

ANALYSIS OF E-BANKING USAGE AND TECHNOLOGY ACCEPTANCE BY USERS OF BANKING SERVICES

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Abstract

In this era of Modernization the information technology has transformed various aspects of our life. The world is rapidly entering into the 'Net age'. The introduction of information technology has facilitated the emergence of E-Commerce. Information technology is playing an active role in all the sectors whether it is corporate sector, banking sector or service sector. With the emergence of information technology in the banking sector it has given rise to many E-Banking products and services. E-Banking products are of recent origin as compared to other countries. The present paper is focused on customers' perception and acceptance E-Banking services in Kangra district of Himachal Pradesh. In the present paper descriptive research design is used and primary data is collected through questionnaires from 100 respondents. Various tools and techniques like Weighted Arithmetic mean, Standard deviation, Skewness, and Chi-square are used for the data analysis. This paper reveals that except debit card and credit card almost all the e-banking products and services like cash deposit machine, passbook printing machine, mobile banking and internet banking are being used since 1-2 years by majority of the respondents, further among all the problems of e-banking, risk of privacy and security are still the biggest problems that are hindering the acceptance of e-banking products and service.

Keywords: E-Banking, ATM, Modernization, Customer Perception, Information Technology, Customer Attitude.

INTRODUCTION

Bank plays a very important role in the economic development of a country. It is a financial institution that accepts deposits and channels these deposits into lending activities either directly or through capital markets. A bank connects customers which have capital surplus to those with capital deficit.

Banking industry in India is growing at a very high speed due to which it is facing certain challenges like customer satisfaction, customer loyalty and customer retention etc. Quality of services which are provided by banks plays a vital role in customer's satisfaction and customer's retention. One of such historic step was taken by Govt. of India on 19 July 1969 by nationalizing 16 banks, which came to be known as Nationalization of banks. The main aim of Nationalization was to transform class banking into mass banking and to channel the bank credit as per the planned priorities and social needs. Branch expansion program was formulated by RBI to extend necessary banking facilities in all the country especially in the rural and semi-rural

areas. Presently due to the various innovations in the information technology banks have also used information technology to transform their services and has developed various E-banking product and services such as ATM (Automated Teller Machine) is an electronic computerized communication device which allows a customer to access their bank account in order to make withdrawal and other services. Mobile banking is a system of banking in which transactions like Balance enquiry; Mini Statement, Cheque Book Request, Fund Transfer, Mobile/DTH recharge etc. are performed by using mobile device. Internet Banking is an electronic payment system in which customers of a financial institution perform their banking transactions on a website operated by the institution.

CONCEPT AND DEFINITION OF E-BANKING

Electronic banking is an umbrella term for the process by which a customer performs banking transactions electronically without visiting a Brick and Mortar institution. **(Pikkarainen, Karjaluoto, and Pahnla: 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 Transactions at the click of a mouse. Delivery of banking services to customers at their office or home with the help of electronic technology is termed as e-banking.

Internet banking (or E-banking) means any user with a personal computer and a browser can get connected to his bank’s website to perform any of the virtual banking functions. Electronic banking services are the banking class of services that can be offered by a bank to individuals and companies through electronic means via a fixed or mobile telephone, and Internet **(RATIU, 2011)**.

STATEMENT OF THE PROBLEM

In today’s world banking industry is changing at a very rapid speed, the work of banking is expanding. As a result of this there has been a continuous increase in the no. of account holders, total deposits and total withdrawals, but due to this increase in no. of customers and no. of transactions personalized services have become victim. Technology has given various E-banking products and services to the customers as well as to the banks. Now customers are able to perform their banking transactions without visiting bank premises, which saves time of both the customer as well as employees of the banks. As banks are moving toward the modern technology so it is important to know about customer’s perception toward E-banking.

REVIEW OF LITERATURE

Safeena and Rehmat (2010) she has studied the consumer's perspective on internet banking adoption, although, customer acceptance is a key driver determining the rate of change in the financial sector. This study aims at examining the impact of perceived usefulness, perceived ease of use, consumer awareness on internet banking and perceived risk on the acceptance of internet banking by the consumers. The result of his study pointed that majority of customers are accepting online banking because of many favorable factors. Analysis concluded that usefulness, ease of use of the system awareness about online banking and risks related to it are main perusing factors to accept online banking system. These factors have a strong and positive effect on customers to accept online banking system. **Gupta & Mishra (2012)** examined the new emerging trends of E-banking in Indian banking industry. The study found that there are many challenges faced by banks in E-banking and there are many opportunities available with the banks. It concluded that banking sector will need to master a new business model by building management and customer services. It also suggested that banks should contribute intensive efforts to render better services to their customers.

Trivedi & Patel (2013) analyzed the problems faced by customers while using e-banking facilities in India. It observed that most of the customers know about the e-banking services offered by their bank. The study found that there is a significant difference amongst different problems identified while using e-banking services. They also found that some problems affect more and some problems affect less in use of banking services. It concluded that all the reasons are not equally responsible for not using e-banking services. **Kaur et al. (2014)** found that, the Indian banking sector has completely transformed. The banks are facing many challenges and many opportunities are available with the banks. Many financial innovations like ATMs, credit cards, RTGS, debit cards, mobile banking etc. has made a revolution in Indian banking. They suggested that still there is a need to have more innovative solutions so that the challenges can be solved and opportunities can be availed efficiently by the banks.

Maheswari (2018) in her study explored the e-banking services adopted by the bank customers. The findings of the study highlighted that the customer uses e-banking services for several purposes like: doing mobile phone recharge, making telephone bill payment, making electric bill payment, doing money transfer, booking of railway tickets, booking of air ticket etc. further it was also found that majority (91.8 per cent) of the respondents adopted ATM than other e-banking products and services. **Fetu**

(2019) conducted a study to analyze the challenges of electronic banking system in commercial bank of Ethiopia. Data for the achievement of research objectives was collected mainly from primary sources it was collected from bank customers and bank staff through questionnaires and focused group discussions. He depicted in his study that e-banking products and services provides a lot of benefits mainly for the bank such as attracting new customers, building good image of bank, reduction burden on employees and increasing revenues to the banks etc. and customers are also benefited through 24 hour banking, saving of time etc. study further revealed that there are also some factors which hinders the adoption of e-banking system in commercial bank of Ethiopia like low level of internet penetration, poorly developed telecommunication sector, high rates of illiteracy and resistance to change etc. To strengthen the e-banking system he recommended that the government should support the e-banking sector by incorporating a comprehensive regulatory and legal framework and banks should take active part in creating awareness among their customers regarding the e-banking products and services being offered by their bank.

RESEARCH METHODOLOGY

The methodology of the present study is as under:-

OBJECTIVES OF THE STUDY

- To examine the customers perception regarding technology acceptance of E-banking product and services.
- To identify the problems hindering the acceptance of E-banking.

HYPOTHESES

H₀ (1): There is no significant difference in the opinion of respondents regarding the time of using E-banking products and services.

H₀ (2): The views of respondents with regard to factors encouraging using E-Banking is equally distributed.

H₀ (3): The views of respondents with regard to problems of E-banking are equally distributed.

For the achievement of research objectives, a questionnaire was framed on the basis of five point likert scale. In order to check the reliability of the questionnaire pilot study was also conducted. A sample size of 100 respondents was taken for the present study. The required data was collected from the users of banking services of selected banks. For the selection of sample, Random Sampling technique was used.

SCOPE OF THE STUDY

In the present study an attempt has been made to get insight into the perception of customers of selected banks. The study is only confined to the Kangra Distt. of Himachal Pradesh. E-banking is very wide subject, hence the products and services which are widely used, perception of customers and the problems of e-banking are studied.

RELIABILITY

Reliability means the consistency in the items of the scale. For checking the reliability of the scale value of Cronbach's Alpha was calculated. If the calculated value of Cronbach's Alpha is 0.060 or more, then the scale is said to be reliable. Table 1 reveals that, the value of Cronbach's Alpha is found to be 0.697, which is higher than the value recommended implies that the scale is reliable

Table 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.697	.696	23

DISCUSSION AND INTERPRETATION

Table.2: Demographic Profile of Respondents

Gender	Frequency	Valid Percentage	Cumulative percentage
Male	60	60	60
Female	40	40	100
Total	100	100	
Age	Frequency	Valid Percentage	Cumulative percentage
Below 25	3	3	3
25-35	48	48	51
35-50	37	37	88
Above 50	12	12	100
Total	100	100	
Marital Status	Frequency	Valid Percentage	Cumulative percentage
Married	78	78	78
Unmarried	22	22	100
Total	100	100	
Education	Frequency	Valid Percentage	Cumulative percentage
Secondary	9	9	9
Graduate	40	40	49
Post Graduate	27	27	76
Post Graduate and above	24	24	100
Total	100	100	
Personal Income	Frequency	Valid Percentage	Cumulative percentage
Up to 3 lakh	16	16	16

3-5 Lakh	41	41	57
5-7 Lakh	25	25	82
Above 7 Lakh	18	18	100
Total	100	100	
Occupation	Frequency	Valid Percentage	Cumulative percentage
Govt. Employee	39	39	39
Businessman	23	23	62
Professional	15	15	77
Private Job	23	23	100
Total	100	100	
Location	Frequency	Valid Percentage	Cumulative percentage
Rural	34	34	34
Urban	66	66	100
Total	100	100	

Source: Data collected through Questionnaire

DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Demographic profile of the respondents have been presented in the Table 2 on the basis of gender, age group, marital status, educational qualification, Total personal income, occupation and location. It is very clear from the table that majority of the respondents are males i.e. 60 percent while females are 40 percent. Similarly the breakup of the respondents on the basis of age has been presented, which reveals that majority of the respondents i.e. 48 percent are falling in the age group of 25-35 year, whereas 37 percent respondents are falling in the age group of 35-50 and least percentage of respondents belong to the age group of below 25 and above 50 i.e. 3 percent and 12 percent respectively. The table also reveals that majority of the respondents i.e. 78 percent are married and 32 percent are unmarried.

The breakup of respondents on the basis of educational qualification inferences that majority of the respondents are graduate i.e. 40 percent below this the percentage is for post graduate 27 percent, after then 24 percent for post graduate and above, least percentage of respondents are falling in the category of secondary 9 percent. This implies that most of the respondents are highly educated. The personal income wise classification of the respondents has been presented in the table depicts that majority of respondents i.e. 41 percent are falling in the income level of 3-5 lakh, while 25 percent respondents are having a personal income of 5-7 lakh, and least percentage of respondents i.e. 16 percent and 18 percent are lying in the income groups of up to 3 lakh and above 7 lakh respectively. Occupation is a very important indicator of the economic status as it determines the personality and standard of living of an individual. In the present study the information about the occupation of the respondents was collected. The study reveals that a significant proportion of the

respondents are serving in govt. sector i.e. 39 percent, whereas 23 percent respondents are businessman, 23 percent are doing private job and remaining 15 percent are doing some kind of professional work. Further occupation wise breakup inferences that a major proportion of respondents belonging to the study resides in urban area i.e. 66 percent while rest of the respondents 34 percent in rural area.

Table 3: Duration of Using E-banking products and services

	Not Using	Less than 1 Year	1-2 Year	2-3 Year	More than 3 Year	Total	Chi-square	P Value
Debit Card	-	2	3	39	56	100	40.46	.000
Credit Card	77	3	6	11	3	100	205.20	.000
Cash Deposit Machine	31	7	41	21	-	100	25.28	.000
Passbook Printing Machine	25	7	47	20	1	100	64.20	.000
Mobile Banking	17	14	21	45	3	100	33.10	.000
Internet Banking	32	11	27	28	2	100	48.00	.000

Source: Data Collected through Questionnaire

DURATION OF USING E-BANKING PRODUCTS AND SERVICES

Debit Card Usage: Respondent's opinion regarding the duration of using E-banking products and services has been presented in table 3. It is clear from the table that Chi-square value is 40.46 which is highly significant at 1 percent level of significance hence null hypothesis is rejected and alternative hypothesis is accepted that there is a significant difference in the opinion of respondents regarding the time of using E-banking products and services.

Credit Card Usage: Credit card facility is not being used by the majority of the respondents i.e. 77 percent whereas 11 percent of the respondents are using this facility from 2-3 years. P value is found .000 which is less than then 0.05 and the rule is to reject the null hypothesis hence the null hypothesis is rejected and alternative hypothesis is accepted.

Cash Deposit Machine Usage: It can be assessed from the table that Cash deposit machine is used by the highest percentage of respondents i.e. 41 percent from 1-2 years after while 31 percent of the respondents are not using cash deposit machine as

they may not be familiar with the working of the machine, other 21 percent of the users are using the machine from 2-3 years. Chi- square value being highly significant at 1 percent level of significance with P value .000 which rejects the null hypothesis and accepts the alternative hypothesis.

Passbook Printing Machine Usage: Majority of the respondents 47 percent are using passbook printing machine from 1-2 years while 25 percent are not using passbook printing machine for printing the transactions on the passbook. It can be noted from the above table that the p value .000 is significantly less than 0.05. Null hypothesis is therefore rejected and it can be concluded that there is significant difference in the views of respondents regarding the usage of e-banking products and services.

Mobile Banking Usage: To access the views of respondents regarding mobile banking usage chi-square test has been applied. P-value is found highly significant which leads to the acceptance of alternative hypothesis.

Internet Banking Usage: Further for the internet banking there are 32 percent of the respondents who are not using, the reason behind the non-usage may be the complexity of the banks website, there are 28 percent and 27 percent of the respondents who are using internet banking from 2-3 year and 1-2 year respectively. P-value .000 is significantly less than 0.05; null hypothesis of no difference in the views of respondents regarding the usage of e-banking has been rejected.

Table 4: Assessment of factors Encouraging customers to use E-Banking

	SA	A	Ind	D	SD	Mean	S.D	Skewness	Chi-Square	P Value
Usage of E-banking is safe	16	80	2	2	-	4.10	.503	-.780	166.56	.000
E-banking leads to transparency	19	78	2	1	-	4.15	.479	-.147	158.00	.000
E-banking is trustworthy	9	80	9	2	-	3.96	.510	-.997	162.64	.000
Wireless access	24	65	11	-	-	4.13	.580	-.011	47.66	.000
Banks educates their customers through seminars	5	21	28	45	1	2.84	.939	.626	63.80	.000

Source: Data Collected through Questionnaire

Note: SA – Strongly Agree, A- Agree, Ind- Indifferent, D-Disagree, SD- Strongly Disagree, S. D.- Standard Deviation.

The respondent's opinion regarding the factors encouraging using e-banking has been presented in table number 4. It is found that mean score 4.10 of the statement is more than the average standard score that is 3 ($N+1/2$, where $N=5$) with the standard deviation .503. The value of skewness is found negative -.780 which inferences that the view of respondent is on the higher side which is ranged between satisfied to

highly satisfy. The above finding is also supported by the value of chi-square which is 166.56 and p-value .000 found highly significant at 1 percent level of significance. Hence the null hypothesis is rejected and alternative hypothesis is accepted with the inference that views of the respondents are not equally distributed on five point rating scale.

Similarly, for the statement that e-banking leads to the transparency in the banking transactions, mean score 4.15 which is more than the average score also asserts that views of the respondents are lying towards the higher side on five point likert scale. These findings are also supported by the negative value of skewness -.147 and value of standard deviation i.e. .479. Further chi-square value is found highly significant at 1 percent level of significance which directs towards the acceptance of alternative hypothesis, that views of the respondents with regard to transparency in e-banking transactions are not equally distributed on the scale.

For the trustworthiness of e-banking mean score is found 3.96 which is more than average standard score 3, this implies that a significant number of the users of e-banking are agree regarding the statement that e-banking is trustworthy. Also the negative value of the skewness -.997 reveals that the views of the respondents are scattered towards the higher side of the likert scale which is ranged between satisfied to highly satisfy. Chi-square value of goodness of fit is also found highly significant which rejects the null hypothesis and accepts the alternative hypothesis.

Further it is noted that the mean score for the opinion of respondents is found 4.13 more than the standard score for the statement that e-banking is a wireless system of banking. Standard deviation is noted .580, negative value of the skewness -.011 also inferences that views of the majority of respondents lies towards the higher side of the five point rating scale. Value of chi-square is found to be significant at 1 percent level of significance which leads to the conclusion that views of the respondents with regard to wireless access in e-banking transactions are not equally distributed on the scale.

For the statement, that banks educate their customers regarding e-banking by conducting seminars, it is found that majority of the respondents are disagree or indifferent. This values of skewness i.e. .626 and mean score i.e. 2.84 are also supporting the above finding as these values indicates that the views of the respondents are scattered towards the lower side on the five point likert scale which is ranged between disagree to strongly disagree. Hence null hypothesis is rejected and

alternative hypothesis is accepted. So we can conclude that banks are not educating their customers about e-banking through seminars.

Table 5: Problems of E-banking

	SA	A	Ind	D	SD	Mean	S.D.	Skewness	Chi-Square	P Value
E-banking can lead to fraud	9	56	15	20	-	3.54	.914	-.565	53.68	.000
ATM machine out of service	8	55	10	21	6	3.38	1.09	-.713	83.30	.000
Risk of privacy	9	56	16	18	1	3.54	.925	-.665	89.90	.000
Lack of appropriate software	6	49	22	22	1	3.37	.928	-.422	70.30	.000
Internet banking is insecure	4	59	19	18	-	3.49	.834	-.712	67.28	.000
Server problem	7	54	22	17	0	3.51	.859	-.520	49.52	.000
Reduction of bank balance without payment	7	57	16	15	5	3.46	.999	-.911	90.20	.000

Source: Data Collected through Questionnaire

Note: SA – Strongly Agree, A- Agree, Ind- Indifferent, D-Disagree, SD- Strongly Disagree, S. D.- Standard Deviation.

VIEWES OF THE RESPONDENTS REGARDING THE PROBLEMS IN E-BANKING

Respondent's opinions regarding the problems faced by them while using e-banking have been presented in the table 5. Analysis of the table reveals that the value of skewness is negative $-.565$ and mean score 3.54 . Chi-square value of goodness of fit is also found significant at 1 percent level of significance, leading to the rejection of null hypothesis and acceptance of alternative hypothesis that the views of the respondents with regard to problems in e-banking are not equally distributed.

Another problem which is highlighted by the table is the server problem having mean value of 3.51 and skewness $-.520$. Standard deviation is noted $.859$. Chi-square value is also found highly significant at one percent level of significance. Hence we reject the null hypothesis and accept alternative hypothesis.

For the problem of insecurity in e-banking, mean is found to be 3.49 while skewness is $-.712$ which infers that views of the respondents regarding the problem of insecurity in e-banking lies towards the higher side on the five point likert scale from agree to strongly agree. The above argument is also supported by the value of chi-square 67.28 and the P-value which is $.000$, so alternative hypothesis is accepted that

views of the respondents regarding the problems in e-banking are not equally distributed.

Table reveals some other problems also, like reduction of balance without payment, ATM machine out of cash and lack of appropriate software having means 3.46, 3.38 and 3.37 respectively, having a higher significant value of chi-square. This leads to the rejection of null hypothesis and acceptance of alternative hypothesis. Hence from the table it can be concluded that Risk of fraud, risk of privacy and insecurity in e-banking are the major problems that are hindering the acceptance of e-banking among the users of e-banking services. So in order to overcome these problems bank should make sincere efforts to win the confidence of customers this will ultimately lead them to get competitive advantage and to survive in long run.

FINDINGS OF THE STUDY

The major findings highlighted by the study are listed below

- Majority 60 percent of the male respondents are using e-banking products and services while 40 percent are females.
- 48 percent of the respondents are in the age group of 25-35. This shows that younger generation is using e-banking products and services more frequently than the other age groups.
- Majority (78 percent) of the respondents are married.
- A significant percentage i.e. 40 percent respondents are Graduate.
- 41 percent of the respondents are in the income group between 3-5 lakh.
- Majority of the respondents are Govt. employee i.e. 39 percent.
- 66 percent of the respondents belong to the urban area.
- Majority of the customers are using e-banking products and services from 2-3 years.
- A significant percentage of respondents is not using credit card i.e. 77 percent.
- 41percent of the respondents are using cash deposit machine from 1-2 year, while 31 percent are not using cash deposit machine. Similarly in case of passbook printing machine 25 percent are not using and 47 percent are using from 1-2 years.

- Mobile banking is being used from 2-3 years by majority of the respondents i.e. 45 percent.
- A significant percentage of the respondents 32 percent are not using internet banking at all, while 28 percent are using from 2-3 years.
- The most important factors that encourage customers to use E-banking are like; E-banking leads to transparency, wireless access and usage of e-banking is safe. As majority of the respondents are either agree or strongly agree with the above factors.
- Majority of the respondents 56 percent are of the opinion that e-banking can lead to fraud and there is always a risk of privacy in e-banking.
- 59 percent of the respondents are agree with the problem of e-banking that internet banking is insecure.

CONCLUSION

The main aim of the study the customers' perception regarding technology acceptance and to identify the problems hindering the acceptance of E-banking. From the results of the study it can be concluded that except debit card and credit card almost all the e-banking products and services like cash deposit machine, passbook printing machine, mobile banking and internet banking are being used since 1-2 years by majority of the respondents, further among all the problems of e-banking, risk of privacy and security are the biggest problems that are hindering the acceptance of e-banking products and service.

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