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STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESES

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

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JOURNAL AND OTHER ARTICLES

 Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

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CUSTOMERS' PERCEPTION TOWARDS SERVICE QUALITY OF INTERNET BANKING SERVICES IN COIMBATORE DISTRICT, TAMIL NADU, INDIA

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ABSTRACT

Internet banking is a result of explored possibility to use internet application in one of the various domains of commerce. It is difficult to infer whether the internet tool has been applied for convenience of bankers or for the customers' convenience. But ultimately it contributes in increasing the efficiency of the banking operation as well providing more convenience to customers. For analyzing customer's perception towards Internet Banking (IB) service quality in Coimbatore district one hundred and twenty consumers using internet banking were selected randomly and they were personally interviewed. The gaps analysis results shows there are no gaps existed with respect to the attributes such as information content and text easy to understand, queries taken seriously, quick complaint resolving, appearance of the website, clarity of website, customer can rely on bank for not misusing their information and language of the website. However, Customer's were not satisfied with respect to the attributes such as Links are problem free, accurate and pages download quickly, accurate information about product and prompt services, bank provides updated technology regularly for I- banking, web page do not freeze after putting all the information, easy to approach and contact bank, easy to find policy and notice statement on the bank site, easy to use, bank provides financial security and confidentiality. So there is need to formulate strategy to solve these problems.

KEYWORDS

Factors influencing, Internet Banking, Service quality.

INTRODUCTION

The emergence of new private-sector banks, expansion by the foreign banks, the changing business model of the nationalized banks compounded by the financial sector reforms and the burgeoning middle class, have, over the last 10 years, completely transformed the way banks in India operate. Some of the world-renowned foreign banks who have historically had a presence in India also started to expand their business in India, particularly in the area of retail banking, where a burgeoning middle class of almost 200 million people offer an enormous business opportunity. Therefore, both businesses and the masses of India have been exposed to a variety of banking services at different levels. Internet banking is the term used for new age banking system. Internet banking is also called as online banking and it is an outgrowth of Personal Computer banking. Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages and purchasing financial instruments and certificates of deposits (Haque *et al.*, 2009). There are many advantages of online Banking. It is convenient, it isn't bound by operational timings, there are no geographical barriers and the services can be offered at a minuscule cost. Internet banking has experienced explosive growth and has transformed traditional practices in banking (Gonzalez *et al.*, 2008).

REVIEW OF LITERATURE

Broadie *et al.* (2007) predicted the Internet banking is leading to a paradigm shift in marketing practices resulting in high performance in the banking industry. Banking customers get satisfied with the system when it provides them maximum convenience and comfort while transacting with the bank. Internet enabled electronic system facilitate the operation to fetch these result. **Christopher** *et al.* (2006), opined that Internet banking has become an important channel to sell the products and services and is perceived to be necessity in order to stay profitable in successful. An in-depth analysis would help to understand that internet enabled electronic banking system differentiates from traditional banking operation through faster delivery of information from the customer and service provider. Additionally, it has to be noted that the banking operations does not transfer physical currencies instead it transfer the information about the value for currencies.

Yang et al. (2004) identified five online service quality dimensions (responsiveness, reliability, competence, access and security) and their relationships with the customer satisfaction. Agarwal and Gupta (2005) have attempted to develop a multilevel-multidimensional model, SERVQUAL (Service Quality) model of service

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quality. The results showed that service quality of foreign banks and new private banks was comparatively much better than those of government banks. The reason was that these banks operated in a selected market and offered selected services along with the fact that the customers were valued. Jayawardhena (2007) showed that service quality in e-banking could be measured using 21 parsimonious measures spread across five dimensions vz., access, website interface, trust, attention and credibility. Joseph et al., (2006) investigated the influence of internet on the delivery of banking services. They found six underlying dimensions of e-banking service quality such as convenience and accuracy, feedback and complaint management, efficiency, queue management, accessibility and customization.

Parasuraman et al. (1985) studied the measurement of service quality, and then explored its impact on customer satisfaction and firm performance. The principal measure of service quality attempted to measure the gap between customer expectations and perceived actual service performance in terms of five dimensions relating to product and process (namely reliability, responsiveness, assurance, empathy and tangibility). Of these dimensions, the first four related to the element of human interaction/intervention in the service delivery. Their inclusion had been validated by numerous studies which highlighted the importance of the customer interface in determining service quality.

IMPORTANCE OF THE STUDY

Customers have started perceiving the services of bank through internet as a prime attractive feature than any other prime product features of the bank. Customers have started evaluating the banks based on the convenience and comforts it provides to them. Bankers have started developing various product features and services using internet applications. **Sangaran** (2001) found that change is required in the attitude of bankers to adopt Internet banking. The banks have to develop a sound strategy before implementing Internet banking in order to compete in the global market place.

I-banking has also affected the customers' expectations as they prefer to deal with the banks that offer, efficient and innovative services. To face and survive in this cutting edge competition, the banks have to deliver better services to the customers because it is only a customer who can evaluate the quality of services .Hence the services quality has to meet the customer's specifications and expectations. The banks must know what type of services the customers expect to have and then accordingly serve them the products and services that fulfill their expectations. The banks should be ready to accept changes otherwise their survival will become difficult in the competitive world .Therefore ,there is a need to evaluate the customers perception regarding the internet banking services to improve the services if they are not up to their expectations.

Many Banks are providing internet banking services to their customers to increase customer turnover through delivering a wide range of value added products and services. In this regard, knowing the expectation and perception level of the customers on internet banking services provided by them would in turn help the banks to have thorough knowledge on their customers' needs.

OBJECTIVES OF THE STUDY

The broad objective of the study is to evaluate the service quality of internet banking services provided by bank from the customer's perspective. The specific objectives are;

- 1. To examine the perception of bank customers on the service quality of internet banking services; and
- 2. To identify the measures for improving service quality of net banking services.

RESEARCH METHODOLOGY

To collect the required information, an interview schedule was prepared based on the literature reviewed on the important attributes of service quality and in depth discussion with the users. A total of 26 items were generated representing all important aspects of service quality as well as attributes of internet users and need of customers. A total of 120 consumers using internet banking were selected randomly in Coimbatore district. The primary data were collected from the users who using internet banking by personal interview during 2010-11. Secondary data for the studies were collected from several published and unpublished sources. The data collected were analyzed by using statistical tools like percentage analysis, Garrett ranking and gaps analysis.

SERVQUAL METHOD (GAP ANALYSIS)

To analyze the service quality of internet banking a set of questions about the services of Internet Banking was developed based on the SERVQUAL instrument. The statement developed is given in Table. 1. The attributes of reliability, responsiveness, efficiency, user friendly, tangibles, accessibility and privacy represents quality of Internet Banking services.

	TABLE 1: SERVICES PROVIDED				
Attributes	Statements				
Reliability	Accuracy of information				
	Functionality of webpage				
	Links are problem free, accurate and pages download quickly				
	Information content and text easy to understand				
Responsiveness	Queries taken seriously				
	Quick complaint resolving				
	Accurate information about product and prompt services				
	Knowledge and skill of the contact person				
Efficiency	Bank site easy to navigate				
	Speed of login account is fast				
	Speed of logout account is fast				
	Easy to find policy and notice statement on the bank site				
Privacy/security	Customer can rely on bank for not misusing their information				
	Bank provides financial security and confidentiality.				
	Bank site secured for credit card information				
the second second	Bank site easy to navigate and simple to use				
Tangibles	Appearance of the website				
	Easy to use				
	Clarity of website				
User-friendly	Language of the website				
	Information about transaction and product				
	Personalization of the bank site for customer personal requirement				
	Bank authority care to listen and meet personal needs of customers.				
Accessibility	Bank site unrestricted to access to all financial information				
	Bank provides updated technology regularly for Internet banking				
	Web page do not freeze after putting all the information				
	Easy to approach and contact bank				

One of the aims of this study involves the use of SERVQUAL instrument in order to ascertain any actual or perceived gaps between customer expectation and satisfaction of the service offered. Service quality is analyzed considering the extent to which a service meets customers' needs or expectations.

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GARRETT RANKING TECHNIQUE

This technique was used regarding suggestion to make customers aware of internet banking. The sample respondents were asked to rank each factors and the data were analyzed. The Garrett's Ranking Technique was adopted by using the following formulae Percent Position = 100 (Rij-0.05)/Ni

Percent Position = 100 (RIJ-C

Where,

Rij = Rank given to i^{th} attribute by $j_{...}^{th}$ individual.

Ni = number of factors ranked by jth individual

By referring to the table given, the percent position estimated was converted into score for each factor and the score of various respondents was added and mean score value was calculated. The means scores values were arranged in a descending order. The factor to highest mean score was considered to be the most important.

RESULTS AND DISCUSSION

The consumer's wants and abilities changes with the age. Age is an important demographic variable to understand the needs of different types of the consumers.

	TABLE 2. AGE WISE DISTRIBUTION OF THE RESPONDENTS									
S.No	Age Group (years)	No of respondents	Percentage to total							
1.	<20	6	5.00							
2.	21-30	51	42.50							
3.	31-40	30	25.00							
4.	41-50	26	21.66							
5.	>50	7	5.84							
	Total	120	100.00							

Source – Primary Data

From the Table 2 it could be inferred that majority of the respondents (43 per cent) belonged to age group of 21- 30 years followed by age group of 31-40 years (25 per cent). Hence it could be concluded that majority of the respondents were young and middle aged persons.

FACTORS IMPORTANT IN ADOPTING INTERNET BANKING

Six different factors, which are likely to influence the adoption of Internet banking was analyzed and the results are presented in Table 3.

TABLE 3: FACTORS IMPORTANT IN ADOPTING INTERNET BANKING									
Factors	Least important	Less important	Neutral	Important	Very important	Mean	Rank		
Better access	0(0.00)	1(0.83)	10(8.33)	50(41.67)	59(49.17)	4.39	I		
Better price	0(0.00)	11(9.17)	26(21.60)	53(44.17)	30(25.00)	3.85	П		
Higher privacy	7(5.83)	28(23.33)	41(34.17)	32(26.66)	12(10.00)	3.11	ш		
Better service	1(0.87)	44(36.67)	40(33.33)	27(22.50)	8(6.67)	2.98	IV		
Marketing efforts	7(5.83)	46(38.33)	34(28.33)	34(28.33)	1(0.83)	2.78	v		
Recommendations	8(6.67)	47(39.17)	34(28.33)	27(22.50)	4(3.33)	2.77	VI		

(Figures in parentheses represent percentage to the total)

Source – Primary Data

According to the respondents the most important factor in starting to use Internet banking was better access to the services (convenience), followed by better price and higher privacy. Better service (i.e. preferring self service over office service) was also above the average importance.

SERVICE QUALITY GAP OF INTERNET BANKING

Customer satisfaction for the services is largely a function of perception and expectations of the services provided. If customer expects a certain level of service and service provided by the bankers fails to match the customer expectations, the service would be perceived as poor. Dissatisfaction with services provided largely stems from the difference between expectations and perception about what is actually provided. This is the basic premise for understanding the gaps that arises in customer service. In this study, the quality of service was measured with respect to eight dimensions namely reliability, responsiveness, accessibility, privacy/security, tangibles, efficiency, user-friendly, The 26 statements about service satisfaction of the customers and gaps are analyzed.

The gaps analysis of the every item of the internet banking service quality was studied by comparing the expectation mean score and the perception mean score of each of those items. If the gap is positive and high, then services provided did not meet the expectation of the customer, leading to dissatisfaction. If the gap is negative, the service provided was greater than the expectation of the customers; hence the customers were more satisfied. T-test was done to verify whether the gap is statistically significant or not. The results of gaps analysis of the respondents are shown in the Table 4.



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S.No	Statements	Expectation	Perception	Gap	T value				
		Mean score (E)	mean score (S)	(E-S)					
	Reliability								
1.	Information provided is accurate	3.74	4.00	-0.26	-2.61*				
2.	Functionality of webpage	3.13	4.21	-1.08	-11.05**				
3.	Links are problem free ,accurate and pages download quickly	4.16	2.53	1.63	14.01**				
4.	Information content and text easy to understand	3.85	4.36	-0.51	-1.13ns				
	Responsiveness	Responsiveness							
5.	Queries taken seriously	3.99	4.10	-0.11	-1.02ns				
6.	Quick complaint resolving	3.93	4.06	-0.13	-1.12ns				
7.	Accurate information about product and prompt services	4.27	3.81	0.46	3.75**				
8.	Knowledge and skill of the contact person	2.74	4.04	-1.30	-10.49**				
	Accessibility								
9.	Bank site unrestricted to access to all financial information	3.97	4.27	-0.30	-2.62**				
10.	Bank provides updated technology regularly for I- banking	3.98	2.82	1.16	10.67**				
11.	Web page do not freeze after putting all the information	4.28	2.95	1.33	11.30**				
12.	Easy to approach and contact bank	4.33	3.21	1.12	9.62**				
	Efficiency								
13.	Bank site easy to navigate and simple to use	4.03	4.28	-0.25	-2.57*				
14.	Speed of login account is fast	3.64	4.11	-0.47	-3.80**				
15.	Speed of logout account is fast	3.40	4.01	-1.08	-5.01**				
16.	Easy to find policy and notice statement on the bank site	4.21	3.08	1.13	10.58**				
	Tangibles								
17.	Appearance of the website	3.73	3.91	-0.18	-1.52ns				
18.	Easy to use	4.13	2.58	1.55	14.93**				
19.	Clarity of website	4.54	4.65	-0.11	-1.62ns				
	Privacy/security								
20.	Customer can rely on bank for not misusing their information	4.22	4.34	-0.12	-1.52ns				
21.	Bank provides financial security and confidentiality.	4.45	3.27	1.18	10.48**				
22.	Bank site secured for credit card information	4.23	2.70	1.53	14.59**				
	User-friendly								
23.	Language of the website	4.38	4.39	-0.01	-0.09ns				
24.	Information about transaction and product	3.74	4.10	-0.36	-3.59**				
25.	Personalization of the bank site for customer personal requirement	4.08	3.06	1.02	10.25**				
26.	Bank authority care to listen and meet personal needs of customers.	4.39	2.87	1.52	13.66**				

(NS- Non significant, **- significant at1per cent level, * - significant at 5 per cent level)

Source – Primary Data

From the Table 4, it could be noted that among the 26 items, 7 items namely Information content and text easy to understand, Queries taken seriously, Quick complaint resolving, Appearance of the website, Clarity of website, Language of the website, Customer can rely on bank for not misusing their information were not statistically significant and there was no service quality gaps existing in above items. Remaining 19 items were significant and implied that a gaps existed in these attributes.

The gap analysis results showed that the perception and the expectation of the respondents were perfectly matching and there exist no gaps with respect to the attributes such as information content and text easy to understand, queries taken seriously, quick complaint resolving, appearance of the website, clarity of website, customer can rely on bank for not misusing their information and language of the website.

The customers were over satisfied than their expectation with respect to the attributes such as information provided is accurate, functionality of webpage, knowledge and skill of the contact person, bank site unrestricted to access to all financial information, bank site easy to navigate and simple to use, speed of login account is fast, speed of logout account is fast and information about transaction and product.

The customers were not satisfied with respect to the attributes such as links are problem free ,accurate and pages download quickly, accurate information about product and prompt services, bank provides updated technology regularly for Internet banking, web page do not freeze after putting all the information, easy to approach and contact bank, easy to find policy and notice statement on the bank site, easy to use, bank provides financial security and confidentiality, bank site secured for credit card information, personalization of the bank site for customer personal requirement, bank authority care to listen and meet personal needs of customers and there exist large gap to be bridged by the firm here.

Hence the strengths of the banks in Internet Banking services are information content and text easy to understand, queries taken seriously, quick complaint resolving, appearance of the website, clarity of website, customer can rely on bank for not misusing their information and language of the website. On the other hand the weaknesses lies in the attributes such as problem free links, easy to use, bank site secured for credit card information, bank authority care to listen and meet personal needs of customers.

RESPONSE REGARDING SUGGESTION TO MAKE THE CUSTOMERS AWARE OF INTERNET BANKING

The respondents were asked about suggestion regarding how to make the customers aware of internet banking services and the details are presented in the Table 5.

S.	Suggestions	Least	Less	Neutral	Important	Very	Mean	Rank
No		important	important			important	Score	
1.	Information/demo at the counter	28	27	31	19	15	394	1
2.	Demo –fair regarding I- banking	39	20	11	23	27	381	11
3.	Personal contact programs	19	31	28	11	31	356	111
4.	Conduct more training programs for bank customers	23	19	23	28	27	343	IV
5.	More advertisement	11	23	27	39	20	326	V

Source – Primary Data

From Table 5. it was found that Information/demo at the counter is the most preferred solution to make them aware of internet banking, followed by the demo - fairs on Internet banking personal contact programs. Therefore, one can conclude that the bank make personal contacts with demo at the counter and any other information should make more and more customers aware of the internet banking services.

SUGGESTIONS

To sum up, the banks need to redesign their Internet banking business strategies to incorporate specific plans to promote their bank and its services. Bank has to simplify the text of the information as much as possible so that it can be easily understood by less educated people too. Customers have to provide separate customer mail id so there is no need to visit the banks personally in case of any problem/complaints and through their mail itself they can file up their complaints and needs. Bank has to provide accurate and problem free links so that customers can easily download the files. This is possible by removing the unwanted file from the web page. Then distinguish the activities in main and sub main activities. Banks have to use improved and updated technologies to reduce fraudulent and hacking. They can use online fingerprint identification or digital signature technologies to reduce fraudulence regarding cash transaction through customers' accounts. Banks have to provide information /demo at the counter to the customer for creating awareness of internet banking. They can also conduct demo fares, personal contact programs and conducting training programs for bank customers on I- banking. Through demo fairs bankers have to give assurance that customer money is safe with them. Banks have to update notice (regarding any information/scheme/policy/ changed rate etc.) in advance and they also have to highlight those notices on web page so that customer can easily go through it. Bank has to make people aware to avoid using online banking in public places so that they can avoid MITM like frauds.

CONCLUSION

The younger the age group, the use of I-Banking services are more because the younger are more technology savvy and prefer to use technological products that saves more of their time .While the older generation prefer traditional banking because they don't trust Internet Banking. Better access, price of Internet Banking and higher privacy of customer account information influencing more in adaptation of Internet Banking Services. There exist no gaps with respect to the attributes such as information content and text easy to understand, queries taken seriously, quick complaint resolving, appearance of the website, clarity of website, customer can rely on bank for not misusing their information and language of the website.

The customers were over satisfied than their expectation with respect to the attributes such as information provided is accurate, functionality of webpage, knowledge and skill of the contact person, bank site unrestricted to access to all financial information, bank site easy to navigate and simple to use, speed of login account is fast, speed of logout account is fast and information about transaction and product.

Customer were not satisfied with respect to the attributes such as Links are problem free, accurate and pages download quickly, accurate information about product and prompt services, bank provides updated technology regularly for I- banking, web page do not freeze after putting all the information, easy to approach and contact bank, easy to find policy and notice statement on the bank site, easy to use, bank provides financial security and confidentiality, bank site secured for credit card information, personalization of the bank site for customer personal requirement, bank authority care to listen and meet personal needs of customers so there is need to formulate strategy to solve these problems.

REFERENCES

- 1. Agarwal, N. and Gupta, M. (2005), "Dissemination of Customer Oriented Strategy to Customer Contact Service Employees: Model in Indian Settings", South Asian Journal of Management, Vol.1, No.1, pp. 58-78.
- 2. Brodie, H. Winklhofer, K. (2007), "Is E-marketing Coming of Age? An Examination of the Penetration of e-marketing and Firm Performance", International Journal of Market Research, Vol.21, No.1, pp. 2-21.
- 3. Christopher, G. C.Mike, L. Visit and W.Amy (2006), "A Logit Analysis of Electronic Banking in New Zealand", International Journal of Bank Marketing, Vol.24, No, pp. 38-43.
- 4. Gonzalez, M.E. (2008), "An Alternative Approach in Service Quality: An E-Banking Case Study", Journal of Quality Management, Vol.15, No.1, pp. 41-48.
- 5. Haque. A, Lajjik M, Isfaac, P. (2009), "Issues of E-Banking Transaction: An Empirical Investigation on Malaysian Customers Perception", Journal of applied Sciences, Vol.29, No.2, pp. 24-32.
- 6. Jayawardhena, C. and Foley, P. (2007), "Changes in Banking Sector The Case of Internet Banking in UK", Journal of Internet Research: Networking and Policy, Vol.10, No.1,pp. 19-30.
- 7. Joseph, M., McClure, C. and Joseph, B. (2006), "Service Quality in Banking Sector: the Impact of Technology on Service Delivery", International Journal of Bank Marketing, Vol.24, No.4, pp. 82–91.
- 8. Parasuraman, A., Zeithal, V.A. and Berry, L.L. (1985), "A Conceptual Model of Service Quality and its Implication", Journal of Marketing, Vol.9, No.4, pp. 41– 50.
- 9. Parasuraman, A., Zeithal, V.A. and Berry, L.L. (1988), "A Multiple Item Scale For Measuring Consumer Perception of Service Quality", Journal of Retailing, Vol.64, No.2, pp. 28–37.
- 10. Sangaran, S. (2001), "Attitude towards Internet Banking: a Study of Influential Factors in Malaysia", International Journal of Services Technology and Management, Vol.8, No.1, pp. 697-705.
- 11. Yang, Z., Jun, M. and Peterson, R.T. (2004), "Measuring Customer Perceived Online Service Quality", International Journal of Operations & Production Management, Vol. 24, No.11, pp. 149–159.



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