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The Impact of E-banking on Service Quality: (A Case Study of Selected Cities of Punjab)

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ABSTRACT

To examine the impact of e banking on service quality five point likert scales have been developed. To achieve this objective, SERVQUAL model was applied on 42 statements .Total 42 statements have been used. Respondents are asked to rate these items from 1 to 5 points based on their experiences of using E banking services. To check the reliability of scale Cronbach's alpha have been checked. The Cronbach's value comes to be .765 which indicates the value scale use is reliable. Factor analysis was used to extract those factors having Eigen value greater than 1. In order to study the impact of e-banking on service quality it is important to study factors which customers choose while using e-banking. It is assumed that all factors are equally important to know the impact of e-banking on the level of customer satisfaction. The identified factors can be called as Service quality dimensions.

Keywords: Service Quality Dimensions, E banking, Internet, Customer Satisfaction, Factor Analysis.

INTRODUCTION:

Nowadays Electronic banking is a very common service that is used by every person in a way or another for making transactions. It can be use of internet banking services, telebanking, mobile banking, ATM services. Banks offers wide range of E banking services. Banking industry has revolutionized the E banking services with the help of technology. In the fight of gaining huge market share every organization focuses on offering best quality service so that the customer can be satisfied and hence retained. So service quality has become an important factor to determine the customer liking and disliking for a particular service. So the main objective of the study therefore is to study the E banking service quality and find out the major factor impacting the service quality.

REVIEW OF LITERATURE:

Fozia(2013) in a study on "A Comparative Study of Customer Perception toward E-banking Services Provided By Selected Private & Public Sector Bank in India" has determined the customer's perception toward the e-banking services. The result of the study clearly shows that different age group of customer and different occupation group of customers have different perception toward the e-banking services. The results also propose that demographic factors impact significantly internet banking behavior, specifically, occupation and age.
Gaurang Trivedi (2014) in a study on "Internet Banking & Customer Retention- A study on the impact of internet Banking on Customer Retention of HDFC Bank" has find out the impact of internet banking to retain customers in the context of HDFC Bank. His study has indicated that the factors, which are Service Quality, Responsiveness, Security and Privacy, Assurance, and Reliability have impacts on customer retention in terms of Internet Banking.

Dr. Geeta Sharma and Surendra Malviya(2014) in their study titled "Internet Banking Service Quality and Its Impact On Customer Satisfaction In Indore District of Madhya Pradesh" found that there is a positive impact of service quality dimensions on customer satisfaction. The study shows that Website ease of use, comfort, accessibility; confidence and responsiveness are the major integral determinants of internet banking services quality.

Md. Shahidul Islam(2015) in a research on "Analysis of service quality and satisfaction level of customers in banking sector of Bangladesh" has studied the impact of service quality on customer satisfaction in banking sectors. This study investigated the customer satisfaction and service quality relationship in terms of five dimension such as Initial Experience, Delivery service condition, Service Experience, Relationship & Environment and Grievance Handling. The study explained a positive correlation between the dimensions of service quality and customer satisfaction.

Fatemeh Sakhaei & Ahmad J. Afshari(2015) in a study "The Impact of Service Quality on Customer Satisfaction in Internet Banking" has studied the impact of service quality factors of internet Banking on customer satisfaction in Iran .The study shows that the Six service quality dimensions has meaningful relationship with customer satisfaction in Internet Banking and reliability has most relation and website design has least relation to customer satisfaction.

Uday Singh Rajput(2015) in his research Customer Perception on E-Banking Service has studied Customers perception on online banking activities and its impact. It was discovered that customers adapting e banking services very leisurely such as ATM, home banking, use of payment cards etc. Still people of these areas are not using all the E- banking services frequently because they have very little more knowledge about computer and internet so they feel hesitation is using E-banking services

R. Kavitha and Fatima Razia (2016) in a study "Factor Analysis of Customer Preference Towards E –Banking Services With Special Reference To Coimbatore City" has analyzed the factors encouraging to prefer e – banking services by customers. She picked twenty factors and after performing factor analysis she concluded that all factors can be summarized into six factors named Data Management and Integrity, Trust in e – services, User friendly, Grievance Handling, Easy login, Reputation and Prompt Service which were preferred by customers.

OBJECTIVE OF THE STUDY:

- To examine the impact of e banking on service quality.

In order to fulfill primary objective we need to study it into two parts. Primary objective is being bifurcated into secondary objectives.

- To find major factors impacting the customer preference for using E-banking services.
- To study the difference amongst various factors impacting use of E-banking services.

RESEARCH METHODOLOGY:

The Sample area considered for study is Punjab. Members of the universe are chosen based on population as per census 2011. The most populated cities of Punjab have been selected. The random sampling has been used taking into consideration the availability and accessibility of the customers for the purpose of data collection. Descriptive research design is used in the study. Descriptive research is used to obtain information concerning the current status of the phenomena to describe what exists with respect to variables or conditions in a situation. Total 500 internet users have been selected for the study from cities of Ludhiana, Amritsar, Jalandhar, Patiala and Bathinda. The data collected for study is both Primary & Secondary. The data is collected from both urban & rural areas of Punjab. SPSS 20 has been used for analysis purpose. Exploratory Factor analysis (EFA) is used to find the important factors impact the service quality of E banking services. To analyze the impact of E-banking on service quality from customers' angle, a modified SERVQUAL type questionnaire relevant to the e banking service was prepared.

HYPOTHESIS TO BE TESTED FOR THE STUDY:

Ho: There is no significant difference amongst different factors impacting the use of E-banking services.
Ha: There exists significant difference amongst different factors impacting the use of E-banking services.

ANALYSIS & DISCUSSION:

To achieve this objective, SERVQUAL model was applied on 42 statements. This analysis was conducted using factor analysis, t-test, Cronbach's alpha and KMO and Bartlett's test. Factors which are extracted is termed as service quality dimensions. Service quality dimensions are important because it helps to examine the impact of E banking services on customer satisfaction

Table 1: Reliability Statistics

Cronbach's Alpha	N of Items
.765	42

As a rule the value of 0.70 and above for the Cronbach's alpha is sufficient. As table 1 indicates, all the variables have an alpha of 0.765 which concludes that reliability of the scale is highly satisfactorily

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.755
Bartlett's Test of Sphericity	Approx. Chi-Square	8666.167
	df	861
	Sig.	0.000

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity have been applied to test whether the relationship among the variables has been significant or not. The Kaiser Meyer-Olkin Measure of sampling adequacy shows that the value of test statistics is 0.755 which means the factor analysis for the selected variable is found to be appropriate or good to the data. Bartlett's test of sphericity is used to test whether the data are statistically significant or not with the value of test statistics and the associated significance level. In table II we conclude that $p<0.001$ shows there exist some relationship among variables. Hence factor analysis is appropriate.

Table 3: Item Statistics

	Mean	Std. Deviation
It provides accuracy in billing.	4.24	.785
It helps in keeping records correctly.	4.38	.755
It performs the service at designated time.	4.10	1.034
E-banking is very necessary for the development of new economy of India.	3.94	1.435
It improves the quality of customer service.	3.96	.833
Response of service through e-banking is very prompt and quick.	4.40	.548
Availability of service is faster in e- banking as compare to manual banking.	4.44	.497
Transfer of fund is easier through E-banking.	4.33	.804
E-Banking provides more punctuality, transparency, accountability.	4.43	.610
Transfer of funds is faster as compared to manual banking system.	4.39	.585
It is trusted by young generation.	3.35	1.344
E-Banking services are accessible via Internet banking, Mobile banking, EFT, ECS, ATM.	4.61	.523
It provides convenient location of service facility(location of ATM, POS terminals)	4.20	.667
It reduces the waiting time to receive the service.	4.17	1.032
E-Banking explains the service itself.	3.76	1.191
It explains the cost of service being used.	3.78	1.169
It assures the customer that problem will be handled.	3.12	1.379
It explains the trade off between service and cost.	2.94	1.146
E-banking provides up to date information.	4.31	.715
It also provides information for well educated customers.	3.93	.906
It helps in reducing the no. of queues in the bank branches	3.60	1.048
Online purchase of goods and services including online payment is easier.	4.57	.597
E-banking provides effective medium of promotion of various schemes.	4.85	7.314

	Mean	Std. Deviation
E-banking increases the reputation of the banks.	3.32	1.435
It increase believability, honesty and trustworthiness of the customers in banks.	3.34	1.285
It ensures the ability to fulfill the requirement.	3.51	1.406
Degree of reliability involved in Interaction with customer is more in e- banking.	3.36	1.545
It provides unlimited network to the banks to approach customers.	3.14	1.478
E-banking ensures physical safety of the transaction.	4.47	.574
Password facility provides confidentiality to transaction.	4.12	.752
It also increases the financial security.	4.10	1.180
It provides necessary information to the customers and It helps in better customer relationship, attracting and retaining them.	3.38	1.212
Privacy can be easily maintained.	4.31	.774
It provides individualized attention to the customers.	2.31	1.298
Website of the bank is designed according to the need of the customer.	3.07	1.309
It ensures to provide necessary information to the customer.	3.23	1.076
E-banking learns the specific requirement of the customer.	3.18	1.386
Banks use advanced Computer/IT to serve clients.	3.64	1.288
E-banking provides modern looking equipment.	4.22	.656
Physical representation of service through plastic card, credit and debit card is easy.	4.22	.663
E-banking provides more physical facilities to the customers.	3.45	1.511
E-banking provides 24 hours, 365 days a year service to customers.	4.03	1.113

Table III shows the mean values for the 42 items used in scale. Value above 3 indicates that respondents are comfortable to use E banking services. Value below 3 shoes that customer are not convenient with the particular service. For the variables It explains the tradeoff between service and cost mean value is 2.94 and it provides individualized attention to the customers mean value is 2.31 which indicate that respondents don't consider these a very good quality variables. For remaining variables, mean value is above 3.0 which indicate respondents are happy using E banking services. Hence overall respondents are satisfied.

Table 4: Communalities

	Initial	Extraction
It helps in keeping records correctly	.769	.727
It helps in keeping records correctly.	.745	.683
It performs the service at designated time.	.752	.559
E-banking is very necessary for the development of new economy of India.	.898	.847
It improves the quality of customer service	.633	.675
Response of service through e-banking is very prompt and quick.	.787	.470
Availability of service is faster in e- banking as compare to manual banking	.694	.406
Transfer of fund is easier through E-banking.	.835	.818
E-Banking provides more punctuality, transparency, accountability.	.744	.587
Transfer of funds is faster as compared to manual banking system.	.766	.729
It is trusted by young generation.	.802	.761
E-Banking services are accessible via Internet banking, Mobile banking, EFT, ECS, ATM.	.698	.685
It provides convenient location of service facility(location of ATM, POS terminals)	.795	.724
It reduces the waiting time to receive the service.	.860	.833
E-Banking explains the service itself.	.655	.509
It explains the cost of service being used.	.807	.723

	Initial	Extraction
It assures the customer that problem will be handled.	.732	.631
It explains the trade off between service and cost.	.853	.833
E-banking provides up to date information.	.910	.780
It also provides information for well educated customers.	.486	.419
It helps in reducing the no. of queues in the bank branches.	.902	.738
Online purchase of goods and services including online payment is easier.	.331	.255
E-banking provides effective medium of promotion of various schemes.	.882	.798
E-banking increases the reputation of the banks.	.923	.860
It increase believability, honesty and trustworthiness of the customers in banks.	.942	.881
It ensures the ability to fulfill the requirement.	.913	.871
Degree of reliability involved in Interaction with customer is more in e- banking.	.909	.883
It provides unlimited network to the banks to approach customers.	.786	.706
E-banking ensures physical safety of the transaction.	.691	.593
Password facility provides confidentiality to transaction.	.844	.784
It also increases the financial security.	.853	.739
It provides necessary information to the customers and it helps in better customer relationship, attracting and retaining them.	.904	.857
Privacy can be easily maintained.	.859	.740
It provides individualized attention to the customers.	.886	.829
Website of the bank is designed according to the need of the customer.	.886	.780
It ensures to provide necessary information to the customer.	.909	.795
E-banking learns the specific requirement of the customer.	.779	.459
Banks use advanced Computer/IT to serve clients.	.877	.779
E-banking provides modern looking equipment.	.712	.631
Physical representation of service through plastic card, credit and debit card is easy.	.739	.698
E-banking provides more physical facilities to the customers.	.894	.820
E-banking provides 24 hours, 365 days a year service to customers.	.534	.399

Extraction Method: Principal Component Analysis
Source : Primary Data

The communalities table represents the application of the Factor Extraction Process. Principal Component Analysis method is used to identify the number of factors to be extracted from the data and by specifying the most commonly used Varimax rotation method. In the principal component analysis, total variance in the data is considered. The proportion of the variance is explained by the five factors in each variable. The proportion of variance is explained by the common factors called communalities of the variance. Principal Component Analysis works on initial assumption that all the variance is common. Therefore, before extraction the communalities are all 1.000. Then the most common approach for determining the number of factors to retain i.e. examining Eigen values was done.

Table 5: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	12.36	29.43	29.437	12.13	28.902	28.902	6.332
2	4.138	9.852	39.289	3.859	9.189	38.091	3.275
3	2.741	6.527	45.816	2.386	5.681	43.772	2.883
4	2.492	5.932	51.748	2.202	5.242	49.014	3.781

5	2.201	5.240	56.988	1.894	4.508	53.522	2.760
6	1.928	4.591	61.579	1.583	3.769	57.291	7.439
7	1.562	3.720	65.299	1.277	3.040	60.332	1.922
8	1.536	3.658	68.957	1.208	2.876	63.208	3.498
9	1.362	3.243	72.200	1.047	2.494	65.702	6.257
10	.990	3.213	75.413				
11	.928	2.459	77.873				
12	.897	2.257	80.130				
13	.796	2.061	82.191				
14	.732	1.744	83.935				
15	.671	1.598	85.532				
16	.631	1.503	87.035				
17	.576	1.372	88.407				
18	.557	1.325	89.732				
19	.463	1.102	90.834				
20	.421	1.003	91.837				
21	.397	.945	92.783				
22	.319	.760	93.543				
23	.302	.720	94.262				
24	.264	.628	94.890				
25	.239	.569	95.459				
26	.218	.519	95.978				
27	.210	.499	96.477				
28	.184	.437	96.914				
29	.172	.408	97.322				
30	.163	.388	97.710				
31	.152	.362	98.072				
32	.142	.337	98.409				
33	.128	.305	98.715				
34	.100	.238	98.953				
35	.090	.214	99.167				
36	.086	.206	99.372				
37	.067	.160	99.532				
38	.054	.130	99.662				
39	.045	.108	99.770				
40	.041	.096	99.866				
41	.032	.075	99.942				
42	.025	.058	100				
Extraction Method: Principal component analysis.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance's							

According to Kaiser Principle, factors which have Eigen value of 1 or more than one are chosen. These nine factors out of forty two have been extracted which represents the total of 72.2% variance.

Table 6: Rotated Component Matrix

Rotated Component Matrix [a]									
	Factor								
	1	2	3	4	5	6	7	8	9
Response of service through e-banking is very prompt and quick.							0.549		
It helps in keeping records correctly.									0.549
E-banking provides up to date information.	0.778								
It also provides information for well educated customers.	0.776								
It improves the quality of customer service.							0.485		
It provides accuracy in billing.									0.431
Availability of service is faster in e- banking as compare to manual banking.							0.441		
Transfer of fund is easier through E-banking.								0.558	
E-Banking provides more punctuality, transparency, accountability.								0.523	
E-Banking services are accessible via Internet banking, Mobile banking, EFT, ECS, ATM.						0.672			
It performs the service at designated time.									0.511
It explains the cost of service being used.	0.411								
It explains the trade off between service and cost.	0.503								
It reduces the waiting time to receive the service.						0.668			
E-Banking explains the service itself.	0.711								
Transfer of funds is faster as compared to manual banking system								0.409	
Degree of reliability involved in Interaction with customer is more in e- banking.				0.654					
It provides convenient location of service facility(location of ATM, POS terminals)						0.407			
It is trusted by young generation.								.0.423	
E-banking is very necessary for the development of new economy of India.							0.553		
It helps in reducing the no. of queues in the bank branches.		0.7716							
Online purchase of goods and services including online payment is easier.						0.444			
It ensures to provide necessary information to the customer			0.611						
It provides individualized attention to the customers			0.538						

Rotated Component Matrix [a]									
	Factor								
	1	2	3	4	5	6	7	8	9
E-banking provides 24 hours, 365 days a year service to customers.		0.672							
It ensures the ability to fulfill the requirement.				0.772					
It assures the customer that problem will be handled.	0.841732								
It increase believability, honesty and trustworthiness of the customers in banks.				0.766					
Website of the bank is designed according to the need of the customer.			0.65						
E-banking ensures physical safety of the transaction.					0.757				
It provides unlimited network to the banks to approach customers.				0.606					
It also increases the financial security.					0.505				
It provides necessary information to the customers and It helps in better customer relationship, attracting and retaining them.			0.614						
Privacy can be easily maintained.					0.633				
. E-banking increases the reputation of the banks.				0.514					
Physical representation of service through plastic card, credit and debit card is easy.		0.797							
E-banking provides effective medium of promotion of various schemes.	0.605866								
E-banking learns the specific requirement of the customer.			0.68						
Banks use advanced Computer/IT to serve clients.		0.675							
E-banking provides modern looking equipment.		0.425							
Password facility provides confidentiality to transaction.					0.408				
E-banking provides more physical facilities to the customers.		0.593							

Extraction Method: Principal Component Analysis
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 54 iterations.

The above table represents the Rotated Component Matrix. The coefficients are the factor loadings which represent the correlation between the factors and the 42 variables. From the above factor matrix it is found that coefficients for Factor-I have high absolute correlations with variable E-banking provides up to date information(.553), It also provides information for well educated customers(.449), It explains the cost of service being used(.411), It explains the tradeoff between service and cost.(.503), E-Banking explains the service itself.(.711), It assures the customer that problem will be handled(.841) and E-banking provides effective medium of promotion of various schemes(.605).

Similarly factor-II has high absolute correlation with variable It helps in reducing the no. of queues in the bank branches(.772) , E-banking provides 24 hours, 365 days a year service to customers(.672), Physical representation of service through plastic card, credit and debit card is easy(.797), Banks use advanced Computer/IT to serve clients.(.675), E-banking provides modern looking equipment.(.425), E-banking provides more physical facilities to the customers(.593)

Factor III shows correlation with variable It ensures to provide necessary information to the customer (.611), It provides individualized attention to the customers (.538), Website of the bank is designed according to the need of the customer.(0.65), It provides necessary information to the customers and It helps in better customer relationship, attracting and retaining them(0.614), E-banking learns the specific requirement of the customer(0.688).

Factor-IV represents high absolute correlation with variable Degree of reliability involved in Interaction with customer is more in e- banking (0.654), It ensures the ability to fulfill the requirement (0.772), It increase believability, honesty and trustworthiness of the customers in banks (0.766), It provides unlimited network to the banks to approach customers (.606) and E-banking increases the reputation of the banks (0.514).

Factor V has high correlation with E-banking ensures physical safety of the transaction(0.757), It also increases the financial security(0.505), Privacy can be easily maintained(0.633), Password facility provides confidentiality to transaction(0.408)

Factor VI is correlated with E-Banking services are accessible via Internet banking, Mobile banking, EFT, ECS, ATM(0.672), It reduces the waiting time to receive the service(0.688), It provides convenient location of service facility(location of ATM, POS terminals)(0.407), Online purchase of goods and services including online payment is easier(0.444)

Factor VII represents the correlation with variables Response of service through e-banking is very prompt and quick(0.549), It improves the quality of customer service(0.485), Availability of service is faster in e- banking as compare to manual banking(0.441), E-banking is very necessary for the development of new economy of India(0.553).

Factor VIII shows the high correlation with variables Transfer of fund is easier through E-banking(0.558), E-Banking provides more punctuality, transparency, accountability(0.523), Transfer of funds is faster as compared to manual banking system(0.409), It is trusted by young generation(0.423).

Factor IX has high correlation with variables It helps in keeping records correctly (0.549), It provides accuracy in billing (0.431) and It performs the service at designated time (0.511).

Each factor is named on basis of the correlation of variables with each other. Factor 1 is Communication second is tangibility, third is understanding, fourth is credibility, fifth is security, sixth is access, seventh is responsiveness, eighth is competence and last ninth factor is reliability.

Table 7: Factor 1 Communication

E-banking provides up to date information.	.778
It also provides information for well educated customers.	.776
It explains the cost of service being used.	.411
It explains the trade off between service and cost.	.503
E-Banking explains the service itself.	.711
It assures the customer that problem will be handled.	.841
E-banking provides effective medium of promotion of various schemes.	.605
% Variance	29.437
Cumulative %	29.437%

It can be termed as communication. It explains maximum variance 29.437%

Table 8: Factor 2 Tangibility

It helps in reducing the no. of queues in the bank branches.	.772
E-banking provides 24 hours, 365 days a year service to customers.	0.672
Physical representation of service through plastic card, credit and debit card is easy.	.797
Banks use advanced Computer/IT to serve clients.	.675
E-banking provides modern looking equipment.	.425

E-banking provides more physical facilities to the customers.	.593
% Variance	9.852
Cumulative %	39.289

Factor II explains 9.852% variance and cumulative 39.289%. It is named as tangibility.

Table 9: Factor 3 Understanding

It ensures to provide necessary information to the customer	0.611
It provides individualized attention to the customers	0.538
Website of the bank is designed according to the need of the customer.	0.65
It provides necessary information to the customers and It helps in better customer relationship, attracting and retaining them.	0.614
E-banking learns the specific requirement of the customer.	0.688
%variance	6.527
Cumulative %	45.816%

Factor III explains 6.527% variance and cumulative 45.816%. It can be named as understanding. It indicates E banking services understand needs of customers and provide necessary information to the customer.

Table 10: Factor 4 Credibility

Degree of reliability involved in Interaction with customer is more in e- banking.	0.654
It ensures the ability to fulfill the requirement.	0.772
It increase believability, honesty and trustworthiness of the customers in banks.	0.766
It provides unlimited network to the banks to approach customers.	0.606
E-banking increases the reputation of the banks.	0.514
%variance	5.932
Cumulative %	51.748%

Factor IV is named as credibility. It explains 5.932% variance and cumulative 51.748 %. It expresses Believability, honesty and trustworthiness of the customers with E banking services offered by banks.

Table 12: Factor 5 Security

E-banking ensures physical safety of the transaction.	0.757
It also increases the financial security.	0.505
Privacy can be easily maintained.	0.633
Password facility provides confidentiality to transaction.	0.408
% Variance	5.24
Cumulative %	56.988%

Factor V explains 5.24% variance and cumulative 56.988%. It is named as security. It represents the concern of customer towards the physical and financial safety of transaction.

Table 13: Access

E-Banking services are accessible via Internet banking, Mobile banking, EFT, ECS, ATM.	0.672
It reduces the waiting time to receive the service.	0.668
It provides convenient location of service facility(location of ATM, POS terminals)	0.407
Online purchase of goods and services including online payment is easier.	0.444
% Variance	4.591
Cumulative %.	61.579%

Factor VI explains 4.591% variance and cumulative 61.579%. It is named as access. It expresses the customer concern about accessibility of E-banking services. Customer feels that E banking services should be provided at convenient location.

Table 14: Factor 7 Responsiveness

Response of service through e-banking is very prompt and quick.	0.549
It improves the quality of customer service.	0.485
Availability of service is faster in e- banking as compare to manual banking.	0.441
E-banking is very necessary for the development of new economy of India.	0.553
%Variance	3.72
Cumulative %	65.299%

Factor VII explains 3.72% variance and cumulative 65.299%. It is named as responsiveness. Response of service through e-banking is very prompt and quick. It improves the quality of customer service.

Table 15: Factor 8 Competence

Transfer of fund is easier through E-banking.	0.558
E-Banking provides more punctuality, transparency, accountability.	0.523
Transfer of funds is faster as compared to manual banking system	0.409
It is trusted by young generation.	.423
%Variance	3.658
Cumulative %	68.957%

Factor VIII explains 3.658% variance and cumulative 68.957%. It is named as competence. It shows E-Banking provides more punctuality, transparency, accountability for transactions.

Table 16: Factor 9 Reliability

It helps in keeping records correctly.	0.549
It provides accuracy in billing.	0.431
It performs the service at designated time.	0.511
%Variance	3.243
Cumulative %	72.200%

Factor IX explains 3.243% variance and cumulative 72.200%%. It is named as reliability. This factor explains the accuracy in keeping the records correctly.

Table 17: Group Statistics

Location		N	Mean	Std. Deviation	Std. Error Mean
Tangibilitys	Urban	328	4.2114	.53061	.02930
	Rural	176	4.0947	.58025	.04374
Understanding	Urban	328	4.1951	.49236	.02719
	Rural	176	4.1784	.45681	.03443
Security	Urban	328	4.2759	.51105	.02822
	Rural	176	4.2088	.48559	.03660
Communication	Urban	328	3.6372	.56359	.03112
	Rural	176	3.6331	.55140	.04156
Competence	Urban	325	3.8769	.64836	.03596
	Rural	176	3.8835	.68133	.05136
Reliability	Urban	328	3.2907	1.26489	.06984
	Rural	176	3.4186	1.32221	.09967
Responsiveness	Urban	328	3.9985	.61734	.03409
	Rural	176	4.0540	.54896	.04138
Access	Urban	328	3.2096	.70256	.03879
	Rural	176	3.2713	.76432	.05761
Credibility	Urban	328	3.7549	.71859	.03968
	Rural	176	3.7193	.77950	.05876

Table XVII indicates that for the tangibility, understanding, and security the mean value are above 4.0 which represents that respondents are happy with these service quality factors. Since mean value for Communication is 3.6, competence 3.8, relaibilty is 3.2, responsiveness 3.9, access is 3.2 and credibility is 3.7 which indicate respondents are happy and satisfied with these service quality dimensions too.

As all dimensions (factors) of service quality are equally important. Hence, all service quality factors are supposed to have similar impact on customers. So to check the significance of the factors we use Independent Samples Test. It will explain whether there is significant difference amongst factors for using E banking services in rural and urban areas. So we frame the null hypothesis that there is no significant difference amongst different factors impacting for using E-banking services.

H0: There is no significant difference amongst different factors impacting for using E-banking services.

Ha: There is significant difference amongst different factors impacting for using E-banking services.

Table 18: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Tangibility	Equal variances assumed	.383	.537	2.277	502	.023	.11669	.05124	.01601	.21736
	Equal variances not assumed			2.216	331.554	.027	.11669	.05264	.01313	.22024
Understanding	Equal variances assumed	1.403	.237	.372	502	.710	.01671	.04488	-.07145	.10488
	Equal variances not assumed			.381	381.785	.703	.01671	.04387	-.06955	.10297
Security	Equal variances assumed	.230	.632	1.430	502	.153	.06711	.04694	-.02511	.15932
	Equal variances not assumed			1.452	374.115	.147	.06711	.04622	-.02377	.15799
Communication	Equal variances assumed	.031	.860	.078	502	.938	.00408	.05227	-.09861	.10677
	Equal variances not assumed			.079	364.837	.937	.00408	.05192	-.09803	.10618
Competence	Equal variances assumed	1.335	.249	-.107	499	.915	-.00660	.06178	-.12798	.11478
	Equal variances not assumed			-.105	344.037	.916	-.00660	.06270	-.12992	.11672
Reliability	Equal variances assumed	2.640	.105	-1.065	502	.287	-.12791	.12008	-.36384	.10802
	Equal variances not assumed			-1.051	344.601	.294	-.12791	.12170	-.36728	.11146
Responsiveness	Equal variances	3.660	.056	-.999	502	.318	-.05550	.05554	-.16462	.05362

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
	assumed									
	Equal variances not assumed			-1.035	395.603	.301	-.05550	.05361	-.16090	.04990
Access	Equal variances assumed	2.420	.120	-.911	502	.363	-.06170	.06771	-.19474	.07133
	Equal variances not assumed			-.888	333.016	.375	-.06170	.06946	-.19833	.07492
Credibility	Equal variances assumed	2.390	0.122	0.514	502	.607	0.0355	0.06918	-0.10035	0.1714
	Equal variances not assumed			0.501	333.83	.616	0.0355	0.0708	-0.1039	0.1750

From the above table it can be concluded that at confidence level 5%, the sig value for tangibility factor is 0.023 which less than 0.05. Hence null hypothesis is rejected and alternate hypothesis is accepted. It is concluded that there exist a significant difference amongst different factors impacting for using e-banking services. All factors do not have same impact. Factor impact varies. No two factors have similar impact on customer choice of E banking services. For a customer reliability can be priority, for other tangibility or so.

FINDINGS OF STUDY:

- According to Kaiser Principle nine factors out of forty two have been extracted which represents the total of 72.2% variance.
- Factor I can be termed as communication. It explains maximum variance 29.437%
- Factor II explains 9.852% variance and cumulative 39.289%. It is named as tangibility
- Factor III explains 6.527% variance and cumulative 45.816%. It can be named as understanding
- Factor IV is named as credibility. It explains 5.932% variance and cumulative 51.748
- Factor V explains 5.24% variance and cumulative 56.988%. It is named as security.
- Factor VI explains 4.591% variance and cumulative 61.579%. It is named as Access.
- Factor VII explains 3.72% variance and cumulative 65.299%. It is named as responsiveness.
- Factor VIII explains 3.658% variance and cumulative 68.957%. It is named as competence.
- Factor IX explains 3.243% variance and cumulative 72.200%%. It is named as reliability.
- The factors tangibility, understanding, and security have the mean value above 4.0 (both urban & rural) which represents that respondents are happy with these e banking factors to use with.
- Mean value for Communication is 3.6, competence 3.8, reliability is 3.2, responsiveness 3.9, access is 3.2 and credibility is 3.7 which indicate respondents feel all factors are equally important for using e banking services. Respondents are happy and satisfied with these service quality dimensions.
- There exists a significant difference amongst different factors impacting for using e-banking services. Hence all factors are not equally important. All factors do not have same impact. Factor Impact varies.

CONCLUSION:

In order to examine the impact of E banking on service quality we have finally come up with nine factors communication, tangibility, understanding, credibility, security, access, responsiveness, competence reliability which impact service quality to great extent. It is clear from the research that there is a significant difference amongst different factors impacting for using e-banking. The E banking service providers should pay attention to these factors in order to make their banking services quality full for their customers.

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