

A STUDY ON TECHNOLOGY AND SERVICE QUALITY OF BANKING SECTOR

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ABSTRACT

Technology-based self-service has greatly changed the way that service firms and consumers interact, and are raising a host of research and practice issues relating to the delivery of e-service which has become increasingly important not only in determining the success or failure of electronic commerce, but also in providing consumers with a superior experience with respect to the interactive flow of information. The use of technology in the delivery of banking services is becoming increasingly important as it is being employed to reduce costs and eliminate uncertainties.

This research investigates the role that technology plays in banks and its impact on the delivery of perceived service quality. A sample of 201 electronic banking customers was taken and analyzed. The data collected was analyzed by use of frequency, percentage, ANOVA and correlation analysis, results indicated that consumers have perceptual problems with some aspects of electronic banking. Some strategic implications are discussed. Secure services as the most important dimension, followed by convenient location of ATM, efficiency (not need to wait), ability to set up accounts so that the customer can perform transactions immediately, accuracy of records, user friendly, and ease of use, complaint satisfaction, accurate transactions and operation in 24 hours.

Key Words: Service Quality, Technology, Customer Satisfaction and Loyalty

INTRODUCTION

Recent advances in technology have created a surge in “technology-based self- service”. Such developments are changing the way that service firms and consumers interact, and are raising a host of research and practice issues relating to the delivery of e-service. E- Service is becoming increasingly important not only in determining the success or failure of electronic commerce, but also in providing consumers with a superior experience with respect to the interactive flow of information.

The financial system around the world has been facing a lot of changes. Mergers and acquisitions, deregulation, increased competition, changing information systems and technology, and human resources with different skills are just a few ‘forces’ that are influencing the banking business.

Technology is one leading ‘driving force’ nowadays, in different businesses. It is therefore important to research the investments in technology and their impact in the bank business. It is particularly important to assess how technology is reducing the ‘labour intensive activities, reducing service and processing cost, increasing service levels, and improving the productivity and competitiveness of the Indian financial sector. Technology is made up of discoveries in sciences, product development and improvement in machinery, process, and automation and information technology. It also includes a combination of knowledge, information and ideas. The literature provides an extensive account of the relationships between service quality, customer satisfaction, and financial performance where face-to-face interaction between customer and employee is the only focus. Recently, however, technology has had a remarkable influence on the growth of service delivery options (Dabholkar and Bagozzi, 2002).

Dabholkar (1994) claims that when the customer is in direct contact with the technology there is greater control such as with Internet banking. However, if there is an absence of direct contact, such as with telephone banking (since the technology itself is not visible to customers who are able only to

press numbers on their telephone keypad) it is assumed that there is less control perceived by the customer during this transaction. Bateson (1984) has conducted a number of studies on the need for consumers to have control during service encounters. When a consumer freely chooses to use technology as a form of service delivery the impact is high in terms of quality attributes. Some of the quality factors that are highly important to consumers are efficiency and speed (Bateson, 2000).

Service quality can be seen as the extent to which a service meets customer's needs and expectations (Lewis and Mitchell, 1990). Service quality can thus be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman, 1985).

Service quality has been recognized as having the potential to deliver strategic benefits, such as improved customer retention rates, whilst also enhancing operational efficiency and profitability (Cronin, 2003; Rust, 2001; Zeithaml, 2000). Oliveira (2002) suggest that e-service quality is amongst a firm's competitive capabilities that lead to business performance, Roth and Menor (2003) see issues in implementing service technology and eservices as critical in service operations, and AlHawari and Ward (2006) demonstrates that service quality impacts on customer satisfaction which in turn affects the financial performance of banks.

THEORETICAL FRAMEWORK

(i) Technology and Service Quality

The proliferation of, and rapid advances in, technology-based systems, especially those related to the internet, are leading to fundamental changes in how companies interact with customers (Parasuraman and Zinkhan, 2002; Bauer, 2005). This trend is well established in the service industry, where service providers are increasingly urged to invest in technology to better secure their future in the electronic age (Zhang and Prybutok, 2005; Bauer et al., 2005).

The challenging business environment in the financial service market has also resulted in more pressure on banks to develop and utilize alternative delivery channels, with a view to attracting more customers, improving customers' perceptions, and encouraging loyalty. (Bauer et al., 2005; Lee and Lin, 2005; Parasuraman, 2005). Among the more recent delivery channels introduced is electronic banking. In its simplest form, electronic banking means the provision of information about the bank and its products via a page on the internet. Davis et al. (1989) however, defines the term as the provision of information and/or services by a bank to its customers via computer, telephone or television. A more developed service, in Daniel's (1999) view, is one that provides the customers with the opportunity to gain access to their accounts execute transactions or buy products online or via other electronic means such as TV, telephone or Automated Teller Machines (ATM).

The installation of customer friendly technology (such as menu driven automated teller machines, telephone and Internet banking services) as a means of delivering traditional banking services has become commonplace in recent years as a way of maintaining customer loyalty and increasing market share. Traditional brick and mortar banks are using technology to meet the competitive challenge posed by online banks, as well as a method of reducing the cost of providing services that were once delivered exclusively by bank personnel (Joseph et al., 2003). Managers in virtually all industries understand that providing quality customer service is a key strategic component in firm profitability. The importance of service delivery and its impact on improving satisfaction and retention of customers, improving sales and market share, and improving corporate image cannot be overstated (Lewis et al., 1994). As with most other service providers, banks have moved quickly to invest in technology as a way of controlling costs, attracting new customers, and meeting the convenience and technical innovation expectations of their existing customers.

Services, by definition, are intangible and easily duplicated. They can be divided into high-touch or high-tech services. High-touch services are mostly dependent on people in the service process producing the service, whereas high-tech services are predominantly based on the use of automated systems, information technology and other types of physical resources. However, one should always

remember that high-touch also includes physical resources and technology-based systems that have to be managed and integrated into the service process in a customer-oriented fashion (Gronroos, 2001). Thus, in this study, technology banking services include both high-tech and high-touch services. For example, high-tech services include Internet/Telephone/Short Messaging Service (SMS), ATM machines whereas high-touch services consist of instructions and personnel assistance in using the services.

Quality is differentiable and stem from the expectations of customers. Hence, it is necessary to identify and prioritize expectations for service and incorporate these expectations into a process for improving service quality. Implementing and evaluating service quality is a very complex process. Two aspects need to be taken into consideration when evaluating service quality: content and delivery. Customers may be in the best position to evaluate the quality of delivery, while the service providers are the best judges of the content of the message. Though there are a number of different aspects of services involved, this study focuses on only one: the perceptions of technology users as to the quality of the services.

Degree of intangibility has been proposed as a means of distinguishing between products and services (Levitt, 1981) and Darby and Karni (1973) and Zeithaml (1981) highlight the fact that degree of tangibility has implications for ease of service or product quality evaluation. Onkvisit and Shaw (1991) feel, however, that the significance of intangibility is over-emphasized and that the service provider's offer is their productive capacity. As services are produced and consumed simultaneously, customers are present and may take part in the delivery process. They may, therefore, affect or shape the performance and quality of the service, in some cases causing disruption and increased waiting time and consequently lower customer satisfaction (Zeithaml and Bitner, 1996).

(ii) **Technology in the Banking Industry**

Technological developments have removed repetitive, time consuming tasks, reduced human error and extended access to banking related facilities. Technology also provides customer information that it would be much more expensive to provide on a person-to-person basis. Telephone banking facilities allow non-cash transactions to be carried out, which would have required a visit to a branch earlier. Similarly, Internet banking allows customers to perform tasks at a time and in a place convenient to them. Dabholkar (1996) suggests that direct contact with such technology also gives customers a feeling of greater control. Smith (1987) is of the opinion that technology was introduced in banks originally to reduce costs but that, by dividing front and back office operations, technology can be targeted to enhance different functions. The dilemma still remains, however, as to how to maintain a satisfactory number of face-to-face interactions with the customers.

Continuous improvements in the information technology have enabled banks to provide their services in a more direct manner to adjust their products better to the clientele's needs. Although banking has always been an information business, until now information technology was mainly used to automate administrative processes. The shift from automating to information-using information and its flow to inform managers provides opportunities to track a customer's behavior and respond at the right time. By making effective use of these.

Opportunities, banks are able to transfer a great deal of transactions from branch offices to a call-center. Accessibility has been extended through technological developments as well as the introduction of new service delivery methods that allow consumers to do business with service firms from the home and office. Electronic banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick and-mortar institution. The following terms all refer to one form or another of electronic banking: personal computer (PC) banking, Internet banking, virtual banking, online banking, home banking, remote electronic banking, and phone banking. PC banking and Internet or online banking are the most frequently used designations. It should be noted, however, that the terms used to describe the various types of electronic banking are often used interchangeably..

SCOPE OF THE STUDY

The study will provide some useful insights for managers of banking services. The service quality dimensions identified in this study will be related to technology based banking. This is useful for the service manager of a bank because any manager can measure the perceptions of service quality on these dimensions identified to get a broad indication of the bank's technology related service quality performance. The study mainly concentrates towards technology based service quality dimension and its impact towards customer satisfaction and customer loyalty.

STATEMENT OF THE PROBLEM

Consumer confidence has been adversely affected as a result of the global economic slowdown and turbulence in the financial markets all across the world. In this current business scenario, the banking industry has become highly competitive. Information technology (IT) is extensively used in this competitive environment to deliver banking services to the consumers. In fact, rise of information technologies and the internet in particular, have changed the consumption process of retail banking as human-human interactions in service delivery is becoming increasingly redundant. Traditional banking or branch banking is increasingly being replaced by the technology-based banking (e.g. usage of ATMs, internet and phone banking). Hence human - human interactions or face-to-face interactions between customers and bank employees are being replaced by interaction of customers with technology. This research aims to identify the generic service quality dimensions of technology-based banking and to examine the effect of these dimensions on customer satisfaction and customer loyalty.

OBJECTIVES OF THE STUDY

1. To analyze the significant relationship between personal profiles and technology based service quality.
2. To identify the generic technology based service quality in banking.
3. To identify the level of customer satisfaction towards technology based service quality in banking.
4. To measure the customer loyalty towards Bank.

Hypothesis

1. There is no significant relationship between personal profiles and technology based service quality in State Bank of India.
2. The level of customer satisfaction towards technology based service quality in banking is very high.

METHODOLOGY

In the present study, both survey method and descriptive design method are adopted in order to study technology based service quality dimensions in leading public banks in Tiruchirappalli. The study is descriptive in nature. The customers who were more than three years in the leading Public Sector Banks in Tiruchirappalli were considered as the population for the study. The customer's database like email id and contact number were collected. The structured questionnaire framed was send to all customers through web and asked them to return through mail. The questionnaire which was fully filled was considered for the study. The sample for the study was 201 by adopting purposive sampling technique.

Both primary and secondary data were considered for the study. Primary data was collected with the help of questionnaire. The data collection tool questionnaire consists of four parts. The first part consists of personal profiles of the respondents; the second part consists of technology based generic service quality dimensions, and the third part consists of questions related to customer satisfaction and the final fourth part consists of questions related to measure customer loyalty towards bank. The secondary data were collected from journals, books, magazines and Bank URLs etc.

The collected data was tabulated; organized and graphical representations were made. To analyze the hypothesis framed statistical tools like ANOVA and Correlation were used at appropriate

place with the help of statistical package SPSS 18. (Statistical packages for social science).

LIMITATIONS OF THE STUDY

1. As the questionnaire was done thorough internet it lacks personal interviewing and as a result of which the respondents may not have given true responses.
2. Only leading public sector bank was considered for the study.

ANALYSIS AND INTERPRETATION

Hypothesis

There is no significant relationship between Age and dimensions of technology based service quality, Customer Satisfaction, and Customer Loyalty in Banking.

Analyzing variable	Dimensions	Sources of Variations	Sum of Squares	df	Mean Square	F	Sig.
Age	Service Quality	Between Groups	1.164	4	.291	.608	.658
		Within Groups	33.502	70	.479		
		Total	34.667	74			
	Customer Satisfaction	Between Groups	.789	4	.197	.256	.905
		Within Groups	53.931	70	.770		
		Total	54.720	74			
	Customer Loyalty	Between Groups	2.122	4	.531	1.139	.345
		Within Groups	32.598	70	.466		
		Total	34.720	74			

From the above table it is inferred that age is considered as analyzing variable with the dimensions of service quality, customer satisfaction and customer loyalty to find out the significant relation. Age has no significant relationship with the dimensions of technology based service quality in Banks.

Hypothesis

There is no significant relationship between Income and dimensions of technology based service quality, Customer Satisfaction, and Customer Loyalty in Banking

Analyzing variable	Dimensions	Sources of Variations	Sum of Squares	df	Mean Square	F	Sig.
Income	Service Quality	Between Groups	.172	2	.086	.180	.836
		Within Groups	34.494	72	.479		
		Total	34.667	74			
	Customer Satisfaction	Between Groups	1.653	2	.827	1.122	.331
		Within Groups	53.067	72	.737		
		Total	54.720	74			
	Customer Loyalty	Between Groups	2.965	2	1.483	3.362	.040
		Within Groups	31.755	72	.441		
		Total	34.720	74			

From the above table it is inferred that income is considered as analyzing variable with the dimensions of service quality, customer satisfaction and customer loyalty to find out the significant relation. Income has no significant relationship with the dimensions (Service quality and Customer satisfaction) of technology based service quality in Banks. Income is found to have significant relationship with customer loyalty.

Identifying Relationship among Service Quality, Customer Satisfaction and Customer Loyalty

		Service Quality	Customer Satisfaction	Customer Loyalty
Service Quality	Pearson Correlation	1	.569**	.640**
	Sig. (2-tailed)		.000	.000
	N	201	201	201
Customer Satisfaction	Pearson Correlation	.569**	1	.557**
	Sig. (2-tailed)	.000		.000
	N	201	201	201
Customer Loyalty	Pearson Correlation	.640**	.557**	1
	Sig. (2-tailed)	.000	.000	
	N	201	201	201

** . Correlation is significant at the 0.01 level (2-tailed).

The above correlations table shows the inter correlation between the dimensions of technology based service quality in banking sector. The dimensions are service quality, customer satisfaction and customer loyalty. All the dimensions are highly significant (.000) level of significance with each other and positively correlated with each other.

FINDINGS SUGGESTIONS AND CONCLUSION

(i) FINDINGS

- [1] 80% of the respondents were Male.
- [2] 36% of the respondents were under the age group of 36-40.
- [3] 75% of the respondents were married.
- [4] 39% of the respondents were Professional.
- [5] 44% of the respondents belong to monthly income of Rs.20001 to Rs.30000.
- [6] 37% of the respondents are the customers in their bank more than 3 years.
- [7] 30% of the respondents are customers who are stock trading service utilizer.
- [8] 42% of the respondents are customers strongly agree that the technology provided by the bank is easy and user friendly.
- [9] 37% of the respondents are customers are moderate that the technology provided by the bank works accurately and is error-free.
- [10] 42% of the respondents agree that the banks technology is reliable and safe.
- [11] 38% of the respondents are moderate that the risk associated with the bank's technology is low.
- [12] 33% majority of the respondents are moderate that the bank's technology maintains secrecy.
- [13] 38% of the respondents are moderate that the personal information exchanged while using technology is not misused by bank.
- [14] 41% of the respondents are moderate that the bank's technology provides the precise information.
- [15] 47% of the respondents are moderate that the bank's technology provides the sufficient information.
- [16] 39% of the respondents are agree and also moderate that the bank's technology provides the reports that needed.
- [17] 44% of the respondents agree that the bank's technology is accessible beyond regular business hours.
- [18] 48% of the respondents are moderate that the bank's technology gives more freedom of mobility.
- [19] 51% of the respondents are moderate that the bank's technology is convenient to use for interacting with branch employees.
- [20] 33% of the respondents agree that the bank's technology is accessible beyond regular business hours.
- [21] 46% of the respondents are moderate that the bank's provides proper customer service.
- [22] 44% of the respondents are moderate that the bank's customer service offered proper explanations.

- [23] 43% of the respondents agree that the bank's customer service representative's offer personalized information.
- [24] 39% of the respondents are moderate that the bank's customer service people are sympathetic and reassuring.
- [25] 35% of the respondents agree that the bank's employees are knowledgeable enough to resolve the problems.
- [26] 29% of the respondents agree that that there is overall satisfaction with the bank.

(ii) SUGGESTIONS

- [1] The dimensions identified in this study are generic in nature these can be adopted by the service managers to measure the perceptions of customers whenever a new form of technology is introduced in the banking services sector
- [2] The dimensions can be used to track the relative performance of a bank with respect to their competitors over a period of time.
- [3] The dimensions can also be used to segment and profile the customers based on their perceptions about service quality and hence targeted communication can be designed to educate them on technology usage.
- [4] Fair understanding of the impact of these dimensions on customer satisfaction and loyalty can help the service managers of banks to formulate proper strategies to instill customer confidence.
- [5] Service managers need to focus on making their delivery channels reliable and easy to use so that customers feel confident in using them repeatedly and hold positive usage experience.
- [6] Banks need to resolve any problems faced by customers adequately, especially in the scenario of technology frustrating the customers at interaction interfaces.

CONCLUSION

The paradigm shift from traditional branch banking to electronic banking, the newly emerged service delivery channels and rapidly increasing penetration rates of online banking are the motivators of this study. Technology has become an increasingly vital element in the competitive landscape of the financial services industry.

Determine the parameters of the customers "zone of tolerance". This is important because managers need to know at what point customers cease to be satisfied with the core service they are receiving. Due to resource restrictions, in some instances it is not possible for institutions to provide everything that customers want. Knowledge of the zone of tolerance allows Banks to allocate resources accordingly. Ascertain which will be the determinants of service quality based on the different types of technology. Another area of further research can be done by comparing public and private sectors banks, which will provide insights on the evaluation of technology and its impact towards service quality. This is most important issue due to the global competitive advantage in which Banks operates.

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