

Banking Technology and Service Quality: Evidence from Private Sector Banks in Kerala

Jacob Joju, Manoj P. K.



Abstract– Rapid strides in Information and Communication Technology (ICT), is fast penetrating into all aspects of commercial banking. On the one hand ICT enables the banks to provide their customers with ‘As you like it’ products. On the other hand customers are becoming discerning day by day. Banks vie with each other in providing newer products day by day on attractive terms and conditions. Switching costs being low it is difficult for banks to retain their customers. Customer service has become vital today, both for retaining the customers and for attracting new ones. In the aforesaid situation, this study attempts to analyze the significance of the five dimensions of the SERVQUAL model in providing products and services by banks, identify the dimension that most significantly influence the service quality, study as to how the service quality perceptions of males and females differ and also how perceptions differ across rural and urban customers. Using the outcomes of the analysis, suggestions are made to enable more effective delivery of banking services for enhanced customer satisfaction.

Keyword: ICT, E-Banking, Fin Tech, Service Quality.

I. INTRODUCTION

As globalization pressures are sweeping across the world including India, there is intense competition in the banking sector and the same is growing day by day. Commercial banks growingly adopt the advances in ICT (Information and Communication Technology) for rendering enhanced customer service, availing cost savings etc. On the one hand, ICT enables banks to offer tailor-made and ‘As you like it’ products through an array of delivery channels. It offers the ‘anytime, anywhere, any communication medium’ benefit. On the other hand, modern customers are very discerning and are increasingly prone towards switching banks in search of better products and services. Every bank comes up with new and innovative products and services with the help of ICT on a constant basis. The very survival of banks depends on their customer service, given the low switching costs. Superior customer service has become vital not only for retaining customers but also for attracting new ones.

II. SIGNIFICANCE OF THE STUDY

In today’s business satisfaction of customers and their continued patronage is of vital significance. Only then the competitiveness of business can be ensured on a constant basis. Customer-centricity has become the basis for business strategies in respect of service industries like banking. So, banks must clearly define their customers; and identify the customer groups that fetch better returns and also factors that make them happy, and enhance their loyalty. In tune with exponential growth of bank branches and customers, range of bank products and services too grow fast. Today’s customers often switch from one bank to another if they are given more attractive services and products, switching costs being declining very fast. Hence, banks are experiencing difficulty in attracting new customers and retaining their present customers. In the ongoing globalized era, India too facing this global trend. Today, Financial Technologies (‘Fin Tech’ in short) are growingly being used by banks for leveraging the huge potential of ICT in the field of financial services. Only banks having Fin Tech advantage can satisfy the highly discerning customers in this digital era. Fin Tech acts as an enabler for high quality banking products and services at lower operating costs. This situation points to the need for a systematic study of customer preferences towards service quality. The five dimensions as per the SERVQUAL model have been selected here for this purpose. Customers are selected from among the Kerala-based OPBs (Old Private sector Banks), because Kerala is a state in India with very high achievements in the fields of literacy, education, banking intensity, internet penetration etc.

III. LITERATURE REVIEW AND RESEARCH GAP

Though Peter Drucker remarks that business exists to create a customer, in practice businesses find it difficult to locate the fit between business operations and needs of customers. This is because one off promotions are used by businesses to attract customers, and do not take any strategic steps for retaining customers. Here, CRM comes in handy and by adopting it businesses can garner higher share of the customer data. It symbolizes the integration of relationship marketing with the state-of-the-art ICT tools and practices. World over CRM is fast becoming a valuable management tool. Levesque (1996) [7] in his study has sought to confirm as well as reinforce the truth that if customer service happens to be unsatisfactory, it leads to fall in customer satisfaction, and hence their interest in recommending the service to others. This situation results in rise in their switching behavior.

Manuscript published on November 30, 2019.

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In one of the pioneering papers on CRM experience of corporates in *Harvard Business Review*, “Avoid the Four Perils of CRM”, Reichheld, F. F., Scheffer, P. & Rigby, D. K. (2002) [16] have warned about four possible perils that one need to be vigilant about while implementing any CRM initiative viz. (i) Implementing CRM before creating a CRM strategy, (ii) Rolling out CRM before changing your organization to match, (iii) Assuming that more CRM technology is better, (iv) Stalking, not wooing customers. A macro level study on retail banking in India by Manoj P. K. (2003) [8] has discussed the potential of retail credit in India, especially housing loans, its capacity to bring about economic growth of nations, and suggested strategies for the successful conduct of their retail portfolio.

Linkage effect and its positive effect in increasing economic activities, the need for promotion of retail loans particularly in recession times etc, are discussed. Ten strategies for promotion of retail banking products have been suggested. The first and foremost strategy is adoption of advanced technology. Some others are related to technology (more delivery channels and customer touch points, enterprise CRM etc). The need for ‘human touch’ (human factor) is specially pointed out. Ledingham, D. & Rigby, D. K. (2004) [6] in their paper, “CRM Done Right” in *Harvard Business Review*, have pointed out that there has been rapid increase in the number of executives supporting CRM as it increased drastically to 82 per cent in 2003 from just 35 per cent in 2000. A research paper on bank marketing by Manoj P K (2006) [9], has pointed out relevance of marketing the banking products and services aggressively by the respective banks, for their survival and growth in the ongoing reforms era. Strategies for effective bank marketing in the Indian context are suggested. In a research paper by Manoj P K (2010) [12], the author has studied as to how ICT influences the operational efficiency and risk management capability of private sector banks. The author has observed that technological change reduces the Net Interest Margin (NIM) of banks but enhances the Non-Interest Margin (NOM). Hence, investment in technology for upgrading technology has been recommended for enhanced profitability through higher NOM. In another research paper by Manoj P K (2010) [15], the author has pointed out that NOM significantly influences profitability. So, higher investment in ICT is suggested for enhanced NOM and profitability of banks. Neeraja James and Manoj P. K (2014) [14] in the research article ‘Relevance of E-Banking in the Rural Area – An Empirical Investigation’ have analyzed the significance of E-banking services with reference to a typical rural area in Kerala and have suggested steps for greater coverage of rural areas by banks. A study by William George A. J and Manoj P K (2013) [19], “Customer Relationship Management in Banks: A Comparative Study of Public and Private Sector Banks in Kerala” observe the vital need for customer relationship management (CRM) with special reference to the OPBs (Old Private sector Banks) registered in Kerala state, because of the growing competition in the banking industry. The authors point out that Kerala-based OPBs (or KOPBs) are much advanced in respect of the adoption of CRM than their counterparts in the public sector, or the so called Public Sector Banks (PSBs) – the Government-owned banks. A field-based study relating to e-CRM in banks jointly done by Manoj P K, Jacob Joju & Vasantha (2014) [10] viz. “Impact

of E-CRM on Commercial Banking: An Empirical Investigation with Reference to Private Sector Banks in Kerala” in *International Journal of Applied Financial Services & Marketing Perspectives* has noted that most customers of the banks in the Private sector have availed services like CRM and such other high-tech, ICT-based banking services. Most customers and bank staff too prefer such services, and also efforts towards marketing of banks. A field-based and comparative study relating to e-CRM done jointly by Jacob Joju, Vasantha S., & Manoj P. K. (2015) [4], “E-CRM: A Perspective of Urban and Rural Banks in Kerala” in *International Journal of Recent Advances in Multidisciplinary Research*, has compared the acceptance of e-CRM between urban and rural banks. It has been noted that e-CRM is more acceptable by the urban customers, and that rural customers have more inclination to ‘human factor’ in services than their urban counterparts. An empirical study by Jacob Joju, Vasantha S., & Manoj P. K (2017) [5], “Financial Technology and Service Quality in Banks: Some Empirical Evidence from the Old Private Sector Banks Based in Kerala, India” in *International Journal of Applied Business and Economic Research*, the authors have analyzed the linkage between service quality and delivery gap and have suggested strategies for the enhanced performance of the four banks under their study. In another recent paper by Shih, C. (2016) [18], “Customer Relationship Automation is the New CRM” in *Harvard Business Review*, the author has observed the future of CRM lies in automation and digitization and hence saving time required for manual data entry, refining data etc. In a research paper by Manoj P. K (2016)[11], “Bank Marketing in India in the Current ICT Era: Strategies for Effective Promotion of Bank Products” in *International Journal of Advance Research in Computer Science and Management Studies* the need for ICT adoption for effective delivery of bank products is pointed out. Of the six strategies suggested for bank marketing, the sixth strategy is about the effective use of e-CRM. In a recent research article by Jacob Joju, Vasantha S., & Manoj P. K. (2017) [3], “Electronic CRM and ICT-Based Banking Services: An Empirical Study of the Attitude of Customers in Kerala, India” in *International Journal of Economic Research*, the authors have studied the attitude of customers towards e-CRM and have noted the positive attitude. The need for staff training for enabling better customer service, providing of more service channels etc. has been noted. Though there are many studies on service quality including CRM, those on service quality dimensions using scientific models like SERVQUAL are scarce. So, this study seeks to bridge the above research gap and looks into service quality of Kerala-based Old Private sector Banks (KOPBs).

IV. OBJECTIVES OF THE STUDY

- 1) To study the service quality in Old Private sector Banks (OPBs) in Kerala using SERVQUAL model;
- 2) To identify the dimension that most significantly influence service quality of OPBs in Kerala (KOPBs);
- 3) To study the difference in service quality perceptions among the bank customers based on their gender and also to test the significance of such differences, if any;

- 4) To suggest strategies for customer satisfaction and hence competitiveness of banks through effective use of ICT-based bank products, based on the findings of the present study.

V. MATERIALS AND METHODS

This is a descriptive-analytical study using data from both primary as well as secondary sources. Primary sources include the customers of the four Kerala-based OPBs (KOPBs, in short) i.e. banks registered in Kerala state, India. These four KOPBs are: (1) Federal Bank Ltd. [FB] (2) South Indian Bank Ltd. [SIB] (3) Dhanalakshmi Bank Ltd. [DB], and (4) Catholic Syrian Bank Ltd. [CSB].

A sample comprising of 400 customers is chosen based on random (lottery) sampling technique. Adequacy of the sample size of 400 has been determined based on the method by Israel (2009), the details are as follows:

Sample Size (n) = $(ZS/E)^2$. Here, Z is the standardized value corresponding to a Confidence Level of 95 percent which is 1.96, and S is the Sample Standard Deviation (SD) from a Pilot Study with 50 sample size which is 0.510 and E is the Acceptable Error which is 5 percent, that is 0.05. Hence Sample Size (n) = $(1.96*0.510/0.05)^2 = 399.61$ and is rounded off to the next whole number 400.

The sample members have varied social, economic, occupational, and educational profile. They belong to diverse age groups also. SEM (Structural Equation Model) is used to analyze the relation between the five dimensions of SERVQUAL – a multi-dimensional research instrument, designed to capture service quality along with its five dimensions. Perceptions of customers are gathered on the five dimensions of service quality with meticulously designed and pre-tested questionnaire. Besides, data from secondary sources too are collected and used in the study, these sources being publications of the Reserve Bank of India (RBI), Government of India, Government of Kerala, and official websites of various Government Departments etc. Common tools of statistical analysis are applied for analysis of data and interpretation. SERVQUAL model by Parasuraman et. al (1988) [13] being a very scientific and highly popular model used for objective assessment of service quality, this model has been used in this research paper too. So, the five dimensions of service quality as used by these authors (viz. Reliability, Assurance, Tangibility, Empathy, and Responsiveness) have been used in this paper. (Table I)

Table I: Five Dimensions in SERVQUAL Model

Dimensions	Definition
Reliability	Ability to perform the guaranteed service dependably and accurately
Assurance	The knowledge and cordiality of the employees and their capacity to convey confidence and trust.
Tangibility	The presentation of physical facilities, equipment, staff and correspondence materials
Empathy	The provision of caring, individualized attention to customers (clients).
Responsiveness	The eagerness of client assistance and also to provide prompt service

Source: Based on Parasuraman, A. et. al (1988) [13]

VI. RESULTS AND DISCUSSIONS

The respondents of the study are distributed equally among the OBS under study viz. South Indian Bank (SIB) (25 percent), Federal Bank (FB) (25 percent), Catholic Syrian Bank (CSB) (25 percent), and Dhanlakshmi Bank (DB) (25 percent). Gender distribution shows that 55.3 percent are males and the rest 44.7 percent are females. Age distribution shows that 43.8 percent belong to the range 25–40 years, followed by 25 percent below 25 years, 21.3 percent between 41–55 years and the rest 10 percent in the range 56 years and above. Marital status shows that 25 percent of the respondents are single while 58.8 percent are married and the rest 15 percent are Widows/Widowers. Based on area of residence, 50 percent of them reside in urban areas whereas the rest 50 percent reside in rural areas. Location of the branches shows that 43.5 percent of them are rural branches while the rest 56.5 percent are urban branches. (Table II)

Table II: Profile of the Respondents and Bank Branches

Variable	Description	Frequency	Percent
Name of Bank	SIB	100	25.00
	FB	100	25.00
	CSB	100	25.00
	DB	100	25.00
Gender	Male	221	55.30
	Female	179	44.70
Age	Below 25 years	100	25.00
	25-40	175	43.80
	41-55	85	21.20
	56 and above	40	10.00
Marital Status	Single	100	25.00
	Married	235	58.80
	Widow/er	60	15.00
	Divorcee	05	01.20
Area of residence	Rural	200	50.00
	Urban	200	50.00
Location of branch	Rural	174	43.50
	Urban	226	56.50

Source: Based on Research Design for the study [Para V]

Table III shows the perceptual difference across the male and female respondents under study with respect to service quality in the four Kerala-based OPBs (KOPBs). The mean values for the male and female respondents are 64.95 and 68.14 respectively, indicating that females have had better service quality vis-à-vis male respondents. Since the p-value is less than 0.05 the hypothesis that service quality perceptions are equal across male and female customers is not accepted at 5 percent level of significance (LOS). Or, there exists significant difference between females and males in their perceptions on service quality.

Table III: Gender-based Perception on Service Quality

Variables	Gender	N	Mean	S.D	z-value	p-value
Service Quality	Male	221	64.95	13.43	-02.06	0.040
	Female	179	68.14	17.56		

Source: Field Survey

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Structural Equation Modeling (SEM) evaluates as to whether the given data is fit for a theoretical model. Here, the survey data are used for the above SEM analysis. Table IV shows that the value for [Chi-square/degrees of freedom] ($\chi^2/d.f$) is 2.837, the suggested value being ≤ 5 (Hair et al., 1998). GFI is 0.994 where the suggested value is > 0.90 (Hair et al. 2006). AGFI is 0.957 where the suggested value is > 0.90 (Daire et al., 2008). CFI is 0.997 where the suggested value is > 0.90 (Hu and Bentler, 1999). TLI is 0.986 where the suggested value is > 0.90 (Hair et al., 1998). RMR is 0.1 where the suggested value is 0 to 1. RMSEA is .068 where the suggested value is < 0.08 (Hair et al., 2006). The values of the fit indices indicate reasonable fit of the measurement model with the data in hand. All the attributes are loaded significantly on the latent constructs. (Table IV).

Table IV: CFA-SERVQUAL: Model Fit Indices

Basic Parameters as per the SERVQUAL Model	χ^2	d.f	p	Normed χ^2	GFI	AGFI
		5.673	2	0.059	2.837	0.994
	NFI	TLI	CFI	RMR	RMSEA	
	0.996	0.986	0.997	0.100	0.68	

Source: CFA on Field Survey data (SERVQUAL Model)

Figure I shows the relationship between the elements of the five dimensions comprising the SERVQUAL model, the extent of association between the variables, the relative significance of the various dimensions on the overall service quality, and such other allied aspects. (Figure I).

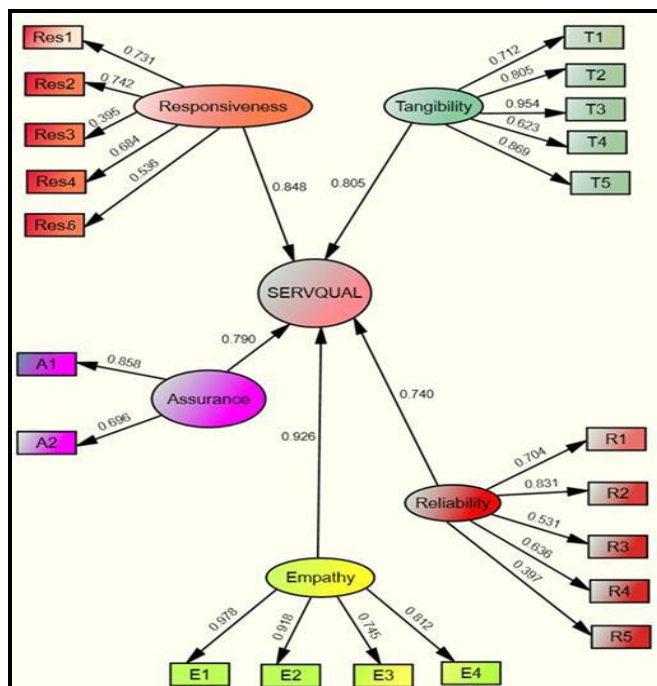


Figure I: Structural Equation Modeling (SEM) – Results

The regression results in respect of the five dimensions of SERVQUAL are summarized in Table V. It is noted that Empathy is the most significant dimension. (Table V).

Table V: Regression Co-efficients – SERVQUAL Model

Path	Estimate	CR	p value	Variance explained
Tangibility	0.805	22.170	<0.001	64.8
Reliability	0.740	18.938	<0.001	54.8

Responsiveness	0.848	24.886	<0.001	71.9
Assurance	0.790	21.348	<0.001	62.4
Empathy	0.926	32.469	<0.001	85.8

Source: SEM (using SERVQUAL Model) Results

Table V shows that the construct Tangibility has got a significant impact on service quality, as the standardised direct effect of the construct on service quality is 0.805, (p value is significant). Reliability has a significant impact on service quality, as the standardised direct effect of the construct on service quality is 0.740, (p value is significant). Responsiveness has a significant impact on service quality, as the standardized direct effect of the construct on service quality is 0.848, (p value is significant). Assurance has a significant impact on service quality, as the standardised direct effect of the construct on service quality is 0.790, (p value is significant). Empathy has a significant impact on service quality, as the standardised direct effect of the construct on service quality is 0.926 (p value is significant).

The model is statistically significant. All the five dimensions (viz. Tangibility, Reliability, Responsiveness, Assurance and Empathy) positively influence service quality of banks under study. Among the five dimensions, Empathy is the most significant dimension of service quality. This fact points to the utmost significance of human factor. Thus, behavior or attitude of staff and their behavior towards clients are vitally significant, as a human touch (empathy) in dealings cannot simply be ensured with the adoption of ICT. This research finding is quite similar to research findings of Ravichandran et al. (2010) [17] and Manoj P K (2003) [8], because the latter researchers have also found that human touch or human factor (empathy) is a vital determinant of service quality in the banking sector. Regarding the relation between human factor and service quality, this study shows that customers have a positive perception towards human factor as a determinant of service quality. Hence, to improve the perception of customers regarding the service quality in banks, banks have to focus on building empathy by enhancing the 'human touch' or customer touch points. Empathy being a human factor that drives service quality, it is essential to have skilled, resourceful and high quality staff capable of building up the service quality of the respective bank with a view to differentiate it from the rest. This will ensure better competitiveness of the bank in the industry. Regarding the physical branches and the behavior of bank staff, this study clearly shows that relationship with the bank staff is vital. As IT-enabled products and services (like, fully automated branches, ATMs etc.) are widely available in Kerala, it is crucial to ensure that attitude and behavior of the staff should be conducive enough to build up the relationship with customers. So, ICT adoption along with the right approach of the staff will bring in good results.

Regarding gender parity in the service quality of banks, the study reveals that female respondents have experienced significantly superior service quality in their dealings with the four banks under study, when compared with their male counterparts. So, banks must focus more on attracting male customers to bring in gender parity in their services, particularly in their digital services.

VII. SUMMARY OF MAJOR FINDINGS

- Significant share of the CSR outlays of banks needs to be earmarked for imparting the requisite IT education, development of skills for doing ICT-based banking services. Accordingly, adequate confidence of the bank customers ineffectively using various Digital Services could be ensured by banks.
- Training and support be provided through E-Literacy Mission of Kerala state, as part of the CSR (Corporate Social Responsibility) program of the respective banks. Such training should be imparted right from the school level, as part of the formal system of education. Besides, training and development through informal system too can be considered, preferably with the help of NGOs, socio-cultural organizations etc. with a view to ensure social equity, gender parity etc. in respect of access to banking products and services.
- Campaigns need to be organised on digital initiatives by banks for creating better awareness among the general public about such banking products and services.
- Customer induction camps may be organised so as to generate confidence in the minds of customers as to how to use digital services in a safe manner.
- Additional benefits and incentives be provided for the use of services in the digital mode. This would help to attract the customers who are using conventional modes and to make them to adopt the online modes instead.
- Customer segmentation be done and those who can be brought within the digital platform easily should be focused. Other segments be brought within the digital umbrella in a phased manner, through suitable training and development, awareness camps etc. as noted above.
- Last but not the least, suitable training be imparted to the bank staff regularly so as to ensure that they are amply skilled. Qualified and trained staff be deployed to take care of customer service, through individualized attention to each customer so as to generate empathy and hence drive service quality through 'human touch'.

VIII. SUGGESTIONS AND CONCLUSION

It is noted that technology readiness is high in Kerala and so also are the levels of education, digital literacy, internet penetration etc. However, banks are still in their learning curve of digital banking services. So, more needs to be done by banks by constantly adapting digital banking strategies so as to retain their customers and attract new customers. Providing high-tech services using Financial Technologies (Fin Tech) has now become an imperative for their survival. Equally important, probably more important, is the need to convince the customers about their level of technology adoption. Above all, banks have to ensure that their staffs are provided with suitable training so as to develop them properly to deliver high quality customer service. Constant relationships of a long term nature need to be built up by ensuring a 'human touch' in all their dealings with clients.

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