and the level of satisfaction with internet banking services.

TABLE VI.

CHI-SQUARE TEST BETWEEN CLUSTERS OF YEARS OF USAGE AND LEVEL OF SATISFACTION OF INTERNET BANKING

Particular	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-square	327.966	6	.000

Source: Author's calculation

It can be seen from table VI that the Chi-square value is 327.966, $p=0.000$, and is statistically significant. Therefore, it can be concluded that the null hypothesis is rejected and there is association between usage of internet banking facility for many years and level of satisfaction with internet banking services.

XI. FREQUENCY OF USAGE OF INTERNET BANKING AND LEVEL OF SATISFACTION

Table VII shows information about customers regarding frequency of usage of internet banking facility with commercial banks. The frequency of usage is classified into six groups viz., (a) Daily (b) Once in a week (c) Once in a month (d) Occasionally (e) During urgency and (f) When needed.

Ho: There is no association between frequency of usage and level of satisfaction with internet banking services.

From table VII, it can be seen that 26.3% of customers belong to the moderately satisfied group during urgency, 24.8% of customers belong to more moderately satisfied group during urgency, and 7.9% of customers belongs to the not satisfied group. Table VIII enumerates the association between cluster of frequency of usage and the level of satisfaction with internet banking services.

It can be seen from table VIII that the chi-square value

TABLE VII.
DISTRIBUTION OF CUSTOMERS BY FREQUENCY OF USAGE INTERNET BANKING AND LEVEL OF SATISFACTION

Satisfaction	Particulars	Frequency of Usage of Internet Banking							Total
		Not use	Daily	Once in a Week	Once in a Month	Occasionally	During Urgency	When Needed	
More Moderately Satisfied Group	Respondents	21	8	48	70	57	92	75	371
	% within Mobile	5.7%	2.2%	12.9%	18.9%	15.4%	24.8%	20.2%	100.0%
Moderately Satisfied Group	Respondents	16	6	36	53	47	73	47	278
	% within Mobile	5.8%	2.2%	12.9%	19.1%	16.9%	26.3%	16.9%	100.0%
Not Satisfied Group	Respondents	75	0	5	6	7	0	8	101
	% within Mobile	74.3%	.0%	5.0%	5.9%	6.9%	.0%	7.9%	100.0%
Total	Respondents	112	14	89	129	111	165	130	750
	% within Mobile	14.9%	1.9%	11.9%	17.2%	14.8%	22.0%	17.3%	100.0%

Note: '% within mobile' refers to the percentage of customers who use mobile banking facilities; Source: Author's calculation

TABLE VIII.
CHI-SQUARE TEST BETWEEN CLUSTERS OF FREQUENCY OF USAGE AND LEVEL OF SATISFACTION WITH INTERNET BANKING

Particular	Value	Df.	Asymp. Sig. (2- sided)
Pearson Chi-square	328.502	12	0.000

Source: Author's calculation

328.502, $p = 0.000$ is statistically significant. Therefore, it is concluded that the null hypothesis is rejected and there is association between frequency of usage of internet banking and level of satisfaction with internet banking services. This implies that frequency of usage of internet banking is a criteria to determine customer satisfaction with internet banking services.

XII. FINDINGS

- ❖ It is found that the most important factors influencing internet banking services moderately are e-ticket booking, account opening and cheque book request, fund transfer, transaction history, and bank statement.
- ❖ Most of the respondents are moderately satisfied with internet banking services like easy customer access, more privacy, online bill payment, balance enquiry, application for account opening, loan and credit card, and viewing account balance.
- ❖ Association between years of usage of internet banking and the level of satisfaction with internet banking facility was investigated. Chi-square test reveals that years of usage are not associated with the level of satisfaction with internet banking facility provided by commercial banks.
- ❖ There is an association between frequency of usage of internet banking and the level of satisfaction about

internet banking facility. Chi-square test reveals that frequencies of usage are not associated with the level of satisfaction about internet banking facility provided by commercial banks.

XIII. SUGGESTIONS

- ❖ Now-a-days customers prefer internet banking services compared to other services. There are many secured methods available for internet banking. Virtual keyboard is one of the secured options available with internet banking but most of the customers are not aware about this virtual keyboard option. Hence, bankers should create awareness among customers about the virtual keyboard facility.
- ❖ Internet banking users face a major problem of password getting locked. If they enter wrong password three times, the account automatically gets locked. Earlier, customers had to visit the bank to get the password unlocked. Now the system has changed, the customer cannot unlock the password by using PAN card number and date of birth. This latest addition is known to very few people. Bankers should take necessary action to popularize the option at large.
- ❖ Internet security is one of the prominent concerns for e-banking operations. It is suggested that the bankers should take initiative and measures for a perfect e-

banking security system such as bio-metric and iris recognition etc.

❖ Majority of the customers use internet banking services for fund transfer and ticket booking. Since there are a number of internet banking services available, the bankers should make efforts to popularize the other internet banking services such as account opening, cheque book request, statement of D-mat accounts, ticket booking, online bill payments, real time gross settlement, national electronic fund transfer, and downloaded personal banking transactions etc.

XIV. CONCLUSION

The banking industry plays a vital role in the economic development of a country and it has become a globalized service sector in the present scenario. In the banking industry, technological advancement has brought a significant change in banking services. In the current situation, Indian commercial banks are providing plenty of e-banking services for their customers. ATM, mobile banking, internet banking, phone banking, electronic fund transfer, debit card, credit card, corporate banking terminal, SWIFT, point of sale, RTGS, and NEFT are the foremost e-banking channels. These services mainly reduce sizeable amount of paper work, lengthy individual customer services, cost per transaction, and manpower. On the other hand, customers are enjoying time constraints like quick, easy, and round clock access to transactions. Now-a-days, e-banking channels are becoming popular and a vital part in the personal banking space. More awareness and satisfaction with e-banking services leads to improvement in smart banking operations and applications of technological advancements.

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