

A STUDY ON FACTORS AFFECTING THE SERVICE QUALITY AND E-BANKING SERVICES

Bodige Mamatha

Research scholar, Dept. Business Management,
osmania university, Hyderabad
Email: mamathab28@gmail.com

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 customer's survey with 386 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

- **HO^1 :** There is no significant impact of E- banking services on demographical variables of customers.
- **HO^2 :** There is no significant affect of Service quality factors on demographical variables of customers.
- **HO^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 in years	20-25 years	83	21.5
	26-30 years	109	28.2
	31-35 years	107	27.7
	36-40 years	65	16.8
	41 and above years	22	5.7
Gender	Male	267	69.2
	Female	119	30.8
Education	SSC	32	8.3
	Intermediate	48	12.4
	Degree	112	29.0
	Pg Degree	129	33.4
	PhD and Above	65	16.8
Occupation	Govt Employee	118	30.6
	Private Employee	142	36.8
	Business	46	11.9
	Home Maker	39	10.1
	Self Employed	41	10.6
income in rupees (in rupees)	below 20,000	35	9.1
	20,001-30,000	59	15.3
	30,001 - 40,000	154	39.9
	40,001-50,000	96	24.9
	50,001 and above	42	10.9
Total		n = 386	100%

The descriptive analysis of all the demographical variables is shown in the above Table 1, from that more than 28.2% of respondents in the group of 26-30 years and 27.7% of respondents in the group of 31-35 years, followed by 69.2% of the respondents belonged male and 30.8% of respondents belonged female, and 33% of respondents studied PG and with followed 29% of respondents studied Graduation, 36.8% of respondents working as a Private Employees, 30.6% are the Govt. Employee, and 39.9% of respondents earned Rs.30,001-40,000 for month and 24% of respondents earned above Rs. 340,001-50,000 respectively.

6.1 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 by 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 0.852. Bartlett's sphericity test indicating Chi-Square = 2385.021, df = 105 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.	.852
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.

6.1.2 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	.805
	It helps in keeping records correctly	1.000	.798
	It performs the service at designated time	1.000	.751
Responsiveness	It improves the quality of customer service	1.000	.722
	Response of service through e-banking is very prompt and quick	1.000	.641
	Availability of service is faster in e- banking as compare to manual banking	1.000	.614
Tangibility	E-banking provides modern looking equipment	1.000	.741
	It helps in reducing the no. of queues in the bank branches	1.000	.854
	E-banking provides more physical facilities to customers	1.000	.712
Empathy	Time bound work of employee	1.000	.720
	Help desks, call centres of bank	1.000	.527
	Provisions of financial advices	1.000	.516
Accuracy	Problem solving through instant information	1.000	.565

	Bank insists on error-free transaction records	1.000	.522
	Electronic Bills payments	1.000	.599
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 0.854, followed with , It provides accuracy in billing and It helps in keeping records correctly (*Reliability*) with 0.805, 0.798 respectively. Lowest communality is extracted by Provisions of financial advices (*Empathy*) with communality 0.516.

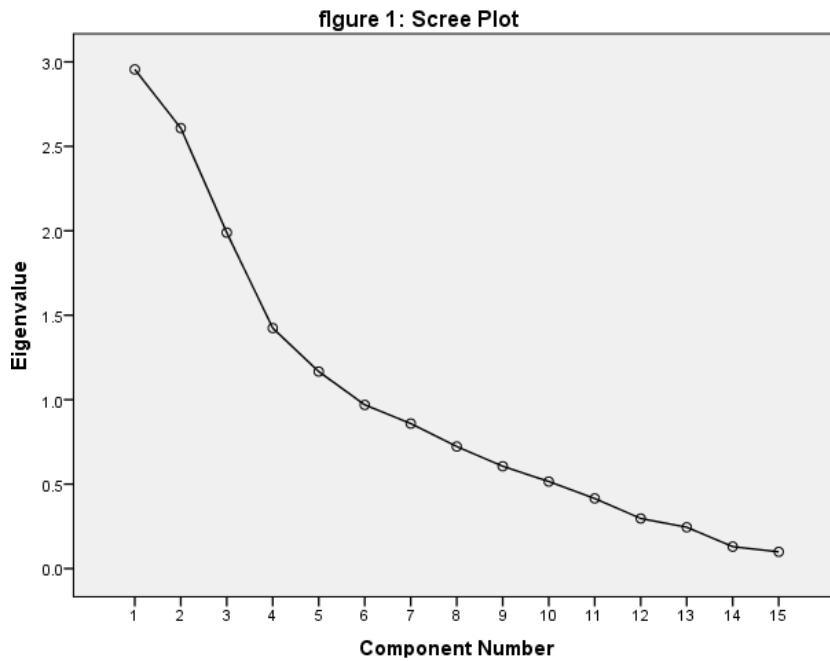
Table 4

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.955	19.703	19.703	2.955	19.703	19.703
2	2.608	17.386	37.089	2.608	17.386	37.089
3	1.989	13.262	50.351	1.989	13.262	50.351
4	1.424	9.491	59.842	1.424	9.491	59.842
5	1.166	7.776	67.618	1.166	7.776	67.618
6	.969	6.461	74.079			
7	.859	5.724	79.803			
8	.723	4.818	84.622			
9	.606	4.039	88.661			
10	.515	3.436	92.097			
11	.415	2.768	94.865			
12	.296	1.976	96.841			
13	.245	1.632	98.473			
14	.130	.867	99.340			
15	.099	.660	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 19.703, followed by second , third and fourth factors with 17.386, 13.262, 9.491 and 7.776 respectively. The same is expressed in the Scree plot.



6.2 ANOVA: It is conducted 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.

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

Table-2
ANOVA with demographical variables

S.N O	Dimensi on	Age		Gender		Education		Occupation		Income in rupees	
		F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
1	E- banking services	8.431	.000	21.30 4	.000	7.202	.000	35.50 0	.002	27.38 7	.001
2	Service quality factors	25.32 4	.001	19.23 5	.009	14.75 5	.000	9.551	.000	17.27 7	.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

- **H_0^3 :** 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	8.342	0.01
2	Responsiveness	12.592	0.00
3	Tangibility	9.487	0.00
4	Empathy	11.251	0.02
5	Accuracy	15.902	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.

7. CONCLUSION

The present research paper attempts to examine 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 more than 28.2% of respondents in the group of 26-30 years and 27.7% of respondents in the group of 31-35 years, followed by 69.2% of the respondents belonged male and 30.8% of respondents belonged female, and 33% of respondents studied PG and with followed 29% of respondents studied Graduation, 36.8% of respondents working as a Private Employees, 30.6% are the Govt. Employee, and 39.9% of respondents earned Rs.30,001-40,000 for month and 24% of respondents earned above Rs. 340,001-50,000 respectively, 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.

REFERENCES

1. Al-Hawari, M. and Ward, T. (2006). The Effect of Automated Service Quality on Australian Banks' Financial Performance and the Mediating Role of Customer Satisfaction. *Marketing Intelligence & Planning*, 24 (2), 127-147.
2. Bitner, M.J. (1990). Evaluating Service Encounters the Effect of Physical Surroundings and Employee Responses. *Journal of Marketing*, 54 (2), 69-82.
3. Brodie, R. J., Winklhofer, H., Coviello, N.E. and Johnston, W.J. (2007). Is E-Marketing Coming of Age? An Examination of the Penetration of E-marketing and Firm Performance. *Journal of Interactive Marketing*, 21 (1), 2-21.
4. Christopher, G., Mike, C., Visit, L. and Amy, W. (2006). A Logic Analysis of Electronic Banking in New-Zealand. *International Journal of Bank Marketing*, 24 (7), 475-493.
5. Dina, R., Allard, C.R. and Sandra, S. (2004). Comfort Your Online Customer: Quality, Trust, and Loyalty on the Internet. *Managing Service Quality*, 14(6), 446-456.

6. Grönroos, C. (1982). Strategic Management and Marketing in the Service Sector. *Marketing Science*, Cambridge.
7. Gupta, D. (1999). Internet Banking: Where Does India Stand? *Journal of Contemporary Management*, 2(1), 43-66.
8. Hair J., Anderson, R., Tatham, R. and Black, C. (1995). *Multivariate Data Analysis*, 4th ed., Prentice Hall, Englewood Cliffs, NJ.
9. Hallowell, R. (1996). The Relationships of Customer Satisfaction, Customer Loyalty and Profitability. *International Journal of Service Industries Management*, 7(4), 27-42.
10. Hurley, R. F. and Estelami, H. (1998). Alternative Indexes for Monitoring Customer Perceptions of Service Quality: A Comparative Evaluation in a Retail Context. *Journal of the*
11. Joseph, M., McClure, C. and Joseph, B. (1999). Service Quality in the Banking Sector: The Impact of Technology on Service Delivery. *International Journal of Bank Marketing*, 17(4), 182-191.
12. Jun, M. and Cai, S. (2001). The Key Determinants of Internet Banking Service Quality: A Content Analysis. *International Journal of Banking Marketing*, 19(7), 276-291.
13. Khan, M. S., Mahapatra, S. S. and Sreekumrah (2009). Service Quality Evaluation in Internet Banking: An Empirical Study in India. *International Journal of Indian Culture and Business Management*, 2(1), 30-46.
14. Lassar, W. M., Manolis C. and Winsor R. D. (2000). Service Quality Perspectives and Satisfaction in Private Banking. *Journal of Services Marketing*, 14(3), 244-271.
15. Lehtinen, U. and Lehtinen, J.R., (1982). Service Quality: A Study of Quality Dimensions. Working paper, Service Management Institute, Helsinki.
16. Malhotra, P. and Singh, B. (2006). The Impact of Internet Banking on Bank's Performance: The Indian Experience. *South Asian Journal of Management*, 13(4), 25-54.
17. Marketing Science Institute(MSI), Working Paper Series No.00115, Cambridge, MA, pp.149.
18. Mols, N.P. (2000). The Internet and Banks' Strategic Distribution Channel Decisions. *International Journal of Bank Marketing*. 17(6), 295-300.
19. Nargundkar, (2008). *Marketing Research*. Tata McGraw Hill India, New Delhi.
20. Parasuraman, A., Zeithamal, V.A., and Berry, L.L. (1988). SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*. 64(1), 12-37.
21. Pegu, R. (2000). Net-banking is fast becoming popular. *The Week*, 25 June.
22. Rafiu, O. S. and Salawu, M. K. (2007). The Emergence of Internet Banking in Nigeria: An Appraisal. *Information Technology Journal*, 6(4), 490-496.
23. Rakesh Dhar, Suman Ghalawat, Atul Dhingra," Framework of E-Banking and Factors Affecting
24. Rao, G. R. and Prathima, K. (2003). Internet Banking in India. *Mondaq Business Briefing*, April, 11.
25. Salawu, R. O and Mary Kehinde Salawu (2007). The Emergence of Internet Banking in Nigeria: An Appraisal. *Information Technology Journal*, 6(4), 490-496.
26. Shanmugan Joghee, " E-BANKING SERVICE QUALITY IN UAE: CUSTOMER PERSPECTIVE", *International Journal of Economics, Commerce and Management*, United Kingdom Vol. V, Issue 2, February 2017.
27. Siu, N. Y. M. and Mou, J. C. W., (2005). Measuring Service Quality in Internet Banking: The Case of Hong Kong. *Journal of International Consumer Marketing*, 17(4), 99-116.
28. Swatman, P. and Unnithan, C.R. (2001). E-banking Adaptation and Dot.Com Viability: A Comparison of Australian and Indian Experiences in the Banking Sector. Working Paper No. 14, School of Management Information Systems, Deakin University.
29. the Service Quality of Banks", ENVISION-Apeejay's Commerce & Management Journal.
30. Venkatraman, N. (2000). Five Steps to a Dot-Com Strategy: How to Find Your Footing on the Web. *Sloan Management Review*, 41(3), 15-28.

31. Yang, Z., Peterson, R.T. and Huang, L. (2001). Taking the Pulse of Internet Pharmacies. *Marketing Health Services*, 21(2), 4-10.
32. Zeithaml, V.A., Parasuraman, A. and Malhotra, A. (2000). A Conceptual Framework for Understanding E-Service Quality: Implications for Future Research and Managerial Practice,