

A Study on the Customer Awareness of E- Banking Services in Madurai City

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INTRODUCTION TO ONLINE BANKING SERVICES

INTRODUCTION OF BANK:

Banking has played a very important role in the economic development of all the nations of the world. In fact, banking is the life blood of modern commerce. Apart from their traditional business oriented functions, they have now come out to fulfill national responsibilities. Banks cater to the needs of agriculturists, industrialists, traders and to all the other sections of the society. Thus, they accelerate the economic growth of a country.

Improvement of Technology in the Bank:

The banks improvement of Technology in Olden days and Modern days.

Olden days:

In olden days, customers visit the bank and know the bank formalities with the help of bank staff and then the customers withdraw the cash. After they done their works, then they will be return to their homes.

Modern days:

Ex: Internet banking

Now a days in the banking sector also, including the technology play dominate role. In many years ago, people approached the bank and waited in the long queue for withdrawing cash, requesting a statement of account, transferring the funds etc. so the bank takes many steps to decreases the difficulties and adopt the new technologies of e-banking service. E-banking includes Mobile banking, internet banking and Automatic Teller machine.

Ex: Internet banking:

- Open with only internet explorer, Firefox.
- Login: www. Tmbnet. in.
- Enter the User ID and password.
- Choose your desired transaction.
- Select the account type eg: Transfer the fund.
- Don't forget the Logout after your transaction.

STATEMENT OF THE PROBLEM:

In this competitive scenario, everyone wants to promote and sustain his business. There are various media through which one can prompt the business. So, they all need awareness about systemized bank services like Internet banking, Mobile banking, and Automatic teller machine services. E-banking is considered a powerful media. In general, the people are not aware of e-banking and its advantage. In this context, the following research questions arise.

1. To what extent the respondents are aware about technology driven services in the study area named Madurai city?
2. What is the E-banking services availed by the customers?
3. What are the major problems faced by the user while using E-banking services?
4. What is the level of satisfaction towards e-banking service?

NEED FOR THE STUDY:

In the present globalized scenario, everywhere there is the use of technology. In the banking sector also, including the technology play dominate role. In many years ago, people approached the bank and waited in the long queue for withdrawing cash, requesting a statement of account, transferring the funds etc. so the bank takes many steps to decreases the difficulties and adopt the new technologies of electronic banking service. E-banking includes Mobile banking, Internet banking, and Automatic teller machine. If the customers use the e-banking services, it is easy to transfer the fund. It ensures convenience (24 hours), user friendliness, safe and secure. Advertisement plays a major role in making people aware of e-banking like Ad in newspaper, Ad in

television, Notice etc. These e-banking is considered a powerful tool for promoting the business. Hence, the researcher made an attempt to study the customer awareness of e-banking in the Madurai city.

OBJECTIVES OF THE STUDY:

- To study the level of customer awareness of E-banking in Madurai City.
- To study the facilities availed by the E-banking users in the study area.
- To Find out major problems faced by the customer while using E-banking services.
- To study the level of satisfaction of E-banking customers.
- To offer suitable suggestion to promote the awareness of the customers.

SCOPE OF THE STUDY:

1. The present study is confined to analyze the attitude of customer awareness towards e-banking.
2. This study does not cover the traditional services provided by the bank.
3. The project result will be also helpful to get the knowledge about the process of e-banking and usefulness to banking sector.
4. This study gives information regarding the opinions of the customer satisfaction about the services of e-banking.

LIMITATION OF THE STUDY

- The study results are limited to the study are that is Madurai city only.
- This study was conducted and targeted only e-banking respondents who used E-banking services.
- The statistical tool are used in this study suffer from their inherent defects.
- Due to time constraint the survey was restricted to a sample size of 300 customers.
- Inability on the part of some of the respondents to answer certain questions is a limitation of this study.

Reason for Choosing the E-banking services:

The table shows the classification of the respondents based on choose the E-banking services.

Table 1

Reason for Choosing the E-banking services

S.No	Reason for Choosing E-banking service	No of Respondents	Percentage(%)
1	Convenience to use	78	26
2	Time savings	142	47
3	Money savings	69	23%
4	Others	11	4%
	Total	300	100%

Source: primary data

The above table shows that out of 300 respondents, 142 respondents choose the E-banking services are used Time savings that is 47%, 78 respondents choose the E-banking services are used Convenience to use that is 26%, 69 respondents choose the E-banking services are used Money savings that is 23%, 11 respondents choose the E-banking services are used Others that is 4%, The opinion is clearly shown in the chart given below.

Table 2.

Choose the E-banking services

Use of E-banking services of the respondents:

The table shows the classification of the respondents based on Use of E-banking services

Table 3

Use of E-banking services

S.No	Use of E-banking services	No of Respondents	Percentage(%)
1	Any one E-banking services	250	83
2	Any two E-banking services	35	12
3	All three E-banking services	15	5
	Total	300	100

Source: primary data

The above table shows that out of 300 respondents, 250 respondents have used any one E-banking services that is 83%, 35 respondents have used any two services that is 12%, 15 respondents have used all three E-banking that is 5%, The opinion is clearly shown in the chart given below.

Table 4.

Use the E-banking services of the respondents

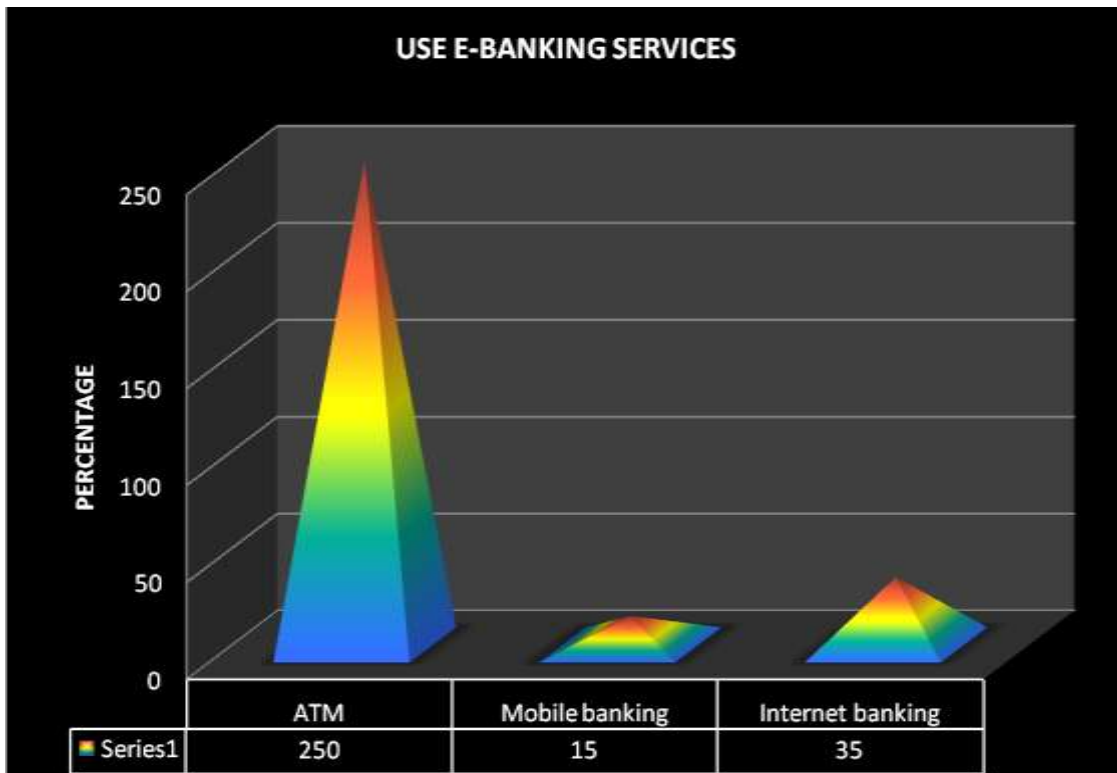


Table 4 (1)

Use the E-banking services of the respondents

S.No	Use E-banking services	No of Respondents	Percentage(%)
1	ATM	150	60
2	Mobile banking	20	8
3	Internet banking	80	32
	Total	250	100

Source: primary data

The above table shows that out of 250 respondents, 150 respondents have used only one services of ATM that is 60%, 80 respondents have used only one services of Internet banking that is 32%, 20 respondents have used only one services of Mobile banking that is 8%.

Use the E-banking services of the respondents

S.No	Use E-banking services	No of Respondents	Percentage(%)
1	ATM & Mobile	7	20
2	ATM & Net	22	63
3	Mobile & Net	6	17
	Total	35	100

Source: primary data

The above table shows that out of 35 respondents, 22 respondents have used two services of ATM & Net that is 63%, 7 respondents have used two services of ATM & Mobile that is 20%, 6 respondents have used two services of Mobile & Net banking that is 17%,

Age of the respondents:

In any study Age is an important demographic characteristic of the respondents that affects opinion. The table shows the classification of the respondents based on age.

Table 5

Age of the respondents

S.No	Age group	No of Respondents	Percentage(%)
1	Below – 20	12	4
2	20-25	92	31
3	26-35	95	32
4	36-50	81	27
5	Above-50	20	7
	Total	300	100

Source: primary data

The above table shows that out of 300 respondents 95 respondents were age 26-35 that is 32%, 92 Respondents less than 26 years age that is 31%, 81 respondents were 36-50 years age that is 27%, 20 respondents were Above 50years age that is 7%, 12 respondents were Below 20 years age that is 12%. The opinion is clearly shown in the chart given below.

CHI-SQUARE ANALYSIS

Chi-square test-case I:

The customers' age wise classification and the use of e-banking they prefer were cross-tabulated from 300 respondents. A cross tabulation with a chi-squared test requested from the computer package. The output is shown below in the table.

Table 6

Age vs use of e-banking Cross tabulation

			usee-banking			Total
			Regularly	Rarely	Frequently	
age	below20	Count	0	8	4	12
		% within use e-banking	.0%	6.7%	3.4%	4.0%
	20-25	Count	17	46	29	92
		% within use e-banking	26.6%	38.7%	24.8%	30.7%
	26-35	Count	24	28	43	95
		% within use e-banking	37.5%	23.5%	36.8%	31.7%
	36-50	Count	17	37	27	81
		% within use e-banking	26.6%	31.1%	23.1%	27.0%
	Above 50	Count	6	0	14	20
		% within use e-banking	9.4%	.0%	12.0%	6.7%
Total		Count	64	119	117	300
		% within use e-banking	100.0%	100.0%	100.0%	100.0%

Source: primary data

The cross tabulation shows the number of respondents falling into each cell, that is, the combination of one age category with one use of e-banking category.

Null hypothesis H_{01} : There is no association between age of respondents and using e-banking services frequently.

Alternate hypothesis H_{A1} : There is association between age of respondents and using the e-banking services frequently.

Table 7
Chi-square tests for Age vs use of e-banking
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.118 ^a	8	.000
Likelihood Ratio	37.288	8	.000
Linear-by-Linear Association	.152	1	.697
N of Valid Cases	300		

a. 4 cells (26.7%) have expected count less than 5. The minimum expected count is 2.56.

Chi-Square Tests

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Likelihood Ratio	37.288	8	.000
Linear-by-Linear Association	.152	1	.697
N of Valid Cases	300		

Source: Results computed through spss package

Interpretation:

The 'p' value, that is pearson chi-square test reads a significant level of 0.000 at 5% level of significance. This value of 0.000 being less than the significance level of 0.05, the null hypothesis is rejected. Hence, there is association between the age of respondents and using the e-banking services frequently

Occupation of the respondents:

In any study Occupation is an important demographic characteristic of the respondents that affects opinion. The table shows the classification of the respondents based on Occupation .

Table 8

Occupation of the respondents

S.No	Occupation	No of Respondents	Percentage(%)
1	Business man/women	69	23
2	Government employee	51	17
3	Private employee	127	42
4	Student	11	4
5	Professional	35	12
6	House wife	7	2
	Total	300	100

Source: primary data

The above table shows that out of 300 respondents, 127 respondents were Private employee that is 42%, 69 respondents were Business man/women that is 23%, 51 respondents were Government employee hat is 17%, 35 respondents were Professionals that is 12 %. 11 respondents were student that is 4 %. 5 respondents were House wife that is 2 %. The opinion is clearly shown in the chart given below.

Inference:

Among the 300 respondents 127 were Private employee that is 42%

KRUSKAL WALLIS TEST

The **Kruskal–Wallis one-way analysis of variance** by ranks (named after William Kruskal and W. Allen Wallis) is a non-parametric method for testing whether samples originate from the same distribution. It is used for comparing more than two samples that are independent, or not related. The parametric equivalent of the Kruskal–Wallis test is the one-way analysis of variance (ANOVA). When the Kruskal–Wallis test leads to significant results, then at least one of the samples is different from the other samples. The test does not identify where the differences occur or how many differences actually occur. It is an extension of the Mann–Whitney U test to 3 or more groups. Since it is a non-parametric method, the Kruskal–Wallis test does not assume a normal distribution, unlike the analogous one-way analysis of variance. Kruskal–Wallis is also used when the examined groups are of unequal size (different number of participants).

H₀₆: There is no significant difference in the ranks given by the respondents of different occupation dimensions of workers to the opening of e-banking account services for convenience(24 hours).

H_{A6}: There is significant difference in the ranks by the respondents of different occupation dimensions of workers to the opening of e-banking account services for convenience(24 hours)

Table 9

Convenience(24 hours) vs occupation

	OCCUPATION DIMENSIONS OF WORKERS	N	MEAN RANK	Z VALUE	P VALUE
CONVENIENCE(24 hours)	Businessman/woman	69	143.64	5.564	.351
	Government employee	51	136.47		
	Private employee	127	157.63		
	Student	11	173.14		
	Professional	35	151.70		
	House wife	7	149.50		
	Total	300			

Source: Resulted computed through spss package.

As the computed p value is more than the assumed value of 0.05, the above null hypothesis is accepted. Hence, there is no significant difference in the ranks assigned by respondents having different occupation dimensions of worker . The mean rank given by the respondents having the number of Government employee is 7 , with the lowest mean rank of 136.47, is followed by mean rank given by respondents having number of Business man/woman is 69 ,with the mean rank of 143.64,is followed by mean rank given by respondents having number of House wife is 7, with the mean rank of 149.50, is followed by mean rank given by respondents having number of professional is 35, with mean rank of 151.70, is followed by mean rank given by respondents having number of private employee is 127,with mean rank of 157.63, is followed by mean rank given by respondents having number of house wife is 5, with mean rank of 165.50, is followed by mean rank given by respondents having number of student is 11, with mean rank of 173.14 . Hence, occupation dimensions of workers to the opening of e-banking account services for convenience(24 hours) are most preferred by Government employee.

FACTOR ANALYSIS:

Factor analysis, a Multivariate interdependence statistical technique is a data reduction tool. Factor analysis removes redundancy or duplication from a set of correlated variables. It is helpful in representing correlated variables with a smaller set of “derived” variables. Factors are formed that are relatively independent of one another. The present researcher has applied the factor analysis for the Specify your opinion about the problems you have met while using e-banking services

Details of input data and variables:

As the first step, sample respondents 300 in number were requested to state to what an extent they agree or disagree with the 17 statements. To measure the degree of preference of the ATM with each of these 17 statements, likert type 5 point numerical scale was use. Strongly agree carrying score 5, agree the score of 4, neither agree (or) disagree carrying the score 3, Disagree the score of 2 and Strongly disagree the score of 1.

Details of statistical calculation and decisions:

Testing for sampling adequacy:

The appropriateness of the factor model is tested before extracting the factors. The test statistics for sphericity based on a chi-square transformation of the determinant of the correlation matrix. Another useful statistics is the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy. Small values of the KMO statistics indicate that the correlation between pair of variables cannot be explained by other variables and that factor analysis may not be appropriate. Generally, a value greater than 0.5 is desirable.

The correlation matrix was examined carefully and the two tests, viz., Bartlett’s test of sphericity and Kaiser-Meyer-Olkin were undertaken to test if it was judicious to proceed with factor analysis in the present study.

H₀: The factor analysis is not valid.

H_A: The factor analysis is valid.

KMO and Bartlett's Test**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.626
Bartlett's Test of Sphericity	Approx. Chi-Square	1258.833
	Df	136
	Sig.	.000

The significance (0.000) is less than the assumed significance value (0.05). so the null hypothesis H₀ is rejected, the alternate hypothesis H₁ is accepted, and hence the factor analysis is valid, next, one may look at the KMO co-efficient to cross check Bartlett's test. It can be seen (0.626) is more than 0.5, so one agrees with Bartlett's test that the factor analysis is valid.

Extraction of factor: Principal Component Analysis(PCA)

There are two main stage in factor analysis as the first stage, principal component analysis was used for the initial extraction of the factors. PCA is a technique for forming a set of new variables that are linear combination of the original set of variables. The new variables are called 'Principal Component or factors.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.663	21.550	21.550	3.663	21.550	21.550	2.981	17.538	17.538
2	2.098	12.344	33.894	2.098	12.344	33.894	2.323	13.667	31.205
3	1.727	10.156	44.049	1.727	10.156	44.049	1.575	9.267	40.473
4	1.377	8.099	52.148	1.377	8.099	52.148	1.543	9.075	49.548
5	1.199	7.051	59.199	1.199	7.051	59.199	1.505	8.851	58.399
6	1.183	6.958	66.158	1.183	6.958	66.158	1.319	7.759	66.158
7	.971	5.710	71.867						
8	.936	5.506	77.373						
9	.762	4.480	81.853						
10	.592	3.481	85.334						
11	.522	3.070	88.404						
12	.488	2.871	91.276						
13	.391	2.299	93.575						
14	.312	1.838	95.413						
15	.312	1.833	97.246						
16	.260	1.532	98.778						
17	.208	1.222	100.000						

The Principle Component Analysis is used for initial extraction of factors. The Eigen value more than one was considered for the information of new principal components. The Factor I explained with variance 17.538 and Eigen value 2.981. The Factor II explained with variance 13.667 and Eigen value 2.32. The Factor III explained with variance 9.267 and Eigen value 1.575. The Factor V explained with variance 8.851 and Eigen value 1.505. The Factor VI explained with variance 7.759 and Eigen value 1.319.

Rotated Component Matrix^a

	Component					
	1	2	3	4	5	6
No printing statement	.773					
Out of order	.772					
Card get locked	.748					
Mutilated notes	.700					
Insufficient of cash machine	.589					
Changing password		.813				
Power cut		.772				
No safe and secure		.720				
User friendly		.515				
Difficulty using other banks ATM centre			.688			
Slow process				.698		
Waiting in long queue				.660		
Fresh card					.855	
Expiry date					.543	
Fee charged						.713

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

Table exhibits the rotated factor loadings for the 17 statements(variables) have been reduced to six factors, namely F1,F2,F3,F4,F5,and F6. These six factors with suitable names are given below:

F1- Incomplete process.

F2- Changing password.

F3- Inconvenience.

F4-Inadequate services.

F5-Fresh card.

F6-Fee charged.

The factors and variables within those factors are presented in the following tables()

Table 10

FACTOR 1: INCOMPLETE PROCESS

S.No	Reason/Variables	Factor1	Eigen value	Percentage variance
1	No printing statement	.773	2.981	17.538
2	Out of order	.772		
3	Card get locked	.748		
4	Mutilated notes	.700		
5	Insufficient of cash machine	.589		

Source: Results computed through SPSS.

The Five factors have been loaded on factor-1, The factor is named as **Incomplete process** on the basis of loading. The Eigen value for the above Factor 1 was 2.981, and the percentage variance was 17.538.

Table 11

FACTOR 2- CHANGING PASSWORD

S.No	Reason/Variables	FactorII	Eigen value	Percentage variance
1	Changing password	.813	2.323	13.667
2	Power cut	.772		
3	No safe and secure	.720		
4	User friendly	.515		

Source: Results computed through SPSS.

The Four factors have been loaded on factor-2, The factor is named as Changing password on the basis of loading. The Eigen value for the above Factor 2 was 2.323, and the percentage variance was 13.667.

Table

FACTOR 3-INCONVENIENCE

S.No	Reason/Variables	FactorIII	Eigen value	Percentage variance
1	Difficulty using other banks ATM centre	.688	1.575	9.267

Source: Results computed through SPSS

The one factors have been loaded on factor-3, The factor is named as **Inconvenience** on the basis of loading. The Eigen value for the above Factor 3 was 1.575, and the percentage variance was 9.267.

Table 12

FACTOR 4- INADEQUATE SERVICES

S.No	Reason/Variables	Factor1V	Eigen value	Percentage variance
1	Slow process	.698	1.543	9.075
2	Waiting in long queue	.660		

Source: Results computed through SPSS

The two factors have been loaded on factor-4, The factor is named as **Inadequate services** on the basis of loading. The Eigen value for the above Factor 4 was 1.543, and the percentage variance was 9.075.

Table 13

FACTOR 5- FRESH CARD

S.No	Reason/Variables	Factor V	Eigen value	Percentage variance
1	Fresh card	.855	1.505	8.851
2	Expiry date	.543		

Source: Results computed through SPSS

The two factors have been loaded on factor-5, The factor is named as Fresh card on the basis of loading. The Eigen value for the above Factor 5 was 1.505, and the percentage variance was 8.851.

Table 14

FACTOR 6- FEE CHARGED

S.No	Reason/Variables	Factor VI	Eigen value	Percentage variance
1	Fee charged	.713	1.319	7.759

Source:

Results computed through SPSS

The one factors have been loaded on factor-6, The factor is named as Fee charged on the basis of loading. The Eigen value for the above Factor 6 was 1.319, and the percentage variance was 7.759.

Table 15

RESPONDENTS ARE MOSTLY FACING THE HIGH PROBLEMS OF ATM WITH MENTIONED THE HIGH LOADING OF VARIABLES ARE GIVEN BELOW

Factor	Name of extracted factor	Selected statement(variable)	Factor loading
F1	Incomplete process	Card get locked	0.748
F2	Changing password	Changing password	0.813
F3	Inconvenience	Difficulty using other banks ATM center	0.688
F4	Inadequate services	Slow process	0.698
F5	Fresh card	Fresh card	0.855
F6	Fee charged	Fee charged	0.713

It is evident from the table that the statement ,Card get locked with factor loading of 0.748, Changing password with factor loading of 0.813, Difficulty using other banks ATM center with factor loading of 0.688, Slow process with factor loading of 0.698, Fresh card with factor loading of 0.855, Fee charged with factor loading of 0.173, are the statements with the higher loading factors of F1,F2,F3,F4,F5,and F6 respectively. Therefore, these are the identified six variables, which carry greater influence over the relative factors that the respondents are mostly facing the high problems of ATM.

ATTITUDE - Likert five point scaling techniques

Attitude is a behavioural disposition which is part of the structure of human perception It is an enduring organisation of motivational, emotional, perceptual and cognitive processes with respect to some aspects of the individual's world. It is an

Internet banking

High	III I
Medium	III III III III III I
Low	III

TALLY MARK SHEET

Level of satisfaction	No of respondents	Percentage
High	6	17
Medium	26	74
Low	3	9
Total	35	100

Out of 35 respondents, 26 (74%) have medium level attitude towards Internet banking services, 6 (17%) have High level attitude towards Internet banking services. 3 (9%) have low level attitude towards Internet banking services.

Suggestions:To the bank:

- Much need to be done in the areas of creating awareness about the availability of electronic banking products and services, how they operate and their benefits. Banks should organize public exhibitions and talk shows and make products accessible to all customers.
- The bank should come forward with more meaningful advertisements and awareness campaigns to create awareness among customer's regarding e-banking services and to make e-banking popular among the entire age and income group.
- Banks should try to win customers confidence by providing adequate security to transaction. If the problems comes in the banks should ensure that at no time should service case as a result of network problem.
- The bank staff must know all the facilities of e-banking so they can say about the e-banking facilities to the customer properly, so the researcher suggest be properly trained regarding this scientific advancement.
- The bank should come forward with more advertisements through the flex in the bank so the customers may easily understand how to operate e-banking services at the counter of all banks.
- The customer may not be charged for using the ATM more than 3 times.

To the customer:

- Don't use in public browsing centres/ shared computers.
- Don't create password which can be easily guessed by others.

To the Government.

- Governments should provide adequate regulatory framework that will ensure customer protection and security transaction.
- Government compel educational institutions to introduce e-banking as a special subject in depth with practical knowledge.

Conclusion:

Most of the respondents are aware of e-banking either fully or partially. E-banking are the most preferred choice followed by ATM, Internet banking, Mobile banking in terms of the frequency of usage for the benefits accrossing time savings come out to be the major benefit followed by easy processing, inexpensive, and easy fund transfer, bill payment etc. some of respondents are account holders of different banks, and they have been availing the e-banking facilities provided by the banks. In many advertisement can play a major role in making people aware of e-banking technologies, e-banking is useful and they will use it in future. So our country will get super power in the year 2020.

