E-Banking Scenario and its Impact on Customers' Satisfaction in India

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ABSTRACT

The present study aims to examine the progress of e-banking scenario concerned with ATMs, Internet banking, Mobile banking and Credit cards and their impact on customers' satisfaction by analyzing the problems faced by the customers in India. The analysis shows that among all the e-banking products, Customer Satisfaction Level (CSL) of ATMs is highest and the number of users of ATMs is also highest as compared to other services. Internet banking and credit cards are at second and third position as far as CSL is concerned, but the number of users is more in case of credit cards as compared to Internet banking. Mobile banking is at the lowest position in terms of CSL and also in number of users.

Keywords: E-banking, ATMs, Internet banking, Credit cards, Mobile banking, Customers' satisfaction level (CSL)

Introduction

Most of the banks today have electronic system to handle their daily voluminous tasks of retrieval, storage and processing of information. Banks by their nature are continually involved in all forms of information management on a continuous basis irrespective of whether they are automated or not. Computer is an established tool for achieving the competitive edge and optimal allocation of resources these days. Competition and the constant changes in technology and life styles of the customers have changed the face of banking. Nowadays, banks are seeking alternative ways to provide and differentiate amongst their varied services. Customers, both corporate as well as retail, are no longer willing to queue in banks, or wait on the phone for the most basic of services. They demand and expect to be able to transact their financial dealings where and when they wish to. With the increasing number of computers every year, electronic delivery of banking services is becoming the ideal way for the banks to meet their clients' expectations. E-banking refers to the effective deployment of IT by the banks. It is about using the infrastructure of the digital age to create immediate opportunities - both locally and globally. For users, it provides current information, 24-hours-a-day access to banking services. It enables the dramatic lowering of transaction costs and the creation of new types of banking opportunities that address the barriers of time and distance. The current web-based variant of banking is the latest of several generations of systems: ATM was the first well-known machines to provide electronic access to customers of retail banks. With advent of ATM, banks are able to serve customers outside the banking hall. Next came phone banking which allowed the customers to interact with their bank by means of a computer. UBIs, which are the foundation of the Indian banking system, account for more than 78 per cent of the assets of total banking industry. Unfortunately, they are burdened with excessive NPAs, massive manpower and lack of modern technology. On the other hand, the PSIBs and PSFBs in India are witnessing immense progress. They have an edge over the UBIs in the implementation of technological solutions. They are leaders in internet banking, mobile banking, credit cards and ATMs.

Literature Review

Various articles on some aspects of e-banking appeared in various journals and magazines, but they are restrictive in nature and do not show a comprehensive picture. A brief review of some of the relevant literature is as under:

Raj (1996) observed one reason why Indian banks are lagging behind their counterparts in the west that is because infrastructure needed to speed the process remains lacking. Mookerji (1998) expected that sophisticated

highly competitive internet banking will develop in future. Ryder (2000) suggested that the legal challenges of internet banking in India comprise information security and regulatory compliance. Manmohan and JaiGanesh (2002) examined the broad security issues related to banking on the internet and proposed a three staged capability model to facilitate brick and mortar banks take their services online as well as analyzed the stage of maturity of their banking services. Yibin (2003) analyzed the status, trends, challenges and implications of e-banking and concluded that e- banking could not only improve the access to finance but also with better and more competitive rates. Trehan et. al. (2004) analyzed how traditional banking differed from relationship banking with the Porter's 5-Forces Model in the banking industry. Parsad (2004) examined the nature and types of credit card frauds, its effects and preventive measures. Sali (2004) studies customers' satisfaction about ATM cards and concluded that to service the banks will increasingly need superior customer service along with good quality products and assets. Shajahan (2005) studied the level of customer's satisfaction on various modes of banking services such as internet, phone, branch and ATMs in India. Sinha (2005) explained the various aspects of debit and credit cards and concluded that usage rate is very low in India. Hundal and Jain (2006) articulated the stimulating and inhibiting attributes in the adoption of mobile banking and outlined some managerial applications. Khan et. al. (2009) evaluated the service quality of internet banking services in India from customers' perspectives and concluded that customers are satisfied with service quality of four dimensions such as reliability, accessibility, privacy/security, responsiveness and fulfillment, but are least satisfied with the 'user-friendliness' dimension.

Given this background, it is interesting to analyze the e-banking scenario and its impact on customers' satisfaction in India. In a quest to seek an answer, the present study is undertaken with specific research objectives as envisaged in the following section.

Objectives of the Study

The present study aims to examine the progress of e-banking in India. In this broader framework, an attempt is made to achieve the following specific objectives:

  ➢ To analyze the present e-banking scenario concerned with ATMs, Internet banking, Mobile banking and Credit cards in India.

  ➢ To examine the impact of ATMs, Internet banking, Mobile banking and Credit cards on customer satisfaction by analyzing the problems faced by the customers in India

Rresearch Hypotheses

To achieve the objectives of the study, the following hypotheses are formulated:

$H_0 1$: There is no significant difference in the present e-banking scenario of ATMs, Internet banking, Mobile banking and Credit cards in India.

$H_a 1$: There is a significant difference in the present e-banking scenario of ATMs, Internet banking, Mobile banking and Credit cards in India.

$H_0 2$: There is no significant difference in the impact of ATMs, Internet banking, Mobile banking and Credit cards on customer satisfaction in UBIs, PSIBs and PSFBs in India.

$H_a 2$: There is a significant difference in the impact of ATMs, Internet Banking, Mobile banking and Credit Cards on customer satisfaction in UBIs, PSIBs and PSFBs in India.

Research Methodology Data Collection

The present study is of analytical and exploratory nature. Accordingly, the use is made of primary data. The primary data is collected with the help of pre-tested structured questionnaires from a sample of 450 respondents (150 respondents from each group) of selected branches of UBI from Uttar Pradesh, Delhi, Bihar and Madhya Pradesh. But the data obtained from 450 (ATMs), 366 (Internet banking), 240 (mobile banking) and 402 (credit cards) is found suitable and complete and is used for further analysis. The branches and respondents are selected with the help of convenience sampling method.

Data Analysis

The collected data in the present study are analyzed through descriptive and inferential statistical techniques. The analysis has been in conformity with the objectives of the study and the hypotheses formulated to achieve the objectives. In order to examine the level of customer satisfaction regarding various e- banking services and their interplay in different banks, various statistical techniques like frequency distribution, percentage, mean, standard deviation, chi- square and ANOVA have been used. The application of normal distribution has been followed in order to categorize the different variables. The level of customer satisfaction of the respondents regarding ATMs, Internet banking, Mobile banking and Credit cards is assumed to be normally distributed. The level of customer satisfaction of the respondents is divided into three categories, i.e. below average, average and above average levels, which have been defined as Low, Medium and High level of satisfaction respectively. The lower and upper limits of average level have been calculated with the help of the following formula:

Lower limit of average level = Mean - 1 Standard deviation

Upper limit of average level = Mean + 1 Standard deviation

The two stage analytical approach is used to analyze the data. In the first stage, total CSL and usage rate of various services is analyzed. Total CSL shows the total weighted value of all the variables of customer satisfaction. In the second stage, ANOVA is used for summarizing the difference between the levels of customer satisfaction.

Results and Discussions

E-banking scenario is analyzed regarding four major e-banking products i.e. ATMs, Internet Banking, Mobile Banking and Credit Cards in terms of customer satisfaction level on the basis of various variables like length of the use of service, frequency of complaints, grievance settlement system, reliability of service and level of satisfaction for the service, etc.

1. Period of Use

The present scenario of ATMs, Internet Banking, Mobile Banking and Credit Cards is measured in terms of the length of the period the respondents are using a particular service. For this purpose, time is divided into five sub-heads i.e. less than 6 months, 6 months to 1 year, 1 to 2 years, 2 to 3 years and more than 3 years. Table 1 and figure 1 envisages that ATM is the oldest service in use. Out of total respondents, maximum 79 per cent respondents are using it for more than 3 years. Credit cards are at second position with 48 per cent users. Internet and Mobile banking are at third and fourth position with 44 per cent and 28 per cent users respectively.

Table 1: Period of Use

No. of Respondents (percentage)

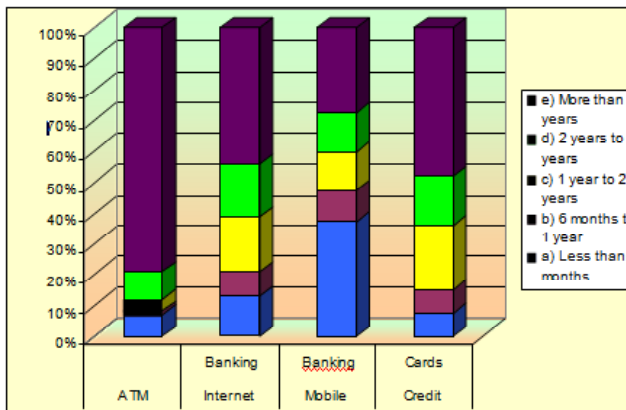| Period of use	ATM	Internet Banking	Mobile Banking	Credit Cards
a) Less than6 months	30(07)	48(13)	90(38)	30(08)
b) 6 monthsto 1 year	06(01)	30(08)	24(10)	30(07)
c) 1 year to2 years	18(04)	66(18)	30(12)	84(21)
d) 2 years to3 years	42(09)	60(17)	30(12)	66(16)
e) More than3 years	354(79)	162(44)	66(28)	192(48)
Total	450(100)	366(100)	240(100)	402(100)

Source: Survey

Fig. 1: Period of Use

2. Complaints Regarding Services

To find out the frequency with which customers are having complaints against their banks with regard to these services, five parameters of complaints are considered which are very often, often, sometimes, rarely and never. Table 2 and figure 2 reveals that there are maximum 27 per cent respondents who never had problems with ATMs. In case of credit cards, this per cent is lowest, i.e. 21 per cent. The table also shows the positions of Internet and Mobile banking in this context where this percentage is 25 per cent in each case.

Table 3: Grievance Settlement System

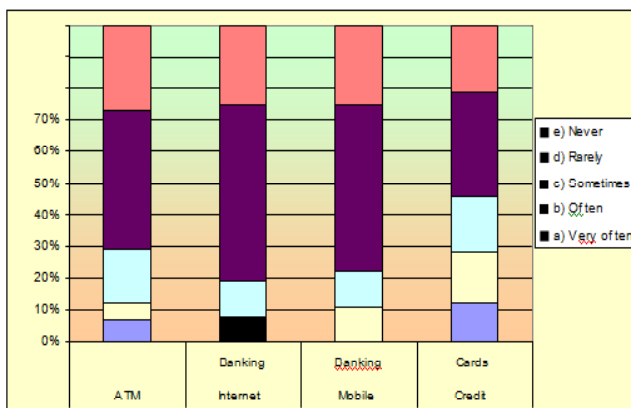| Grievancesettlement	ATMs	Internet Banking	Mobile Banking	Credit Cards
a) Highlysatisfactory	72(22)	66(24)	36(17)	48(15)
b) Satisfactory	234(71)	186(67)	113(52)	156(49)
c) Indifferent	18(05)	18(07)	30(14)	42(14)
d) Unsatisfactory	06(02)	06(02)	36(17)	42(13)
e) Highlyunsatisfactory	00(00)	00(00)	00(00)	30(09)
Total	330 (100)	276 (100)	215 (100)	318 (100)

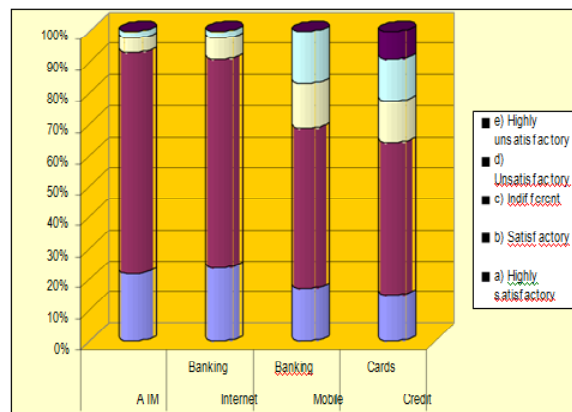*Source:* Survey

Fig. 2: Complaints Regarding Services

3. Grievance Settlement System

The information has been collected from the respondents about the grievance settlement system for these services in banks to know whether this system is satisfactory or not. The table 3 and figure 3 shows that out of the total respondents having problems, maximum number of respondents, i.e. 22 and 71 per cent are highly satisfied and satisfied respectively with the grievance settlement system of ATMs, whereas this percentage is 24 and 67 per cent in case of Internet banking, 17 and 52 per cent in case of Mobile banking and 15 and 49 per cent in case of Credit cards.

Table 3: Grievance Settlement System
No. of Respondents (percentage)

Grievancesettlement	ATMs	Internet Banking	Mobile Banking	Credit Cards
a) Highlysatisfactory	72(22)	66(24)	36(17)	48(15)
b) Satisfactory	234(71)	186(67)	113(52)	156(49)
c) Indifferent	18(05)	18(07)	30(14)	42(14)
d) Unsatisfactory	06(02)	06(02)	36(17)	42(13)
e) Highlyunsatisfactory	00(00)	00(00)	00(00)	30(09)
Total	330 (100)	276 (100)	215 (100)	318 (100)

*Source:* Survey

Fig. 3: Grievance Settlement System

4. Reliability of Services

Reliability of e-banking services is another dimension, which constitute the present scenario of e-banking and is analyzed on the basis of three parameters i.e. very reliable, reliable and unreliable. Table 4 and figure 4 depicts that out of the four services ATM is the very reliable with maximum number of respondents, i.e. 52 per cent and Credit cards is at the minimum with 16 per cent. The table also shows that reliability is highest in credit cards and lowest in ATMs with 60 per cent and 48 per cent respondents respectively. This percentage is 57 per cent and 53 per cent in case of Internet and Mobile banking respectively. Whereas the unreliability is maximum i.e. 29 per cent in case of Mobile banking followed by Credit cards having 24 per cent respondents.

Table 4: Reliability of Services
No. of Respondents (percentage)

Reliability	ATMs	Internet Banking	Mobile Banking	Credit Cards
a) Very reliable	234(52)	96(26)	43(18)	66(16)
b) Reliable	216(48)	210(57)	128(53)	240(60)
c) Unreliable	00(00)	60(17)	69(29)	96(24)
Total	450(100)	366(100)	240(100)	402(100)

Source: Survey
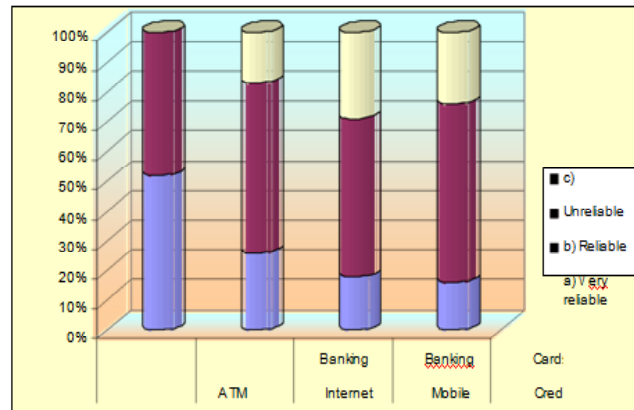
Fig. 4: Reliability of Services

5. Level of Satisfaction

Level of satisfaction after using a particular service has also been examined to find out the clearer picture regarding their status on the basis of five parameters i.e. highly satisfied, satisfied, indifferent, dissatisfied and highly dissatisfied. Table 5 and figure 5 present that satisfaction level, which is highest in case of ATMs as all the respondents are highly satisfied/ satisfied, followed by Internet banking, Credit cards and Mobile banking. The table also reveals that dissatisfied level is highest in case of Credit cards and lowest in Internet banking. On the other hand, indifferent level is highest, i.e. 40 per cent in case of Mobile banking.

Table 5: Satisfaction after Use of Services
No. of Respondents (percentage)

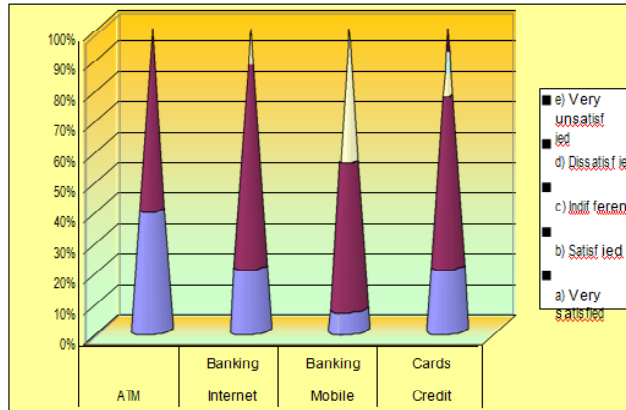| Satisfaction Level	ATM	Internet Banking	Mobile Banking	Credit Cards
a) Verysatisfied	180 (40)	78 (21)	16 (07)	84 (21)
b) Satisfied	270 (60)	246 (67)	117 (49)	228 (57)
c) Indifferent	00 (00)	36 (10)	96 (40)	30 (08)
d) Dissatisfied	00 (00)	06 (02)	11 (04)	30 (07)
e) Veryunsatisfied	00 (00)	00 (00)	00 (00)	30 (07)
Total	450 (100)	366 (100)	240 (100)	402 (100)

Source: Survey

Fig. 5: Satisfaction After Use of Services

6. Status of E-Banking Services

The present status of e-banking products is analyzed in all the banks with the help of total customer satisfaction level (CSL) and total number of respondents using these products. Total CSL includes the total weighted value of all the variables discussed above. Table 6 and figure 6 elucidate the present status of e-banking products. It is clear that ATM is having maximum 85 per cent CSL and respondents using it are also maximum 100 per cent. Position of mobile banking is worst with minimum 68 per cent and 53 per cent CSL and users respectively. Internet banking is at second place with second highest CSL (78 per cent) and it is at third place with 81 per cent usage rate. Credit card is at third place in terms of CSL (74 per cent) but its usage rate is second highest.

Table 6: Status of E-banking Services

Name of Service	Total CSL	Total No. of Users
ATMs	7650 (85)	450 (100)
Internet Banking	5694(78)	366(81)
Mobile Banking	3252(68)	240(53)
Credit Cards	5964 (74)	402 (90)
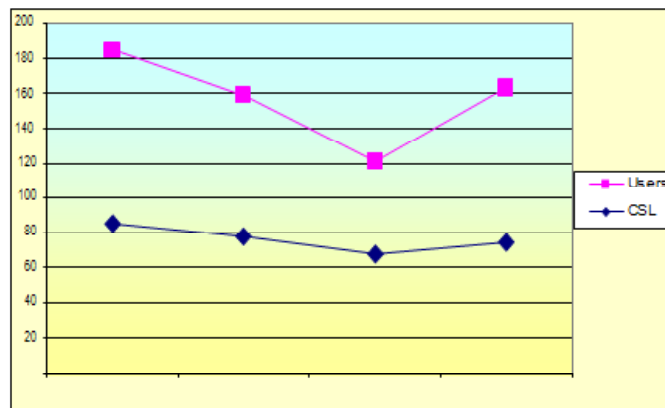
Further to study the level of customer satisfaction, the respondents are divided into three categories i.e. below average, average and above average levels, which have been defined as Low, Medium and High level of CSL respectively.
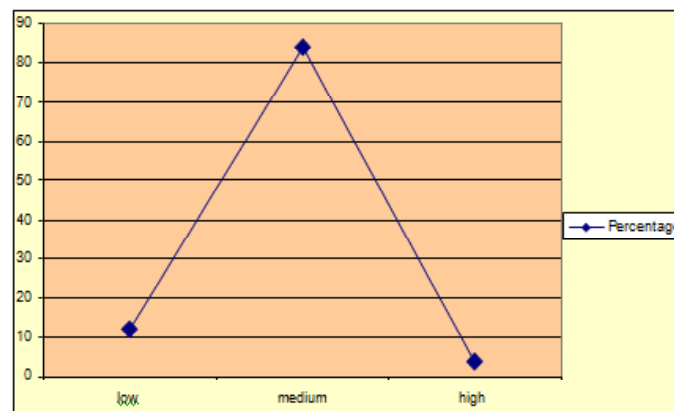
6.1 CSL of ATMs

Table 6.1 and figure 6.1 projects that 84 per cent of the total respondents are in medium CSL. On the other hand, only 4 per cent fall in high CSL and 12 per cent

in low CSL.

Table 6.1: CSL of ATMs

CSL	Frequency	Percentage
Low (Below 15)	54	12
Medium (15-19)	378	84
High (Above 19)	18	04
Total	450	100

Mean Value = 17.00, Std. Dev. = 1.97
Source: Survey.

Fig. 6.1: CSL of ATMs

6.2 CSL of Internet Banking

Table 6.2 and figure 6.2 envisages that 82 per cent respondents have medium CSL for Internet banking, whereas 11 per cent and 7 per cent fall in low and high CSL respectively.
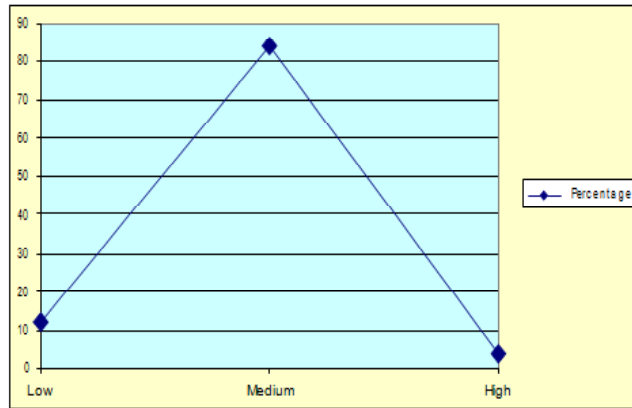
Table 6.2: CSL of Internet Banking

CSL	Frequency	Percentage
Low (Below 13)	42	11
Medium (13-18)	300	82
High (Above 18)	24	07
Total	366	100

Mean Value = 15.56, Std. Dev. = 2.30
Source: Survey.

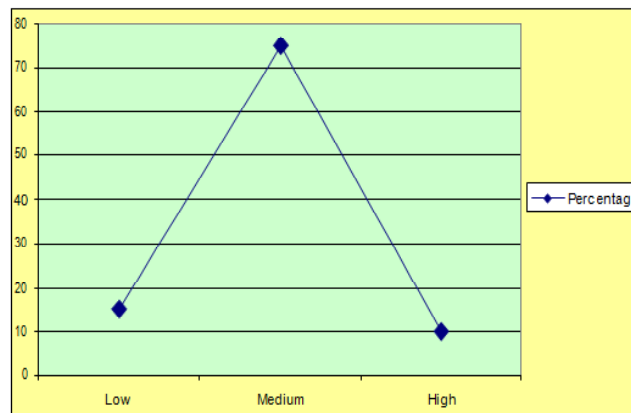**Fig. 6.2 - CSL of Internet Banking**

6.3 CSL of Mobile Banking

Table 6.3 and figure 6.3 reveals that 75 per cent respondents of mobile banking have medium CSL and 15 per cent respondents fall in low CSL, whereas only 10 per cent respondents are in high CSL.

Table 6.3: CSL of Mobile Banking

CSL	Frequency	Percentage
Low (Below 11)	36	15
Medium (11-16)	180	75
High (Above 16)	24	10
Total	240	100

Mean Value = 13.55, Std. Dev. = 2.58
Source: Survey.

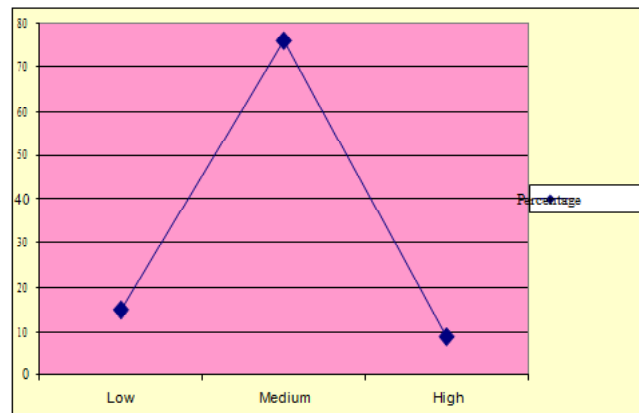**Fig. 6.3 - CSL of Mobile Banking**

6.4 CSL of Credit Cards

Table 6.4 and figure 6.4 shows that 76 per cent out of total respondents have medium CSL and 15 per cent have low CSL, whereas only 9 per cent respondents fall in high CSL.

Table 6.4: CSL of Credit Cards

CSL	Frequency	Percentage
Low (Below 12)	60	15
Medium (12-18)	306	76
High (Above 18)	36	09
Total	402	100

Mean Value = 14.84, Std. Dev. = 3.00
Source: Survey.

Fig. 6.4: CSL of Credit Card

6.5 Combined CSL of E-banking Services

Table 6.5 and figure 6.5 depicts that medium CSL is maximum in case of ATMs with 84 per cent respondents and minimum in case of Mobile banking with 75 per cent respondents. Internet banking and Credit cards are at second and third position with 82 per cent and 75 per cent respondents respectively. The table also shows that maximum 15 per cent respondents have low CSL in Mobile banking and Credit cards. High CSL is highest in Mobile banking and lowest in ATMs with 10 per cent and 4 per cent respondents respectively.
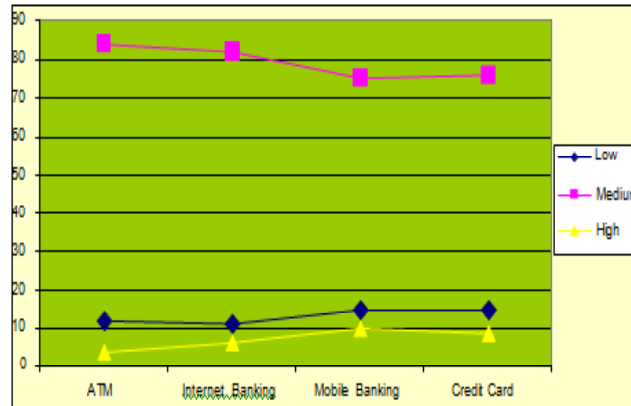
Table 6.5: Combined CSL of E-banking Services

Products	Low	Medium	High	Total
ATM	54(12)	378(84)	18(04)	450(100)
InternetBanking	42(11)	300(82)	24(07)	366(100)
MobileBanking	36(15)	180(75)	24(10)	240(100)
CreditCards	60(15)	306(76)	36(09)	402(100)

F = 634.82(F.05, 2, 9 = 4.26)
Chi-Square = 8.000* (Significant at 5 per cent level)
Source: Survey.

Fig. 6.5: Combined CSL of E-banking Services

As depicted by the above table, the calculated value of F is greater than the tabulated value, therefore the null hypothesis, i.e. there is no significant difference in the present e-banking scenario of ATM, Internet banking, Mobile banking and Credit cards in India, cannot be accepted. This view point is also supported by the value of chi square, which is also significant at 5 per cent level of significance. The analysis also shows that among all the e-banking products, CSL of ATM is highest and the number of users of ATM is also highest as compared to other services. Internet banking and credit cards are at second and third position as far as CSL is concerned but the number of users is more in case of credit cards as compared to Internet banking as depicted by Table-6. Mobile banking is at the lowest position in terms of CSL and also in number of users. Therefore, the null hypothesis i.e. there is no significant difference in the impact of ATM, Internet banking, Mobile banking and Credit cards on customer satisfaction in UBIs, PSIBs and PSFBs in India cannot be accepted.

Conclusions and Policy Implications

To sum up, there is a significant difference in the present e-banking scenario of ATMs, Internet banking, Mobile banking and Credit cards in India. Also, there is a significant difference in the impact of ATMs, Internet banking, Mobile banking and Credit cards on customers' satisfaction in UBIs, PSIBs and PSFBs in India. No doubt, the opportunities in e-banking are immense but the only need is to explore them. The nature of banking services may still be the same but the way they are being offered has been changed dramatically. Banks must realize the seriousness of challenges ahead and develop a strategy that will enable them to leverage the opportunities presented by e-banking. E-banks need to shift now from product centric to customer centric i.e. to design services according to the needs, dreams and expectations of the customers. Opportunities and challenges offered by e-banking can only be met fruitfully if the banks assemble different services including banking, broking, insurance, channel delivery, sales culture, back office processes and knowledge management under one corporate name. Most of the market especially in rural areas is still untapped in India. There is a lot of scope for banking institutions to expand their e-banking services to have a more sophisticated customer base especially in rural areas. ICT infrastructure facilities are also not well developed and the banks are unable to extend the e- banking services, therefore, good infrastructure need to be developed.

REFERENCES

1. Raj S. (1996), "On the road to virtual banking, Dataquest, Cyber media India Limited, Retrieved June 18, 2008, www.dqindia.com

2. Mookerje N. (1998), "Internet banking still in Evolutionary Stage", Retrieved on June 03, 2007, www.financialexpress.com Ryder, D. R. (2000), "The Legal Challenges of Internet Banking", Retrieved on Nov. 09, 2008, www.britannicaindia.com Manmohan T. R. and JaiGanesh H. (2002), "Framework for Internet Banking Security", E-Business, Vol. 3, No. 8, pp 39-44. Yibin (2003), "E-banking: Status, Trends, Challenges and Policy Implications", Paper of CRBC Seminar, November 24.

3. Trehan et. al. (2004), "E-banking - The Indian Scenario", Emerging Trends in International Business and Financial Services, Excel Books, New Delhi, pp 80-93.

4. Parsad R. S. (2004), "Credit Cards Fraud on Internet", Professional Banker, Vol. 4, No.9, pp 51-58.

5. Sali, P. S. (2004), "Electronic Banking: Customers' Satisfaction on ATM Cards", Emerging Trends in International Business and Financial Services, Excel Books, New Delhi, pp 15-30.

6. Shajhan, S. (2005), "A Study of levels of Customers' Satisfaction on various Modes of Banking Services in India", The ICFAI Journal of Bank Management, Vol. 4, No.1, pp79-85.

7. Sinha, P. (2005), "Plastic Power: Credit Cards see fall in rates", The Times of India, Jan. 01, 2005.

8. Hundal, B. S. and Jain, A. (2006), "Adoption of Mobile Banking Services in India", The ICFAI Journal of Bank Management, Vol. 4, No. 2, pp 63-72.

9. Khan et. al. (2009), "Service Quality Evaluation in Internet Banking: An Empirical Study in India", International Journal of Indian Culture and BusinessManagement, Vol. 2, No. 1, pp 30-46.