



An Analytical Study on Perception of Users Towards Determinants of E-Banking in India

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ABSTRACT

The usage of computers and internet in banking has made banking services ideal to meet customers' expectation. The e-banking helped banks to increase their business at the expense of minimum cost. E-banking has made doing business simpler in India and also gave birth to new businesses. This paper explores important aspect of E-banking on the basis of perception of people who are E-banking users. The research is based on primary data collected from 384 people through questionnaire on five point Likert scale by convenient sampling method. The data include the demographic characteristics and determinants of E-banking adoption. Seven determinants of E-banking adoption are selected for analysis. The collected data is analyzed by calculating the mean of responses of each question. The result revealed that all the seven factors namely usefulness, ease of use, privacy, security, website feature, infrastructure and compatibility play important role for E-banking adoption among the users. The result suggests that banks need to improve the security and ease of use in E-banking service for increasing the satisfaction level of users. Finding of the research provide important insights for banks to improve their E-banking services. The findings did not consider the voice of non-user of E-banking services that can be included in the further study.

1. INTRODUCTION

Banks have always been at the forefront in technology adoption. Banks have to constantly update, innovate to retain customers to provide convenient, reliable services. As banks play a central role in mobilizing finance among business activities in a country the technological adoption becomes very crucial for them.

Invention of computer and internet opened new ways of doing businesses and banking. From the 1990s e-banking has become a major distribution channel for financial institutions¹. Now almost all banks provide their customers access to banking services through this channel. This has increased the importance of e-banking service in securing customer loyalty by

ensuring greater consumer satisfaction and building stronger ties with them. Many customers even choose banks on the basis of their e-banking services. E-banking has changed the way customers conduct their banking transactions.

E-banking is also called internet banking, online banking, virtual banking, personal computer banking, home banking, remote electronic banking and phone banking. E-banking includes the provision of retail and small value banking products and services through electronic channels as well as large value electronic payments and other wholesale banking services delivered electronically. It is also defined as the automated delivery of new and traditional banking products and services directly to

customers through electronic, interactive communication channels.

Indian banks have shown remarkable growth in using e-banking in delivering banking services since it was first started by ICICI bank in 1996. During Covid period there was phenomenal growth in the adoption of e-banking transactions by customers of banks. ATMs, Credit Cards, Debit Cards, POS machines, Banking through Apps, and now UPI (Unified Payment Interface) have revolutionized the banking services in our country.

Although e-banking provides faster, easier and more reliable services, customers are still hesitant to use this service because they are concerned with security issues or they may not have the ability to deal with applications of e-banking services. E-banking still has many challenges also like the education level of customers, financial literacy, cyber financial frauds, lack of technological infrastructure in the country. Without understanding what motivates the customers to use electronic banking services, banks will not be able to take actions to increase the use of such services.

It will be beneficial for researchers and banks' management to understand customers' acceptance and preferences regarding electronic banking services. Identifying such variables will improve the likelihood of increasing the adoption rate of these services, by deepening the knowledge about the variables which facilitate or hinder the adoption process. This research will find out the factors responsible for e-banking adoption so that people can adopt e-banking more and without any kind of problem. The knowledge about the factors which help in e-banking adoption is much needed for improvement in existing e-banking services. In addition, it is also important to know that whether the adoption of e-banking is constrained by demographic factors particularly age, gender, education and income.

2. REVIEW OF LITERATURE

Several researchers have explored the determinants of users' acceptance of e-banking.

According to Poon (2008)², security and privacy are the major sources of dissatisfaction in using e-banking while accessibility, convenience, design and content are sources of satisfaction. He suggested that speed, product features availability, service fees and the bank's operation management are critical factors for the success of e-banking. In their study, Liebana-Cabanillas et al. (2012)³ found a positive effect of accessibility, ease of use, usefulness and trust on satisfaction with e-banking services.

Similar results are found by Liao and Wong (2007)⁴ in their study that perceived usefulness, ease of use, security, responsiveness and convenience significantly affect consumer interaction with e-banking services. Two variables that are perceived usefulness and perceived ease of use are first used by Davis in 1989⁵ and found a positive relationship between these two variables and the intention to use technology (Venkatesh and Davis, 1996)⁶. Technology Adoption Model (TAM) comprises perceived usefulness and perceived ease of use which is used frequently by researcher in research on adoption of technology.

Xiao et al. (2017)⁷ in their research using the TAM model in the Shandong Province of China found that perceived usefulness and perceived credibility are significant factors for adoption and factors responsible for resistance are difficult to operate, unnecessary to use and worry about security.

Abbad (2013)⁸ found in his research that PEOU, PU, subjective norms, Internet experience, security and trust, and enjoyment affect the intention of customers to use e-banking. Subjective norms are defined as 'the person's perception that most people who are important to him think he/she should or should not perform the behaviour in question.

Moga et al. (2012)⁹ found that security and trust are the pivotal factors for e-banking adoption. He further revealed that the Romanian legal emphasized further investigating legal provisions for the security and trust factor in Romanian e-banking services and found that these two factors are the most significant. Compatibility is also an important factor along

with perceived ease of use, security and perceived usefulness, gender, age, education level, income Level of the customer (Abu-Assi et al., 2014)¹⁰.

Compatibility is very important factors as there is a high probability for innovation to be adopted by an individual, when it is consistent with his or her job's responsibility and value system (Tornatzky & Klein, 1982¹¹; Agarwal & Prasad, 1998¹²).

Therefore, more a person use internet and more he perceive internet as compatible with his or her lifestyle the more likely that individual will adopt internet banking. Nor et al. (2011)¹³ also found compatibility has a positive relationship with adoption of e-banking among Romanian banking customers.

Alkhaldi and Kharma (2018)¹⁴ found that customers' demographic characteristics such as education, age, income and but not gender played an important role in e-banking adoption.

Khandelwal (2013)¹⁵ found in her research that age, gender, convenience, privacy, better service and better price are important factors that affect the adoption of e-banking services. The factors like recommendation and marketing efforts are the least relevant to e-banking adoption. Among factors discouraging the use of e-banking are lack of internet access, not having a chance to try out e-banking, and lack of security, which are important. Very interestingly a higher number (75%) of respondents not using e-banking opted for personal contact with bank staff for better service.

After going through the above literature review the determinants that affect consumer intention can be identified as usefulness, ease of use, privacy, security, website features, infrastructure for e-banking and compatibility.

3. OBJECTIVES OF THE STUDY

- a. To study consumer acceptance or adoption of e-banking services in the light of determinants derived from extant literature.
- b. To find out which factor plays important role for adoption of e-banking by customers.
- c. To make suggestions for improvement in existing e-banking services.

4. METHODOLOGY

This research is based on primary data collected from bank customers who are using e-banking services of any bank. The questionnaire comprises of two sections. Section one comprises questions on demographic characteristics and section number two consists of questions based on factors of adoption of e-banking services. In order to ensure content validity the questionnaire is prepared on the basis of diverse literature.

The responses were collected online as well as offline mode from the Delhi NCR region through google form from e-banking users. Questionnaire is also filled face to face as such responses rate is satisfactorily high. The variable for demographic characteristic taken in the research is age, education level, gender, and income level.

From the literature discussion above seven factors are identified that are usefulness, ease of use, privacy, security, website features, infrastructure, and compatibility. The respondents were asked to give their responses on the five-point Likert scale from "1" (strongly disagree) to "5" (strongly agree). After the collection of responses the incomplete responses are discarded and only those responses are taken which are completely filled. The complete responses were 384 which are further analyzed to achieve the objective of research.

As the data was of ordinal nature the responses are converted into degree of agreement and the mean of each question is calculated. The average mean of five points of Likert scale is 3.0. The average mean of each question and the total mean of all questions is compared with Likert scale mean 3.0 to see if the mean of responses is more or less than it.

In order to check the reliability of the questionnaire Cronbach alpha test is applied on sample size of 32 collected during pilot study. If the value of alpha is above .70 the reliability of the questionnaire is acceptable suggested by Babbie (1992)¹⁶. Therefore, modifications are done in the questionnaire to bring it to the acceptable level. After modification the value of all factors reached to the acceptable level.

5. FINDINGS OF THE STUDY

5.1 Demographic Profile

A total of 52.9 percent respondents are female. Majority of respondent (63.3 percent) are in the age group below 25 years. Survey shows that 61.7 percent of respondents completed their master degree. Most of respondent (44 percent) belongs to the income level less than Rs. 10,000 per month. Table I shows the detailed information of demography of sample. (Table 1: Calculated)

Table 1: Demographic Variables

Demographic Variables	Frequency	Percentage
Gender		
Male	181	47.1
Female	203	52.9
Age		
Below 25	243	63.3
26 to 45 years	127	33.1
Above 45	14	3.6
Education Level		
High School	Nil	Nil
Intermediate	12	3.1
Bachelor	104	27.1
Master Degree	237	61.1
Ph. D.	31	8.1
Income Level (Monthly)		
Less than 10,000	169	44.0
10,000 to 20,000	92	24.0
20,000 to 40,000	56	14.6
40,000 to 60,000	32	8.3
Above 60,000	35	9.1

5.2 Factors which influence adoption of E-banking

Factor 1: Usefulness: The table 2 shows majority of respondent (93 percent) with a mean value of 4.5 views that e-banking save their time by providing service in comparison to traditional banking. Nearly 88 percent of respondent with mean value 4.3 agree that they can manage their banking activities more efficiently with the help of e-banking services. There are 77 percent of respondents with a mean value of 4.0 agree with the view that e-banking helps them to reduce transportation cost and bank charges. E-banking is an anytime and anywhere banking it is claimed by 90.1 percent of respondents with mean value

of 4.4. More than half (73.4 percent) respondents with mean value of 3.9 agree with the fact that they get correct and more information than that from physical branch of bank. The responses of all five questions help to establish a significant role of usefulness in e-banking adoption.

Factor 2: Easy to Use: Easy to use is a prominent factor for e-banking adoption among banking customers. It is observed that 67.7 percent of respondents with mean of 3.7 believe that for using e-banking one does not require a lot of mental effort Interestingly, only 19.3 percent respondent strongly agree with this out of 67.7 percent. Remembering how to use e-banking site is easy question get 78.1 percent respondent's consent. More than half (86.5 percent) respondents with mean of 4.2 claim that overall, they find e-banking easy to use.

Factor 3: Privacy: Privacy has been very important for e-banking service providers out of total respondent 76.9 percent with mean of 3.9 perceive that their personal account is securely protected when they do online transaction. The 85.9 percent of respondents with mean of 4.3 agree with the fact that banks do not disclose customers' private and confidential information with anyone. The banks take necessary steps to provide privacy protection to e-banking users is believed by 81.0 percent respondents their responses on overall online banking privacy is 71.6 percent.

Factor 4: Security: Security of e-banking ensures customers against any online theft and scam from banks providing such service. According to collected data 74 percent respondents with mean of 3.9 think that e-banking service is secure. There are 67.7 respondents with mean of 3.8 who feel secure in sensitive financial information over e-banking platform. Overall security of e-banking services is confirmed by 70.4 percent of respondents.

Factor 5: Website Features: Website features refers to those services which are available on website of banks. Most of respondents (89.3 percent) with mean of 4.1 agree that they easily access information about product and services by

Table 2: Factors of Adoption and Mean of Responses

Factors	Degree of Agreement (Percentage)					
	5	4	3	2	1	Mean
<u>Usefulness</u>						
I believe e-banking saves time as compared to traditional banking.	58.6	34.4	6.30	.8	0.0	4.5
I believe e-banking help me to manage my banking activities more efficiently.	41.1	47.7	11.2	0.0	0.0	4.3
E-banking enables me to reduce banking cost such as transportation cost and reduced bank charges.	29.9	47.1	15.6	6.8	0.5	4.0
E-banking enables banking anywhere and anytime.	51.6	38.5	7.8	1.8	0.3	4.4
E-banking helps me to get correct and more information than that from branch banking.	26.3	47.1	19.8	5.7	1.0	3.9
Total Mean	41.5	43.0	12.1	3.0	.04	4.2
<u>Easy to Use</u>						
Using e-banking does not require a lot of mental effort.	19.3	48.4	18.5	11.7	2.1	3.7
It is easy to remember how to use this e-banking site.	24.7	53.4	17.7	3.4	0.8	4.0
It is easy to learn how to use e-banking.	28.6	55.5	10.7	3.6	1.6	4.1
Overall, I find the e-banking easy to use.	36.2	50.3	11.7	1.8	0.0	4.2
Total Mean	27.2	51.9	14.6	5.1	1.1	4.0
<u>Privacy</u>						
I believe that my personal account can be securely protected through the online transaction process.	25.3	51.6	16.9	5.2	1.0	3.9
Banks keep customers information private and confidential.	42.7	43.2	11.7	1.8	0.5	4.3
I trust the bank's privacy protection to the users.	30.0	51.0	16.9	0.8	1.0	4.1
Overall, online banking privacy is high.	24.5	47.1	21.9	4.9	1.6	3.9
Total Mean	30.7	48.2	16.9	3.2	1.0	4.0
<u>Security</u>						
I believe the electronic banking service is secure.	22.7	51.3	18.0	7.8	0.3	3.9
I feel secure sending sensitive financial information across the e-banking.	19.0	48.7	23.4	7.0	1.8	3.8
Overall, online banking security is high.	20.1	50.3	24.2	4.4	1.0	3.8
Total Mean	20.6	50.1	21.9	6.4	1.0	3.8
<u>Website Features</u>						
Easy access of information on product and services.	25.0	64.3	8.3	2.1	0.3	4.1
Inquiry about outstanding balance available.	34.9	52.3	9.6	1.6	1.6	4.2
Diversity of services available through e-banking.	30.5	53.6	13.5	2.1	0.3	4.1
Print account statement facility available	31.5	50.0	12.5	4.2	1.8	4.1
Facilitate payment to different parties.	34.4	54.7	8.9	0.8	1.3	4.2
Payment receiving facility is available.	41.1	52.1	6.0	0.8	0.0	4.3
Inquiry about Cheque book, Debit/Credit card available.	35.9	5.3	14.6	3.4	0.8	4.1
Total Mean	33.3	53.2	10.5	2.1	0.9	4.2
<u>Infrastructure</u>						
The resources needed to use e-banking are available to me.	25.8	61.7	10.2	1.3	1.0	4.1
I could easily get access to the resources that are needed to use e-banking.	27.3	54.7	14.3	2.6	1.0	4.0
I have sufficient resources to use e-banking.	28.4	57.0	10.7	3.9	0.0	4.1
Total Mean	27.2	57.8	11.7	2.6	0.7	4.1
<u>Compatibility</u>						
I think e-banking is compatible (suits) with my lifestyle.	32.3	53.4	11.2	3.1	0.0	4.1
I think e-banking is compatible with the way I like to do banking activities.	28.9	57	11.7	1.3	1.0	4.1
I think using e-banking fits with my banking preferences.	28.1	56.5	13.5	1.3	0.5	4.1
Total Mean	29.8	42.7	33.9	7.0	1.2	4.1

e-banking. Banks' website provides inquiry about outstanding balance 87.2 percent respondents are of this view. E-banking enables customers to get diverse banking services it is responded by 84.1 percent of respondents. More than half 81.5 respondents agree that e-banking allows them to print account statement by internet from home and /or workplace. In total 89.1 percent of respondents consent that making payment is much easier by e-banking products. Similarly, receiving payment facility through e-banking is agreed by 93.2 percent of respondents. A total of 81.2 percent of respondents perceive that they get inquiry about cheque book, debit/credit card through e-banking channels.

Factor 6: Infrastructure: E-banking requires some basic equipment and internet facility to provide online banking services. Out of total respondents 87.5 percent of respondents with mean of 4.1 consent that they have resources necessary for using e-banking. The availability of infrastructure for e-banking in a country is very crucial. Most of the respondents (82 percent) with mean of 4.0 agree that resources necessary for e-banking are easily available to them. Overall, 85.4 percent of respondents with mean of 4.1 perceive that they have sufficient resources to use e-banking.

Factor 7: Compatibility: Innovation in product and services are easily acceptable when a service or product is consistent with one's job requirement and value system. In total, 85.7 percent of respondents with mean of 4.1 agree that e-banking service is satisfying their preferences and compatible with their lifestyle; 85.9 percent with mean of 4.1 believe that e-banking is compatible with the way they like to do banking activities. Overall, 84.6 percent of respondents with mean of 4.1 believe the e-banking fits with their banking preferences.

compatibility. The data suggest that usefulness, ease of use, privacy, website features, infrastructure and compatibility are very important factors in e-banking adoption as their mean values are very high. Security can be a source of dissatisfaction because its mean is lowest among all factors' mean.

Result reveals that people find e-banking very useful for them as it save time and they can do banking from anywhere anytime. On the basis of responses it is seen less than 30 percent people are strongly agree with easy to use factor of e-banking. This indicates that banks must take steps to keep their e-banking services more easy to use. Privacy and security is very crucial for trust in the e-banking services. Result suggests that banks need to maintain the security in providing e-banking services. Result reveals that people have proper infrastructure to avail e-banking services. Website feature and compatibility of e-banking suggest that people avail different kind of services from banks' website.

There are some limitations of this research paper. The convenient sampling approach in this research weakens its objectivity. This research does not include the views of non-users of e-banking services. The views of non-users can give important information necessary for e-banking usage. In this study only seven variables are taken future study may also include more factors of e-banking adoption in research. ■

6. CONCLUSIONS AND LIMITATIONS

The primary objective of this study is to analyze consumer adoption of e-banking services in the light of determinants derived from extant literature namely usefulness, easy to use, privacy, security, website features, infrastructure and

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