

Factors Affecting The Service Quality and E-Banking Services

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Abstract- *the present research paper to study the factors affecting the service quality on E-banking services and also the affect of these factors on various demographic variables and e-banking services, best service quality always helps to retaining new and existing customers with long term profitability towards banks. This research paper evaluates main service quality factors like Reliability, Responsiveness, Tangibility, Empathy and Accuracy on E-banking banking services. For conducting customers survey with 427 customers likert scale based questionnaire was developed. Collecting data was analysed using principle component using SPSS 20.0. and tools like Percentage analysis, ANOVAs and Factor analysis used. The results of the ANOVAs showed that demographical variables significant different with E-banking services and Service Quality factors except gender, and Service Quality factors significant different with E-banking services, and results of factor analysis indicates that, all factors like Reliability, Responsiveness, Tangibility, Empathy and Accuracy with their respective dimensions found significant with internet banking.*

Keywords- Accuracy, Empathy, Service quality, Reliability, Responsiveness, Tangibility.

I. INTRODUCTION

In this present era of cut throat competition net banking is being used to expand and reach every possible customer, especially the young and tech-savvy ones. It is not only a fad but convenience to customers. Electronic-banking / Internet banking/Net banking whatever you may use in common parlance is nothing but a field that includes information technologies and computer based innovations to provide various services in banking sector. The conception and span of E-banking is still in the intermediary stage in India. It is enhancing the competence in the area of efficient disbursement and book-keeping system, thereby, improving the swiftness in delivery of banking services significantly. Incredible advancement in the area of Information technology has abridged the world to a global village and it has led to exceptional changes in the banking industry. Gigantic expansion in the tools of telecommunication and Electronic

Data Processing (EDP) has further provided impetus to these changes. According to Christopher et al. (2006), E-banking has become an important channel to sell the products and services and is perceived to be a necessity in order to stay profitable & successful. As per prediction of Broadie et al. (2007), the E-banking is leading to a paradigm shift in marketing practices resulting in high performance in the banking industry. Actually computerization and internet has transfigured fiscal and banking sectors globally and India is no exception. Since the products presented to the customers of a bank are more or less uniform in nature, banks are sensing the emergence to differentiate themselves from the competitors on various criteria that can enhance customer contentment, loyalty and allegiance. This is because, customer contentment and allegiance has been considered to be of utmost importance for a firm's performance in the long run (Hallowell, 1996). Though, nearly all of the online service providers find it a hard job to handle service quality, because of the insufficient exposure to this new means of business operations and their limited knowledge of online consumer behavior (Mols, 2000). Actually, delivery of service in banking can be provided efficiently only when both the front as well as back end operations are efficient. Quality of services, however, poses a major challenge and may prove a major roadblock for any bank. An effort has been made in the present research work to study the various factors affecting the service quality and also the effect of these factors on various demographic variables.

II. REVIEW OF LITERATURE

There have been numerous studies identifying the key service quality dimensions in the traditional banking environment, relatively little literature has investigated service quality attributes in the Internet banking industry (Jun and Cai, 2001). Gronroos, (1982) described the total service quality as customer's perception of difference between the expected service and the perceived service. Further, he defined the concept of perceived service quality as the outcome of an evaluation process, where the consumer compares his expectations with the service he perceives or has received. Lehtinen and Lehtinen, (1982) also state that service quality has three dimensions, however the differences can be seen as

(i) Physical quality: This includes items such as the condition of buildings and enabling equipment; (ii) Corporate quality: This refers to the organization's image and profile and; (iii) Interactive quality: This is derived from the interaction between service organizations' personnel and the customer as well as the interaction between customers. Parasuraman et al., (1988) proposed that higher levels of perceived service quality result in increased customer satisfaction. Several studies in the past have paid much attention to the close relationship between service quality and customer satisfaction (Parasuraman et al., 1988 and Bitner et al., 1990). Hurley and Estelami, (1998) reported that while service quality and satisfaction are distinct constructs, a causal relationship exists between the two, and that perceptions of service quality affect feelings of satisfaction which, in turn, influence future purchase behaviour. Several researchers have found that internet banking is fast gaining popularity in India (Gupta, 1999; Pegu, 2000), there has to be sufficient number of users and infrastructure in place to reach a critical mass. As for internet banking, Joseph et al., (1999) investigate the influence of internet on the delivery of banking service. Their study identifies six underlying dimensions of electronic banking service quality. They are convenience and accuracy; feedback and complaint management; efficiency; queue management; accessibility and customization. Lassar et al., (2000) investigated the impact of service quality on customer satisfaction in private banking by using the SERVQUAL. They reported that customer satisfaction is a multidimensional construct and its dimensions will have differential impact on the service quality dimensions. Customer satisfaction in the online environment is referred as "e-satisfaction". Drawing upon the traditional service quality scale, Zeithaml et al., (2000) have developed e-service quality dimensions for measuring e-service quality. Jun and Cai, (2001) have identified seventeen service quality dimensions of internet banking. These are reliability, responsiveness, competence, courtesy, credibility, access, and communication, understanding the customer, collaboration and continuous improvement, content, accuracy, eases of use, timeliness, aesthetics, security and diverse features. High standard e-service quality is the means by which the potential benefits of the internet can be realized (Yang et al., 2001). A majority of studies view the dimensions of e-service quality as antecedents of e-satisfaction (Dina et al., 2004). Al-Hawari and Ward, (2006) demonstrated that service quality carries a significant impact on customer satisfaction which in turn affects the financial performance of banks. Khan et al., (2009) conducted a research study to evaluate the service quality of internet banking services in India from customer's perspective. They developed a battery of 26 items which were condensed to seven quality dimensions: reliability, accessibility, user friendliness, privacy/security, efficiency,

responsiveness and fulfilment. The impact of these seven dimensions on the overall internet banking service quality was empirically tested, and all the dimensions except user friendliness and fulfilment were found statistically significant. Malhotra and Singh, (2006) found that only 48 per cent of the commercial banks operating in India as on March-end 2005 offer internet banking. In this context, the present research study is undertaken to investigate the factors affecting the service quality of banks on various demographic variables of E-banking customers. Unnithan and Swatman, (2001) studied the key change drivers in the evolution of the banking sector, and the shift towards internet banking in India. They reported that in India, less inclination towards E-banking is because of various factors like having weak infrastructure, low personal computer penetration, developing security protocols and consumer reluctance in rural sector. In a theoretical study, Rao and Prathima, (2003) found that as compared to the banks abroad, Indian banks offering online services still have a long way to go. The above review indicates that measuring the impact of E-banking has attracted much attention from researchers, at the international level but there has not been much analysis on the effect of E-banking on the service quality in the Indian banking industry. The present research paper attempts to fill this research gap and evaluate the factors affecting service quality and determines their effect on demographic variables and develops a model for Indian banking sector.

III. OBJECTIVE

This research work has been carried out to achieve the following objectives:

- To assess the impact of Internet Banking services on demographical variables of customers?
- To study the Service quality factors affecting on demographical variables of customers?
- To study the Service quality factors affecting on E-banking services?

IV. HYPOTHESIS

The following are the hypothesis designed with above objectives

- H_0^1 : There is no significant impact of E- banking services on demographical variables of customers.
- H_0^2 : There is no significant affect of Service quality factors on demographical variables of customers.
- H_0^3 : There is no significant affect of Service quality factors on internet banking services.

V. RESEARCH METHODOLOGY

- **Research Design:** Descriptive research
- **Sources of data:** Primary source of data is collected from the respondents through structured questionnaire and it was in order to collect data on the factors which affect E-banking services. Secondary data is collected from various Journals, Periodicals such as Magazines, Business newspapers, and from subject related books and websites.
- **Data collections methods:** Data has been collected using structure questionnaire through customer survey method and personal interview of e-banking customers.
- **Sampling area:** Hyderabad city
- **Sampling Method:** Convenience sampling method has been used to collect sample of 427 respondents.
- **Statistical tools used:** ANOVAs and factor analysis using SPSS 20.0.

VI. RESULTS AND DISCUSSIONS

Demographic Variables: The frequency distribution of demographic variables is presented in the following table.

Table-1: Demographical Analysis

Particulars	Classification	No of Responses	Percentage
Age	20-25	95	22.2
	26-30	117	27.4
	31-35	115	26.9
	36-40	75	17.6
	41 and above	25	5.9
Gender	Male	296	69.3
	Female	131	30.7
Education	SSC	34	8.0
	Intermediate	26	6.1
	Degree	183	42.9
	Pg degree	121	28.3
	PhD and above	63	14.8
Occupation	Student	54	12.6
	Govt Employee	96	22.5
	Private Employee	166	38.9
	Business	60	14.1
	Self Employed	51	11.9
income in rupees (in rupees)	Below 20,000	35	8.2
	20,001-30,000	143	33.5
	30,001 - 40,000	123	28.8
	40,001-50,000	77	18.0
	50,001 and above	49	11.5
Total		n = 427	100%

The descriptive analysis of all the demographical variables is shown in the above Table, from that more than 27% of respondents in the group of 26-30 years and 26% of respondents in the group of 31-35 years, followed by 70% of the respondents belonged male and 30% of respondents and with followed 28% of respondents studied Below Post Graduation, 38% of respondents working as a Private Employees, 22% are the Govt. Employee, and 33% of respondents earned Rs.20,001-30,000 for month and 28% of respondents earned above Rs. 30,001-40,000 respectively.

ANOVA: It is conducted in order in order to understand whether there is any significant difference in opinions of respondents on E-banking services and Service quality factors, the results are presented in the following table.

- **HO¹:** There is no significant impact of E- banking services on demographical variables of customers.
- **HO²:** There is no significant affecting of Service quality factors on demographical variables of customers.

Table-2: ANOVA with demographical variables

S.NO	Dimension	Age		Gender		Education		Occupation		Income in rupees	
		F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
1	E-banking services	7.531	.001	22.354	.000	8.272	.001	41.562	.001	25.395	.001
2	Service quality factors	21.324	.001	17.274	.009	11.742	.000	6.547	.000	15.127	.000

It is evident that from the above table, dimensions like E-banking services, service quality factors of the F value is found to be significant, meaning there by there is significant different with demographical variables like age, education, occupation and income in rupees. and followed with except gender, remaining all demographical variables significant different with service quality factors

- **HO³:** There is no significant affecting of Service quality factors on internet banking services.

Table-3: ANOVA with service quality factors and E-Banking services

S.NO	Service quality Factors	F	Sig
1	Reliability	7.362	0.01
2	Responsiveness	10.542	0.00
3	Tangibility	8.457	0.00
4	Empathy	7.231	0.02
5	Accuracy	7.982	0.00

It is evident that from the above table, Service quality factors like Reliability, Responsiveness, Tangibility, Empathy and Accuracy of the F value is found to be significant, meaning there by there is significant different with E-banking

services, so finally there is significant different with E-banking service by the service quality factors.

MEASURE THE SAMPLING ADEQUACY

KMO and Bartlett's Test : In order measure the sampling adequacy, KMO and Bartlett's test is conducted . The Kaiser - Meyer- Olkin Measure of Sampling Adequacy is a statistic that shows the proportion of the variance in the variable that might be caused the underlying factor. The Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations among variables are small. High values (close to 1.0) generally indicate that a factor analysis may be useful with data. Bartlett's test of sphericity tests the hypothesis that correlation matrix is an identity matrix, which would indicate that variables are unrelated. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with data. Table no 2 indicates that in the present test the Kaiser-Meyer-Olkin (KMO) measure was 0.724. Bartlett’s sphericity test indicating Chi-Square = 1577.680, df = 191 with a significance of 0.000.

Table 2- KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.724
Bartlett's Test of Sphericity	Approx. Chi-Square	1577.680
	df	191
	Sig.	.000

PRINCIPLE COMPONENT ANALYSIS: The principle component analysis of the data has extracted the communalities for the different variable and the same is presented in the following table, Extraction communalities are estimates of the variance in each variable accounted for by the components.

Table 3 - Facto analysis Results : Communalities

Name of Dimension	Name of Statements	Initial	Extraction
Reliability	It provides accuracy in billing	1.000	.778
	It helps in keeping records correctly	1.000	.753
	It performs the service at designated time	1.000	.672
Responsiveness	It improves the quality of customer service	1.000	.644
	Response of service through e-banking is very prompt and quick	1.000	.651
	Availability of service is faster in e- banking as compare to manual banking	1.000	.640
Tangibility	E-banking provides modern looking equipment	1.000	.653
	It helps in reducing the no. of queues in the bank branches	1.000	.804
	E-banking provides more physical facilities to customers	1.000	.617
Empathy	Time bound work of employee	1.000	.641
	Help desks, call centres of bank	1.000	.675
	Provisions of financial advices	1.000	.595
Accuracy	Problem solving through instant information	1.000	.692
	Bank insists on error-free transaction records	1.000	.696
	Electronic Bills payments	1.000	.673

Extraction Method: Principal Component Analysis.

The Communalities indicate the amount of the variance in each variable that is accounted for initial communalities are estimates of the variance in each variable accounted for by all components of factor. Extraction communalities are estimates of the variance in each variable accounted for by the factor (or components) in the factor solution.

In the table above, It helps in reducing the no. of queues in the bank branches (*Tangibility*) with 0.804, followed with , It provides accuracy in billing and It helps in keeping records correctly (*Reliability*) with 0.778, 0.753 respectively. Lowest communality is extracted by Provisions of financial advices (*Empathy*) with a communality 0.595.

Table-4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.582	12.912	12.912	2.582	12.912	12.912
2	2.054	10.268	23.180	2.054	10.268	23.180
3	1.712	8.562	31.742	1.712	8.562	31.742
4	1.585	7.923	39.665	1.585	7.923	39.665
5	1.342	6.711	46.377	1.342	6.711	46.377
6	1.139	5.697	52.074	1.139	5.697	52.074
7	1.135	5.675	57.748	1.135	5.675	57.748
8	1.047	5.235	62.983	1.047	5.235	62.983
9	.963	4.816	67.800			
10	.905	4.523	72.323			
11	.835	4.175	76.498			
12	.807	4.033	80.531			
13	.716	3.581	84.111			
14	.653	3.265	87.376			
15	.631	3.155	90.531			
16	.527	2.634	93.166			
17	.500	2.498	95.663			
18	.423	2.113	97.776			
19	.283	1.415	99.191			
20	.162	.809	100.000			

Extraction Method: Principal Component Analysis.

This table shows the actual factors that were extracted . First Factor explains the variance in the dependent variable to an extant 12.912, followed by second , third and

fourth factors with 10.268, 8.562, and 7.923 respectively thus, 8th factor are explaining the cumulative variance in the Dependent variable to an extent of 62.983%. The same is expressed in the Scree plot.

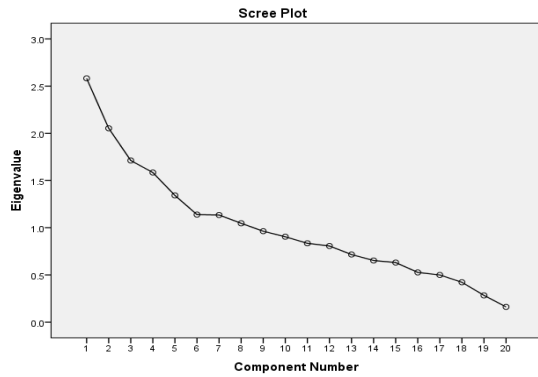


Table-5: Component Matrix^a

	Component							
	1	2	3	4	5	6	7	8
It provides accuracy in billing	.049	.591	.326	-.149	.022	.516	-.150	-.091
It helps in keeping records correctly	.610	.457	.342	-.005	.005	-.207	-.067	.087
It performs the service at designated time	.304	-.172	.696	.079	-.028	.239	.006	-.015
It improves the quality of customer service	.626	-.190	-.146	.178	.180	-.244	.665	.000
Response of service through e-banking is very prompt and quick	.540	.273	-.322	.010	.195	-.183	-.077	.323
Availability of service is faster in e-banking as compare to manual banking	-.351	.663	.070	-.173	-.011	.176	-.061	.086
E-banking provides modern looking equipment	.565	.172	.226	-.044	.226	.236	-.049	-.026

The principal component analysis has been extracted for 8 factors. The 1st factor includes the variable like "It helps in reducing the no. of queues in the bank branches" and so on, followed with 2nd factor includes the variables like "Availability of service is faster in e- banking as compare to manual banking", 3rd factor includes variable like "It performs the service at designated time", 4th factor includes the variables like "It performs the service at designated time", 5th factor includes the variables like "Help desks, call centres of bank", 6th factor includes variable like "It provides accuracy in billing", 7th factor includes variable like "It improves the quality of customer service", and 8th factor includes variable like "It helps in keeping records correctly".

VII. CONCLUSION

The present research paper attempts to examine a contributions of various factors of service quality on E-banking services. There are three two major objective and data collected with through questionnaire. It was analysed by the percentages, ANOVAs, and Factor analysis. As per the results 27% of respondents in the group of 26-30 years and 26% of respondents in the group of 31-35 years, followed by 70% of the respondents belonged male and 30% of respondents belonged female, and 42% of respondents studied Graduation and with followed 28% of respondents studied Below Post Graduation, 38% of respondents working as a Private Employees, 22% are the Govt. Employee, and 33% of respondents earned Rs.20,001-30,000 for month and 28% of respondents earned above Rs. 30,001-40,000, followed with the results of the ANOVAs showed that demographical variables significant different with E-banking services and Service Quality factors except gender, and Service Quality factors significant different with E-banking services, and results of factor analysis indicates that, all factors like Reliability, Responsiveness, Tangibility, Empathy and Accuracy with their respective dimensions found significant with internet banking.

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